CPP Investments

2020 ANNUAL REPORT

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How to read this report

This annual report describes the strategy, performance and governance of Canada Pension Plan Investment Board (CPP Investments™) over the fiscal 2020 year ended March 31, 2020.

The Strategy section includes a description of our purpose, investment approach and who we are. The report then describes our investment performance in the Management's Discussion and Analysis section, attributing our results to various activities and operations during the fiscal year. This is followed by additional information on the way we pay employees and executives, our governance and detailed Consolidated Financial Statements. An overview of this report and supplementary information including previous annual reports is available at www.cppinvestments.com.

CPP Investments' Sustainable Investing Report can be found at www.cppinvestments.com/sustainable-investing. The next report will be released in November 2020.

Forward-looking statements

This annual report contains forward-looking information and statements. Forward-looking information and statements include all information and statements regarding CPP Investments' intentions, plans, expectations, beliefs, objectives, future performance, and strategy, as well as any other information or statements that relate to future events or circumstances and which do not directly and exclusively relate to historical facts. Forward-looking information and statements often but not always use words such as "trend," "potential," "opportunity," "believe," "expect," "anticipate," "current," "intention," "estimate," "position," "assume," "outlook," "continue," "remain," "maintain," "sustain," "seek," "achieve," and similar expressions, or future or conditional verbs such as "will," "would," "should," "could," "may" and similar expressions. The forward-looking information and statements are not historical facts but reflect CPP Investments' current expectations regarding future results or events. The forward-looking information and statements are subject to a number of risks and uncertainties that could cause actual results or events to differ materially from current expectations, including available investment income, intended acquisitions, regulatory and other approvals and general investment conditions. Although CPP Investments believes that the assumptions inherent in the forward-looking information and statements are reasonable, such statements are not guarantees of future performance and, accordingly, readers are cautioned not to place undue reliance on such statements due to the inherent uncertainty therein. CPP Investments does not undertake to publicly update such statements to reflect new information, future events, and changes in circumstances or for any other reason.

People.
Purpose.
Performance.

CPP Investments is a global investment management organization.

We were established to help ensure the Canada Pension Plan (CPP) is strong and sustainable for the long term.

We invest around the world in public and private assets. Our teams bring deep expertise and local knowledge.

Investments are diversified by asset class and geography so that the Fund is more resilient, and to safeguard the best interests of current and future CPP beneficiaries.

$409.6 B	3.1%	$12.1 B
Net assets	**Net return**	**Net income**

For fiscal year ended March 31, 2020

Dear fellow Canada Pension Plan contributors and beneficiaries,

"As Chairperson of the Board of Directors, I am keen to report to you on the significant work CPP Investments carried out on your behalf this past year."

Dr. Heather Munroe-Blum
Chairperson

This year's report is set against the backdrop of the biggest humanitarian and financial challenge the world has faced in generations. The COVID-19 pandemic, which occurred during the fourth quarter of our fiscal year, has had significant and far-reaching global impacts. It has forced our global community to deal with exceptional social and health care challenges, volatile financial markets and dramatic economic impacts. These have included consequences from the unprecedented global suspension of activity across many sectors of commerce, education and culture, with the necessary imposition of social distancing. The full impact of this global pandemic has yet to be seen, but what we do know is that these challenges call for extraordinary cooperation among governments, businesses and individuals in order to pull through this crisis together.

CPP Investments' mission is to contribute to a secure base for the retirement of more than 20 million CPP contributors and beneficiaries. Despite the significant decline in global equity markets, the Fund has held up comparatively well. During this time of extreme financial stress, our longstanding approach to building and managing a well-diversified Fund continues to demonstrate its value. This is a result that has been years in the making.

The Board remains steadfast in its oversight. We have strong confidence in the organization's 2025 business strategy, which is designed to enhance our operational processes and investment programs, and to keep us well positioned for both future financial disruptions and new growth opportunities.

CPP Investments' 10-year net return of 9.9% is testament to the merits of the organization's long-term strategy.

The Office of the Chief Actuary issued the 30th Actuarial Report on the Canada Pension Plan in December 2019. The report, which is tabled every three years and is based on the status of the Fund as of December 31, 2018, confirmed that the legislated contribution rates of both the base and additional CPP are sufficient to finance the CPP over the long term. It reaffirms the sustainability of the CPP for the next 75 years.

The Chief Actuary's report was issued just a few weeks before the global pandemic, and we have so far seen the financial impact of the pandemic on only one fiscal quarter. Nonetheless, we expect the core principles of our approach to continue to pay off, and we will remain prudent as the global situation unfolds. Active management is proving to be a good approach in these times providing a comparatively safe harbour. Consistent with CPP Investments' legislative objective, the investment choices we have made over the last decade have not been limited to above-average wealth creation opportunities on the upside, but have also included protection of value on the downside. This approach continues.

I acknowledge the dedicated efforts of CPP Investments' employees and the Senior Management Team at all times, but do so now especially in the face of this crisis. The organization's enduring public purpose drives our behaviour at CPP Investments and is ingrained in our unique culture. Key attributes of that culture are a long-term horizon, foresight and investment management capabilities that have been well-tested and well-demonstrated over the last few months. It is at times like this when we most appreciate the steady hands, skilled management and commitment to public purpose that are so characteristic of our people.

While it is natural to focus here on the potential impacts of the global pandemic, it remains important both to look back on the activities of the entire fiscal year, and to keep an eye to that long-term investment horizon. Here are three key areas of Board activity in fiscal 2020:

1. Stewardship of the long-term investment strategy;
2. The Board's engagement with the business; and
3. Board renewal and continuity.

Stewardship of the long-term investment strategy

CPP Investments received its first transfer of funds from the additional CPP in January 2019. Fiscal 2020 was its first full year of implementation. In the lead-up to the receipt of those first funds, the Board focused on its oversight duties to ensure that the organization was well-equipped to deal with the challenges of managing our two accounts each with different risk profiles.

As part of this oversight work, an ad hoc Board committee met regularly during fiscal 2020 to oversee additional CPP performance, systems and structures. These and other preparations benefited the Fund and, importantly, CPP contributors and beneficiaries. The additional CPP account ended the fiscal year with assets of $2.3 billion. The Board and I are confident that Management has effective processes and plans in place to ensure the continued sustainability of both the base and additional CPP.

Risk management

Oversight of risk management is integral to the Board's mandate, and we continually assess the adequacy of CPP Investments' governance structures to ensure effective oversight of all risk assessment and risk management activities.

The first months of calendar 2020 have demonstrated just how unpredictable the world is. We are continually faced with unexpected challenges, making it critical for all organizations to plan for a range of future contingencies. My fellow Board members and I take comfort in knowing that our Management does this well. Management's preparedness and actions taken in response to the COVID-19 pandemic allow one to fully appreciate the value of such focus and prudent planning.

Recognizing that the Fund is growing in size and complexity, last year we established a standing Risk Committee to assist in fulfilling the Board's oversight responsibilities. We are taking a holistic approach to oversight across all key risks, including reviewing and reaffirming our risk appetite through specific statements covering various domains, including market risk, liquidity risk and strategic risk.

The Board has endorsed modifications to the Integrated Risk Framework and additional risk appetite statements, including those for additional CPP. The Risk Committee is also working with Management to apply both learning and foresight to the continued evolution of CPP Investments' risk governance framework.

This year, the Board reviewed several enhancements put in place by Management to better position the organization for future growth of the Fund. These included:

- Incorporation into the crisis management framework an expansion of the long-standing preparation plans to cover a range of new operational and financial stress scenarios; and
- Enhancement of processes to identify, assess and monitor risks that could cause significant reputational harm to CPP Investments.

The Board also continued to engage across the organization on climate change risk, an ever-present long-term global risk that has been a Board priority for several years. In fiscal 2020, the Board's guidance included enhancing the Fund's focus on climate change risks involving new and existing investments, and ensuring the organization was well-placed to invest in sectors that will benefit from, or participate in, mitigation of negative climate change.

Engagement with business activities

Let me now turn to the Board's engagement with the ongoing business of CPP Investments, focused on four main areas: investment oversight, operations oversight, technology and data, and people.

Investment oversight

The Board oversees CPP Investments' core activities through the Investment Committee of the Board. The Investment Committee establishes investment policies, standards and procedures, and reviews, approves and monitors our annual investment plan. It also reviews the approach to investment risk management and approves the engagement of external fund managers and asset custodians.

CPP Investments undertook a company-wide consultation process in fiscal 2020 to formalize the Investment Beliefs that underpin daily investment decisions. This document provides transparency and consistency to decision-making, and a compass for selecting long-term investment strategies. A copy of the Investment Beliefs is included on page 23 of this report.

Operations oversight

The Board's oversight activities also include the annual review of the operating budget. In fiscal 2020, the operating expense ratio of 30.6 basis points was one full basis point lower than the five-year average of 31.6. We expect expenses to be prudently managed at all times. I note here that these may modestly increase over the coming years as the organization continues to invest in technology, data and a well-prepared workforce to manage the growing and increasingly diversified Fund.

The strategic deployment of people and support systems to the most promising geographical regions is a key component of our global approach to investing and the ability to balance opportunities among emerging and developed markets. This year, CPP Investments opened its ninth global office – this one in San Francisco – recognizing that the U.S. remains the organization's biggest investment market. This brings to two our U.S. offices, including our long-standing office in New York City.

In the fourth quarter of fiscal 2020, the Board worked very closely with Management to ensure the Fund was well-positioned to manage through the significant financial and operational impacts of the COVID-19 pandemic. To prepare the organization to deal with a significant crisis, over the years, Management has participated in regular crisis preparedness exercises. While the exact nature of this pandemic could not have been predicted, the foresight in running these exercises meant that the organization was well positioned when the COVID-19 pandemic hit. Management has reported to the Board regularly on its actions to support and to protect both employees and the Fund during this unprecedented event. My fellow Directors and I are confident that Management is taking appropriate steps to weather these exceptional challenges as well as possible.

Technology and data

In fiscal 2020, the Board approved the Technology & Data strategy, one that is designed to optimally support all employees and to enhance investment decisions. Having the right technology, systems and processes in place proved to be critical this year as the entire organization – over 1,800 employees – successfully transitioned to a work-from-home environment in response to the COVID-19 pandemic.

People

Central to fulfilling our long-term strategy is the quality of our people. We compete not just for investment opportunities but also for top talent. Attracting and retaining outstanding people rests largely on our corporate reputation as a great investor and great employer with a strong purpose-driven culture. With this in mind, a significant and ongoing objective of the Board and Management is to strengthen our pool of talent through both development and recruitment, and to sustain an optimal corporate culture.

Our culture is founded on our Guiding Principles of Integrity, Partnership and High Performance and our values include embracing inclusion, diversity and transparency. We know ethical conduct across the organization is critical to earning and keeping public trust, and to doing good business.

The stewardship of an organization's culture is in the hands of every employee, led by the senior team and the CEO, and is overseen by the Board. Over the years, the Board has immersed itself in several of our global markets each for one week. In doing so, we build relationships with individual employees, engage ourselves in the various environments in which they operate, meet partners and deepen our overall understanding of the organization as expressed in that region. This past year, we chose to spend three days immersed in CPP Investments' global corporate office right here in Toronto. The deep engagement over the course of this site visit reinforced our knowledge of the diverse array of corporate functions and investment programs, and connected us with people across CPP Investments' headquarters who deliver on our mandate every working day. This was time well spent. We were impressed, as we always are, with the exceptionally talented and dedicated employees we met, and the ideas and high values and perspectives they shared.

Board renewal and continuity

In last year's report, I noted that the Board had completed work that began in 2015 to support the processes that would ensure timely renewal of its membership. This year, we focused on the recruitment of new Board members.

I'm pleased to report on this year's appointment of William "Mark" Evans as one of two current international Directors on our Board. Katie Taylor was reappointed to the Board, and each of Mary Phibbs, Ashleigh Everett and John Montalbano was recommended for reappointment to the Board.

In accordance with the *Canada Pension Plan Investment Board Act,* our Board is comprised of highly qualified Directors with the skill sets and backgrounds needed to provide effective oversight of CPP Investments. In addition to having deep expertise in risk management and business oversight, the Board demonstrates strong female representation along with a broader diversity of important backgrounds and experience, all contributing to the complex work of the Board.

In closing

During a year marked by one of the most significant global crises in our lifetimes, I stop to acknowledge and give special thanks for the efforts of all employees of CPP Investments. Our employees remain dedicated to our public mission, working to support the security of the Fund through this uncertain period. As at all times, they are dedicated to seeing the Fund on solid footing for the future.

On behalf of the Board, I also thank our exceptional CEO, Mark Machin, and his dedicated Senior Management Team, all of whom are adeptly guiding the organization through this difficult time. Their compassion, steadfastness and expertise position CPP Investments to weather this storm and stay on course, keeping our commitment to more than 20 million CPP contributors and beneficiaries.

Finally, I express my deep appreciation to each of our Directors for their outstanding service.

Heather Munroe-Blum OC, OQ, PhD, FRSC
Chairperson

To our fellow Canada Pension Plan contributors and beneficiaries,

“The sustainability of your Canada Pension Plan remains secure. The resilience of the Fund, for today’s retirees and for decades to come, should give Canadians confidence.”

Mark Machin
President & CEO

The fourth quarter of the 2020 fiscal year at Canada Pension Plan Investment Board (CPP Investments) coincided with the arrival of the COVID-19 global pandemic, upending the personal and working lives of Canadians and billions of other people around the world.

The past months have tested our health, economic and social systems in ways many among us could not have imagined. Markets reacted forcefully to the expected impacts of widespread economic shutdowns aimed at containing the spread of the virus. In purely financial terms, stock market performance in the final weeks of our fiscal year was among the worst ever measured on a quarterly basis.

Amid these challenging and uncertain times, our organization’s mission is even more meaningful: to help protect the lifetime retirement security of generations of Canadians.

So, let me begin our annual report to you this year by stating that the sustainability of your Canada Pension Plan remains secure. The resilience of the Fund, for today’s retirees and for decades to come, should give Canadians confidence.

Expecting the unexpected

While the COVID-19 pandemic was something few of us could have predicted, the likelihood of a global event leading to turmoil in financial markets was something we could foresee and prepare for. And we did.

As the managers of a Fund with an exceptionally long investment horizon, we must be prepared to navigate all market conditions. In the final month of our fiscal year, the VIX Index, which measures expected stock market volatility and is often referred to as the ‘fear index’, set an all-time high. Periods of exceptional market turbulence like this test our investment skill and our organizational strength. These are the times when we most clearly demonstrate our value.

Being prepared for such scenarios is the key to navigating them. And from each crisis we weather, we draw new lessons. Over the decade since the Global Financial Crisis, we put significant effort into enhancing our risk management practices. This included implementing an integrated risk approach, and properly preparing a financial crisis plan and a pandemic response plan. Preparedness is the foundation that makes the biggest difference in how well crises are managed.

Since launching active investment management, we have designed and built a portfolio that performs during periods of economic stability and absorbs some of the most extreme negative outcomes in times of economic stress. It is our active management strategy and its execution that has placed the Fund in a safe harbour today.

Highlights of the year

In fiscal 2020, the Fund grew to $409.6 billion, with $12.1 billion in net income.

Our dollar value-added (DVA) compared with our Reference Portfolios for the fiscal year was $23.5 billion as a result of the continued resilience of many of our investment programs.

Over the past 10 years, we have produced a rate of return of 9.9%, and our operations have contributed $235.2 billion in net investment income, after all costs.

Our Investment Beliefs provide current and future beneficiaries with additional transparency as to our decision-making processes in carrying out our long-term investment strategies.

We are seeing an acceleration of the disruptive trends that have been driving business and societal changes in industries such as health care, e-commerce, mobility, big data and artificial intelligence.

We are balancing our search for new opportunities with our long-term strategy, maintaining conservative levels of liquidity and supporting companies in our portfolio.

We have committed to be a leader among asset owners in understanding the risks posed, and opportunities presented, by climate change.

We continue to execute our 2025 strategy. We remain confident in the long-term trends that underpin our convictions and strategy.

Fortitude and focus

Still, we remain a long-term investor. For us, a 'swift' reaction does not mean quickly acquiring new assets or disposing of existing ones. Instead, in times of crisis, we must assess, understand and proceed using good judgment.

For long-term investors, extreme market volatility requires mental fortitude to stay the course. Economist John Maynard Keynes' theory on animal spirits explained that we have a spontaneous urge to action rather than inaction that can sometimes work against us in investing. It is our job to tame these impulses.

We are taking the time now to identify the changes that will be both enduring and progressive. We are balancing our search for new opportunities with our long-term strategy, maintaining conservative levels of liquidity and supporting companies in our portfolio. Our long-horizon approach to building a highly diversified, resilient portfolio for Canadians will continue to be our guide through what is to come.

Our transparency with Canadians

We know that as Canadian workers and employers, you do not get to choose CPP Investments as the investment manager of your CPP contributions. This fact imposes a great responsibility to demonstrate that you can count on us – especially during the tough times.

This annual report, our quarterly reporting and the bi-annual public meetings we will hold in fiscal 2021, are important aspects of our public accountability. As Canadians navigate challenging circumstances in the months to come, we are committed to providing timely and transparent information about the Fund, well beyond what is required of us by legislation.

As Canadians remain focused on their health and well-being, we remain focused on safeguarding the financial health of the Fund.

Our financial performance

In fiscal 2020, the Fund grew to $409.6 billion, comprising $12.1 billion in net income and $5.5 billion in net contributions received. Despite the devastating market conditions in our fourth quarter, this represents a net annual return of 3.1%, after all costs.

Over the past 10 years, we have produced a net rate of return of 9.9%, and our operations have contributed $235.2 billion in net investment income, after all costs. While we demonstrate our accountability through quarterly and annual reporting, our long-term results are always the best measure of our performance. That is what ultimately helps to pay pensions today and tomorrow, shepherding the Fund through the vagaries of short-term market swings.

For instance, on a calendar year basis (January to December 2019), the Fund's performance delivered a 12.6% rate of return. That is strikingly different from the 3.1% annual return we are reporting for the fiscal year as a result of the broad equity market sell-off during our fourth quarter (the three months through March 2020). During this time, we saw the S&P 500 drop by roughly 11.7%, while our fourth quarter return was a decrease of 3.7%.

To demonstrate the value added by active investment management, we also measure our performance against our Reference Portfolios, which represent passive, public-market stocks and bonds that the Fund might otherwise hold had CPP Investments' not pursued an active management approach for the Fund. This fiscal year, the Reference Portfolio results for base and additional CPP were -3.1% and 0.7%, respectively.

Our dollar value-added (DVA) compared with our Reference Portfolios for the fiscal year was $23.5 billion as a result of the continued resilience of many of our investment programs. DVA is a volatile measure, and so again we look at our results over a longer horizon. Since inception of our active management strategy, we have now delivered $52.6 billion in compounded DVA.

Our long-term returns are expected to exceed what the Fund needs to remain sustainable. I say that with confidence because this year the Fund's sustainability was independently validated by the Office of the Chief Actuary. And while that report was produced prior to the COVID-19 pandemic, it does account for financial market volatility, changes to long-term demographic trends, and so on.

The Chief Actuary's latest assumption is that, over the 75 years following 2018, the base CPP account is on track to earn an average annual real rate of return of 3.95% above the rate of Canadian consumer price inflation, after all costs. The corresponding assumption is that the additional CPP account will earn an average annual real rate of return of 3.38%. As of this year, CPP Investments' average annual real rate of return over a 10-year period is 8.1%.

Investment landscape

The longest bull market run on record – enjoyed by equity investors for 11 years – took a sharp and rapid turn into bear market territory in the fourth quarter of our fiscal year.

Investors fled stocks amid concerns about the economic impact of the novel coronavirus on businesses and the health impact on consumers. Indeed, we believe the pandemic will push many significant economies to a global recessionary cliff this calendar year.

Even before the pandemic set in, we were grappling with serious geopolitical risks. For example, the world's two largest economies – the United States and China – were in the midst of considerable trade tensions that affected many businesses. The rise of populist governments in other parts of the world, such as South America, ushered in new economic priorities and challenges, as well as investment opportunities. In Europe, the outcome of Brexit was unknown for a considerable portion of the year. And in Hong Kong, widespread protests were impacting the local economy – as I write this, our CPP Investments colleagues in the Hong Kong office have been managing through unprecedented change since the summer of 2019.

These were the pressures beyond our control. To insulate ourselves from the effects of these challenges and pursue our long-term strategy, we continue to diversify the Fund globally, by asset class and by strategy. We adhere to disciplined rebalancing of the Fund to maintain the long-term portfolio construction we target. Safety and soundness come first – neither the severity and duration of economic turmoil, nor the extent of its lingering or permanent aftermath can be easily predicted. We will continue to stress test our portfolio as we always do, looking at investment outcomes under a variety of extreme scenarios so we can be confident the Fund will remain resilient as it continues to grow.

As we have seen in past crises, unexpected outcomes can emerge as people and communities respond, adjusting behaviours and innovating solutions in ways that leave lasting positive impact. Even in this time of physical distancing, our investment teams continue to work creatively to find, assess and execute on new investment opportunities.

Long-term strategy and trends

We continue to execute our 2025 strategy, approved by our Board two years ago. We remain confident in the long-term trends that underpin our convictions and strategy.

To meet our goals, investment teams continue to anticipate the trends we believe will reshape the world in the long term. Notably, we are seeing an acceleration of the disruptive trends that have been driving business and societal changes in industries such as health care, e-commerce, mobility, big data and artificial intelligence. To help us stay on top of these trends, we opened an office in San Francisco, providing a presence in the world's largest innovation hub.

Climate change and the gradual evolution to a low-carbon environment will also continue to evolve the world we live in. We have committed to be a leader among asset owners in understanding the risks posed, and opportunities presented, by climate change.

And across many markets, significant demographic shifts will also persist. Not only is half the world's population under the age of 30, but at the same time, we are entering a crucial decade for the so-called "grey tsunami" in many developed markets, where the youngest baby boomers are reaching the age of 65.

Amid these changes, we are improving our technology and data capabilities while also better capitalizing on our collective knowledge to improve our international competitiveness — a pillar of our 2025 strategy. Our efforts include the development of new tools to improve investment decision-making, including testing new strategies for using data and centralized analytics services. We have also added processes that foster enterprise-wide knowledge sharing to unleash the power of our collective insights. These are the kinds of advancements that will support our ability to compete globally with the top ranks of the world's investors.

Other efforts include further diversifying the Fund geographically and across sectors. We grew investments in emerging markets to $87.6 billion or 21.4% of our total assets at the end of fiscal 2020, compared to $77.9 billion and 19.9% of our assets last year. In addition, we expanded our employee base outside Canada from 351 to 449 people in the same timeframe.

Culture continues to be a strong focus. To meet our 2025 goals, we must be able to attract high-calibre global talent and foster a culture that is innovative, ambitious, agile and inclusive. The COVID-19 pandemic points to the importance of being able to develop rich insights and adapt quickly. As part of this effort, we have worked to improve inclusion and diversity firmwide, particularly regarding female representation. Women now account for 46% of employees and hold 31% of senior-level positions.

To help us stay on course through periods of change, we have our decision-making guideposts. Our Investment Beliefs provide current and future beneficiaries with additional transparency as to our decision-making processes in carrying out our long-term investment strategies. We have documented them and invite you to read more on page 23.

Our thanks

Before my career in finance, I was trained as a medical doctor in the U.K. Today, I watch with enormous respect and admiration the medical professionals around the world – who are in many circumstances risking their own health and lives to care for all of us through their work each day. To those on the front lines of this health crisis, and others providing essential services each day: Thank you. We are sincerely grateful.

Through this uncertainty, the one constant has been the quality of our people, who are all driven by the knowledge that they are helping to lay the groundwork for Canadians' retirement security. Thank you, all my colleagues at CPP Investments, for your dedication and commitment to excellence – particularly during the times this year that really tested the strength of our character. We also appreciate our Board of Directors for their guidance and leadership.

Finally, thanks to you, our current and future beneficiaries, for putting your trust in us to forge ahead and help protect the Canada Pension Plan for generations.

Sincerely,

Mark Machin
President & CEO

Our role

CPP Investments has a critical mission – to help ensure Canadians have a strong foundation of financial security in retirement. We manage Canada Pension Plan (CPP) funds in the best interests of contributors and beneficiaries. Our experienced professionals invest globally to maximize returns without undue risk of loss, with consideration of the factors that may affect funding of the CPP. We take a disciplined, long-term approach to managing the Fund.

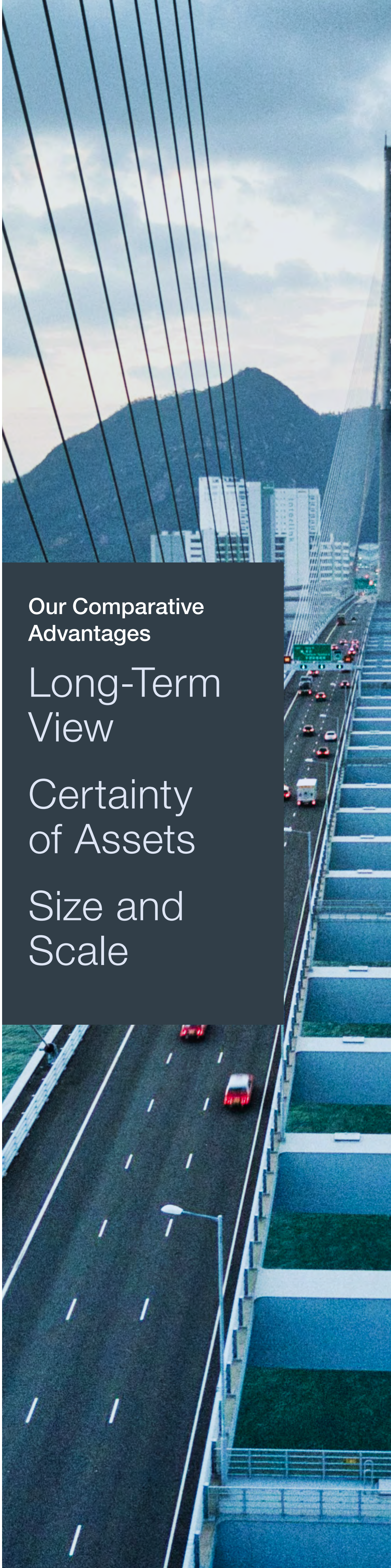
How we serve the Canada Pension Plan:

Workers in Canada and their employers jointly contribute to the **Canada Pension Plan**.

Contributions are first used to pay CPP benefits.

CPP Investments takes the contributions not needed to pay benefits and creates global, diversified investment portfolios.

Assets are managed to maximize returns, without taking undue risk, to help sustain the CPP for future generations.



Our Comparative Advantages

Long-Term View

Certainty of Assets

Size and Scale

75+ Years
of CPP sustainability

20+ Million
contributors and beneficiaries

$235.2 Billion
10-year net income

9.9%
10-year return (net nominal)

Long-term sustainability

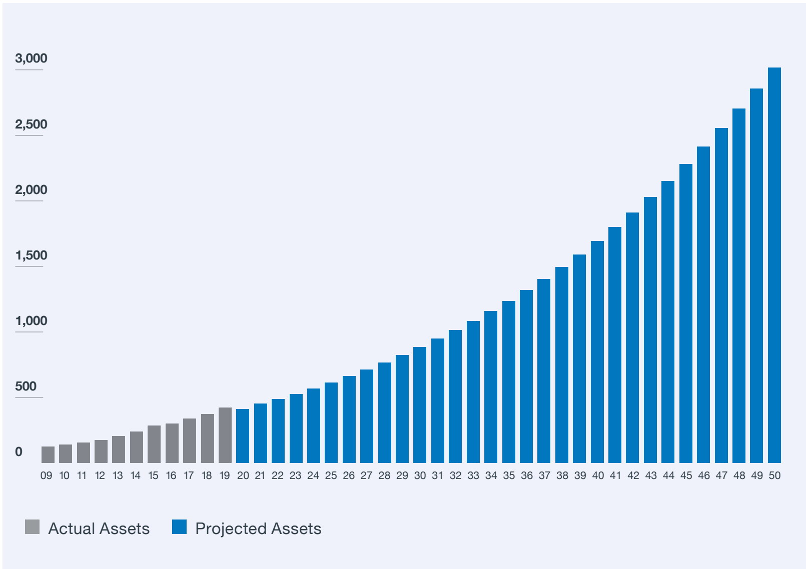
The Office of the Chief Actuary monitors the sustainability of each part of the CPP. CPP Investments is on track in helping to ensure a strong foundation of retirement income for future generations.

Every three years, the Chief Actuary reports on the financial state of the base CPP and additional CPP over the next 75 years. The most recent report, released in December 2019, again confirmed that each part of the CPP is sustainable at the legislated contribution rates.

The chart below illustrates the combined projections from the Chief Actuary's Report, considering future changes in demographics, the economy and investment environments. The Fund has two sources of growth: net contributions from CPP participants and income earned from investments.

By 2050, the total Fund is projected to reach $3 trillion ($1.6 trillion when value is adjusted for expected inflation).

Sustainability of the CPP As at December 31 ($ Billions)

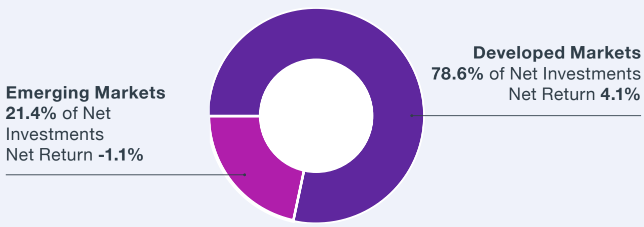


Global investments

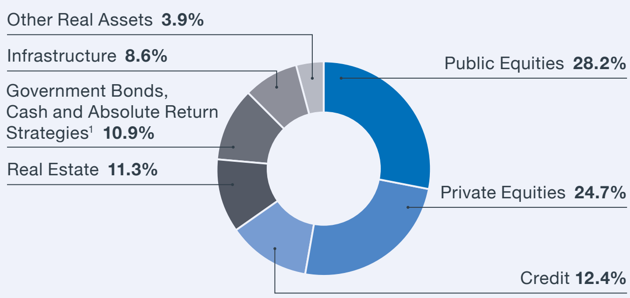
We search globally for the best possible investment opportunities.

CPP Investments' diversified portfolios are designed to capture global growth while also withstanding periods of market uncertainty. Our team of professionals in nine offices apply their deep expertise and local knowledge to source investment opportunities, engage with world-class partners and build value in our existing assets.

Market Classification For fiscal year ended March 31, 2020



Asset Mix As at March 31, 2020



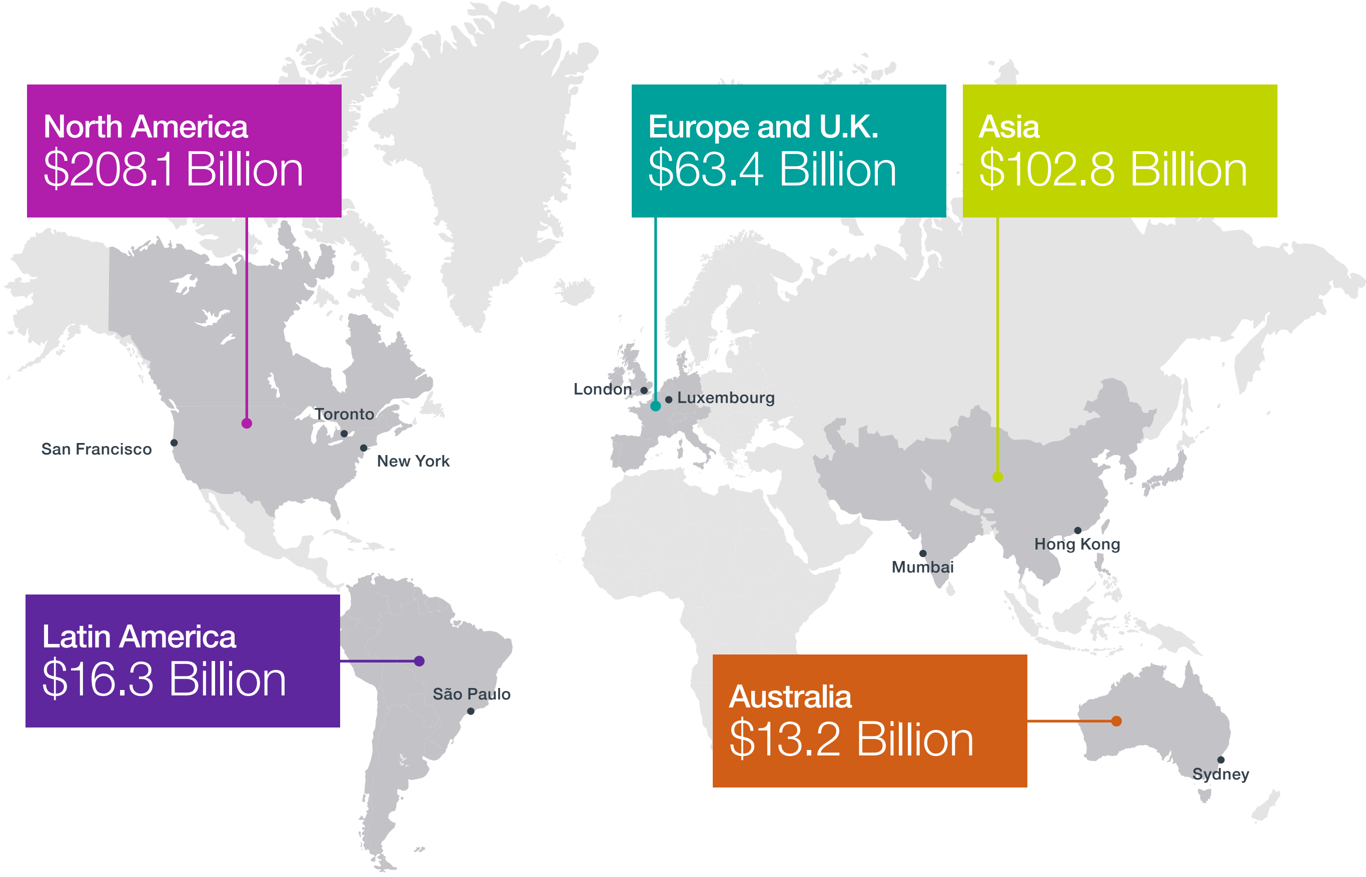
1. Net of external debt issuances

Countries in which we hold investments
55

Global investment partners
283

Global transactions in fiscal 2020
742

Regional investment highlights



407 ETR
Canada
C$3.0 billion

Acquired an additional 10.01% equity stake in 407 International Inc., which holds a concession over the 407 Express Toll Route toll road in Ontario.

Green Bond
United States
US$500 million

Issued our first U.S. dollar-denominated green bond, a Floating Rate Note linked to the new Secured Overnight Financing Rate. We have issued four green bonds to date.

IDEAL
Mexico
MXN$17.7 billion

Acquired a 23.7% interest in IDEAL, one of the largest infrastructure companies in Latin America, as well as an 11.1% stake in a FIBRA-E, a local infrastructure income trust, which owns a stake in four of IDEAL's toll roads.

Multifamily joint venture
Brazil
Up to R$1 billion

Formed a joint venture with Cyrela Brazil Realty to develop a portfolio of for-rent residential real estate in São Paulo.

Merlin Entertainments
United Kingdom
Total transaction size:
£5.9 billion

As part of a consortium, acquired the global leader in location-based family entertainment, including LEGOLAND® Parks, with more than 65 million visitors per year.

Iberian Private Real Assets Credit partnership
Spain and Portugal
€300 million

Committed to an Iberian Private Real Assets Credit partnership, a separately managed account which will invest in middle market real estate credit opportunities.

India Resurgence Fund
India
US$225 million

IndiaRF invests in distressed assets through the purchase of existing debt and equity securities and may strengthen such assets through recapitalization and operational improvements.

National Investment and Infrastructure Master Fund
India
Up to US$600 million

The NIIF Master Fund invests equity capital in core infrastructure sectors in India, with a focus on transportation, energy and urban infrastructure.

Investment departments

We have six unique departments that build and manage our assets by identifying investment opportunities and evolving our investment strategies around the world. Working together, they help maximize returns for the total Fund in a cost-effective way, taking various risks into account.

Assets under Management by Investment Department As at March 31, 2020

Total Portfolio Management

Executes the long- and medium-term design of the Investment Portfolios, and ongoing implementation of the Total Portfolio Investment Framework.

$179.7 billion

Capital Markets and Factor Investing[1]

Ensures CPP Investments has the flexibility to efficiently gain access to a broad array of sources of return in public equities, fixed income securities, currencies, commodities, derivatives and externally managed funds on a global basis.

$56.0 billion

Active Equities[1]

Invests globally in public (or soon-to-be public) companies by way of common shares or equity-linked securities, private companies, externally managed funds and securities focused on long-horizon structural changes.

$61.4 billion

Credit Investments

Manages all of CPP Investments' public and private credit investments globally, investing in credit and credit-like products across the capital structure.

$40.0 billion

Private Equity

Invests in global private equity suitable for large, patient and knowledgeable investors.

$94.6 billion

Real Assets

Consists of investments in real estate, infrastructure, power and renewables and energy and resources sectors.

$97.6 billion

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

Operational highlights

We continue to execute our investment strategy, develop leading capabilities and make progress on our objectives.

Scaling our investment programs and emerging market capabilities, and increasing our global presence

- Opened an office in San Francisco to provide a local presence in the world's largest innovation hub and the fifth-largest global economy.
- Across all of the programs, grew investments in emerging markets from $77.9 billion to $87.6 billion, representing 21.4% of our total assets.
- Expanded the employee base outside Canada from 351 to 449 people.

Continuing to integrate technology, data and our knowledge collaboration initiative to enhance investment decisions

- Began transformation of our technology and data capabilities to improve investment decision-making and operational scalability, including by launching several proofs of concepts leveraging data and centralized analytics services.
- Formalized enterprise-wide knowledge sharing to unlock our collective insights through a tool called the Collaboration Portal, improvements to a consolidated investment pipeline and more regular organization-wide communications highlighting cross-department themes.

Operationalizing our new risk framework

- Enhanced our risk appetite statements and limits.
- Enhanced processes to identify, assess and monitor risks that may significantly impact our reputation.
- Expanded, before the COVID-19 pandemic, our crisis management framework to cover a range of operational and financial stress scenarios.

Building talent and reinforcing culture on the foundation of our Guiding Principles

- Improved inclusion & diversity firmwide including improved female representation, now accounting for 46% of employees and 31% of senior-level positions.
- Offered development opportunities to 27% of employees.
- Launched a culture evolution initiative that aims to make CPP Investments an increasingly innovative, ambitious, agile and inclusive organization.

Evolving our enterprise-wide business architecture to guide how we will operate in the future

- Assessed our investment governance framework and our global operating model for the future to execute our 2025 strategy.

Talented and experienced teams around the world are the source of CPP Investments' diverse transactions and partnerships.

Americas Structured Credit & Financials

North America

Team members:
Andrew Edgell,
Philippa Flint,
Liz Meng,
Robert Colaguori

Keytruda®

US$1.3 billion

Acquired a portion of LifeArc's royalty interests on worldwide sales of Keytruda®, a market-leading cancer therapy

The drug is approved for use in more than 85 countries worldwide

"Alternative assets related to intellectual property help to diversify the Fund through income streams that are typically uncorrelated to the broader capital markets."

John Graham, Senior Managing Director & Global Head of Credit Investments

Direct Equity Investments Latin America

Latin America

Team members:
Tania Chocolat,
Ricardo Castro,
João Souza,
Mateus Ribeiro,
Nicholas Ellery

Smart Fit

C$340 million

Acquired a 12.4% stake in Smartfit Escola de Ginástica e Dança S.A. (Smart Fit), Latin America's largest fitness chain

Serves 2.5 million members across 739 locations in 10 countries

First private investment by newly formed group, Direct Equity Investments Latin America

Direct Private Equity

Europe

Team members:
Ryan Selwood,
Jennifer Kerr,
Sunny Lee,
Wendy Franks,
Ira Shiner,
Chris Schmied,
Shannon Whitaker

Refinitiv

US$27 billion

Total enterprise value

Announced the merger of Refinitiv, one of the world's largest providers of financial markets data and infrastructure, with the London Stock Exchange Group plc in an all-share transaction

The transaction implied a US$27 billion total enterprise value for Refinitiv

The Refinitiv consortium, including CPP Investments, will retain an approximate 37% economic interest in the combined company

Employees

Our purpose-driven culture to help support the retirement security of more than 20 million people is powered by our global workforce. Our employees uphold our Guiding Principles of Integrity, Partnership and High Performance, driving the Fund forward to meet its investment objectives.

Full-time
1,824

Number of global offices
9

Gender diversity
46% women

International assignments and transfers
54

Inclusion and diversity

There is strong momentum around our commitment to foster a truly inclusive and diverse organization, where every employee can feel free to be themselves. Our employee resource groups are driven to effect change within our own culture, and in our communities, through a range of programs and activities.

Go Green

Raises employee awareness to improve collective environmental efficiency and reduce CPP Investments' internal environmental footprint.

MindMatters

Promotes mental health and a psychologically healthy workplace for each of us.

Mosaic

Builds awareness of the rich cultural diversity at CPP Investments.

OUT

Contributes to a diverse and inclusive culture through building awareness of and engagement with the LGBT+ community.

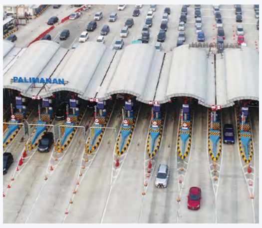
WIN (Women's Initiative)

Aims to improve organizational culture by attracting, developing and retaining high-performing female professionals.

Infrastructure

Indonesia

Team members:
Scott Lawrence,
Andrew Alley,
Paul Bernath,
Yiyi Yang,
Garret Gerow,
Moritz Lindhorst,
Josh Bitonte



Cipali Toll Road

C$550 million

Acquired 45% interest in PT Lintas Marga Sedaya, the concession holder and operator of the Cikopo-Palimanan (Cipali) toll road in West Java, Indonesia

At 117 kilometres, one of the longest operational toll roads in Indonesia and a critical link in the transportation network of the island of Java, as part of the Trans Java Toll Road network

Invested alongside Astra Infra (a subsidiary of PT Astra International Tbk), commencement of a long-term partnership

This is our first infrastructure investment in Indonesia

Direct Private Equity

United States

Team members:
Ryan Selwood,
Austin Locke,
Caitlin Walsh,
Matt Taylor,
Samaar Haider,
Jonathan Miller,
Ather Mohammad,
Alexandra Weinberg

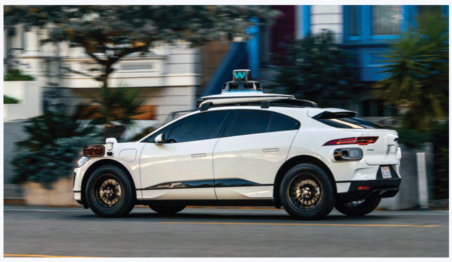
Waymo

US$2.25 billion

Total initial round

Co-lead in Waymo's first external funding round, alongside Silver Lake and Mubadala Investment Company, and other investors

Formerly the Google self-driving project, a proven leader in self-driving technology that is scaling its fully driverless experience



Power & Renewables

United States

Team members:
Bruce Hogg,
Michael Douglas,
Edwina Kelly,
Rahul Bhalodia,
Mike Conrad,
Karen Boutros,
Matt Slahta,
Anna Wang,
Ryan Howson

Pattern Energy

US$2.8 billion

Acquired all common shares of Pattern Energy Group Inc., a renewable energy company, and merged with its affiliated private development company, Pattern Development

A portfolio of 28 operating renewable energy projects that use proven, best-in-class technology

Net capacity of 3.4 GW in the U.S., Canada and Japan with 10+ GW in the development pipeline

Global leadership

CPP Investments Senior Management Team brings a broad range of experience to the organization.

Left to right

Kelly Shen
Senior Managing Director & Chief Technology and Data Officer

John Graham
Senior Managing Director & Global Head of Credit Investments

Geoffrey Rubin
Senior Managing Director & Chief Investment Strategist

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

Mary Sullivan
Senior Managing Director & Chief Talent Officer

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

Mark Machin
President & Chief Executive Officer

Neil Beaumont
Senior Managing Director & Chief Financial and Risk Officer

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

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

Edwin Cass
Senior Managing Director & Global Head of Real Assets

Shane Feeney
Senior Managing Director & Global Head of Private Equity

Deborah Orida
Senior Managing Director & Global Head of Active Equities

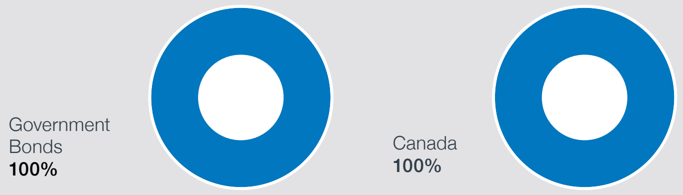
Suyi Kim
Senior Managing Director & Head of Asia Pacific

Our Purpose & Investment Strategy

This section provides an overview of how CPP Investments manages the Fund.

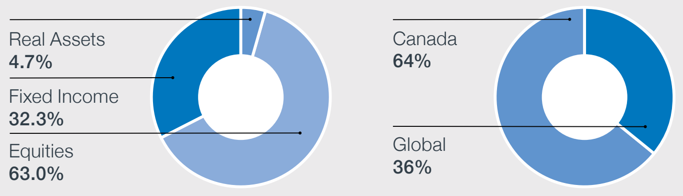
1999 CPP Assets

$36.5 billion



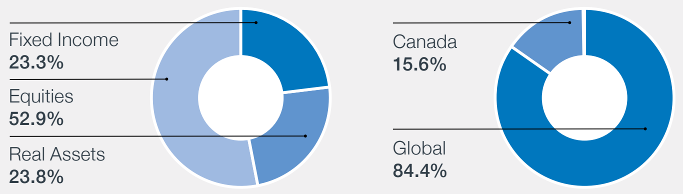
2006 Net Assets

$98.0 billion



2020 Net Assets

$409.6 billion



Strategy

How we manage the Fund

Our investment objectives

The *Canada Pension Plan Investment Board Act* directs Canada Pension Plan Investment Board (CPP Investments) to manage the amounts transferred by the Canada Pension Plan (CPP) in the best interests of contributors to and beneficiaries of the CPP. One of CPP Investments' objectives under the Act 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."

CPP Investments is independent from any government. The Act sets no expectations on economic development, social objectives or politically based directives. As a result, we are able to invest with an unambiguous focus that is in the best interests of CPP contributors and beneficiaries.

When we refer to the Fund, it means the total assets we manage, net of their related liabilities.

Our purpose

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

Until March 1999, the Fund had been invested only in non-marketable Canadian, federal, provincial and territorial bonds (known as CPP Bonds). At that time, CPP Investments became responsible for investing all CPP contributions not needed for CPP payments and administration expenses and for reinvesting all net income generated. Together with net transfers from the CPP of $149.9 billion, which include the CPP Bonds and net cash inflows, the Fund has grown to its current value of $409.6 billion. In January 2019, CPP Investments also took on responsibility for managing funds from the additional Canada Pension Plan (additional CPP). The additional CPP reached $2.3 billion at March 31, 2020, and will grow rapidly with the anticipated substantial additional net cash inflows.

It is critical that CPP Investments manage the Fund in such a manner as to offset the risks and non-investment factors that the CPP itself faces. These include an aging population in Canada, levels of employment and immigration, and the real rate of growth in earnings on which CPP contributions are based. To offset the risks related to future Canadian economic and demographic conditions, our investments are prudently diversified. Combined with the relatively small size of Canadian capital markets, this is the key reason why a large proportion of Fund assets, currently 84.4%, is invested outside Canada.

Independence with accountability

All Fund assets are owned by CPP Investments and are entirely separate from any government's assets. Contributions by CPP members and employers that are not needed to pay current CPP benefits are transferred to CPP Investments and are invested in accordance with the legislative mandate of CPP Investments. These contributions may be thought of as savings invested to generate future retirement 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 by CPP Investments.

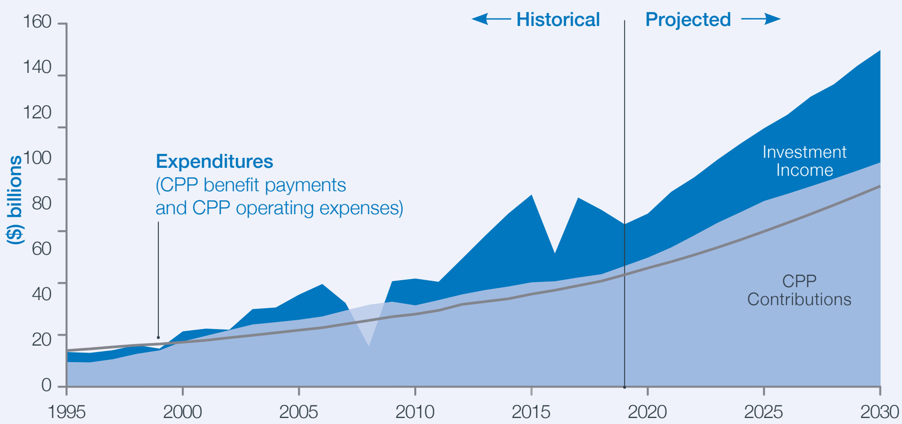
Most importantly, unlike taxes that go into the federal government's consolidated revenue fund, CPP contributions may only be applied to serve the CPP.

Under the 1997 CPP reforms, the federal and provincial finance ministers enshrined the independence from government of CPP Investments with carefully written legislation, ensuring that we can, and do, operate at arm's length, free from political influence. To maintain public trust, we operate in a highly transparent and open way, consistently demonstrating our commitment to accountability in our practices and actions. This includes:

- Disseminating information about who we are, what we do and how we invest through multiple public outreach channels;
- 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;
- Undergoing an external special examination every six years;
- Delivering speeches and making presentations on a wide range of subject matters related to key risks, challenges, opportunities and events affecting our strategy and investments; and
- Actively engaging with stakeholders, pensions experts, news media and other interested parties.

CPP Revenues and Expenditures

As at December 31 ($ billions)



From the 30th Actuarial Report:

> The total Fund assets are expected to grow continuously over the projection period. Within the total, however, the base and additional CPP show different patterns.

> For the base CPP, from 2022 on, a portion of investment income is required to fund expenditures. Investment income, which represented 26% of base CPP total revenues in 2019, is projected to represent 34% in 2030 and to stabilize at about 41% in 2075.

> For the additional CPP, contributions are expected to exceed expenditures until 2057. By 2075, investment income is projected to represent about 70% of additional CPP total revenues, illustrating the greater importance of investment income to its financing.

> Based on Table 11 – Financial Projections for the base CPP, and Table 21 – Financial Projections for the additional CPP.

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

Amendments to the legislation that governs CPP Investments, and certain amendments to the legislation that governs the 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. In safeguarding the Fund's independence, these strong checks and balances protect the best interests of CPP contributors and beneficiaries, as well as the independence of the Fund.

Finally, our overall governance framework, predicated on a highly skilled, diverse and professional Board of Directors, has been cited by various organizations and experts as a leading example for others to emulate in the management of public pension funds.

Current and future status of the Fund

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

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

The most recent actuarial review of the Canada Pension Plan was conducted as of December 31, 2018. It covered both parts of the CPP – the base CPP and the additional CPP introduced on January 1, 2019.

Released in December 2019, the 30th Actuarial Report concluded that the CPP is sustainable for the next 75 years. It showed that investment income in the base CPP account was 107% higher than expected over the three years since the previous review. Of the total $41 billion by which the Fund's assets grew faster than expected, $39 billion came from higher-than-expected investment income. These favourable results, however, should not be expected to repeat in every three-year period. The financial consequences associated with the COVID-19 pandemic in the fourth quarter of this fiscal year are an example of possible impacts on future performance, including lower-than-expected investment income during a three-year period under review. While we expect economic and market recovery from COVID-19 in time, there are likely to be lasting impacts. CPP Investments manages its liquidity such that there is no danger of disruption to CPP benefit payments. Moreover, the 75-year actuarial assessment period for the CPP anticipates severe downturns from time to time.

A key assumption in the 30th Actuarial Report is that, over the 75 years from 2018, the base CPP will earn an average annual net real rate of return of 3.95%. This return is over and above the rate of Canadian consumer price inflation, after all costs. The corresponding assumption for the more conservatively invested additional CPP is an average annual net real rate of return of 3.38%. The next actuarial review will be performed in the calendar year of 2022 and will cover the status of both base and additional CPP as at December 31, 2021.

Base and additional Canada Pension Plan

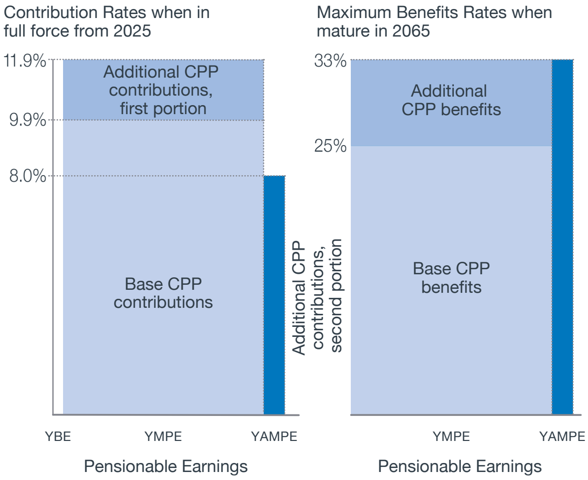
In December 2016, following federal and provincial agreement, Royal Assent was given to Bill C-26, *An Act to Amend the Canada Pension Plan*, the *Canada Pension Plan Investment Board Act* and the *Income Tax Act*. This Act increased the amount of retirement pensions and other benefits that will be paid 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 increases in contribution rates and covered earnings began in January 2019 and are being phased in over seven years.

With this amendment, the Canada Pension Plan is now constituted as two parts. The "base" Canada Pension Plan (base CPP) refers to the portion of benefits and contributions continuing 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 jointly and 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 fund the additional benefits as they accrue (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 below illustrate the following:

- The levels of contribution rates after 2025, following the increases over the phase-in period. Additional CPP requires two portions of additional contributions – the first portion is the increase in contribution rate on earnings that were already covered by base CPP up to the Year's Maximum Pensionable Earnings (YMPE), and the second portion is a new rate that applies only to the additional covered earnings;
- The level of earnings covered by CPP after 2025, following the 14% increase in covered earnings from the YMPE up to the Year's Additional Maximum Pensionable Earnings (YAMPE). This means CPP contributions will be applied to a higher level of earnings for those affected;
- Maximum benefits rising from 25% to 33% of pensionable earnings following 40 years of contributions; and
- The amount of pensionable earnings on which no CPP contributions are made, known as the Year's Basic Exemption (YBE), remains unchanged.

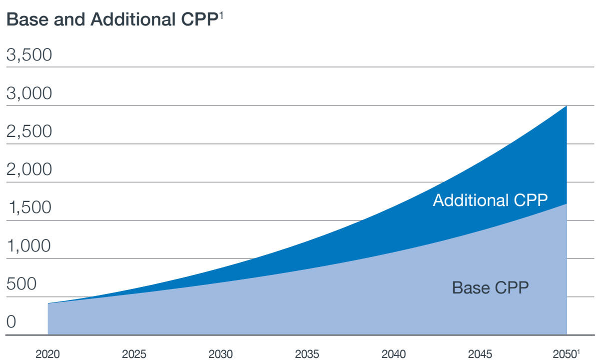
Increase in Maximum Benefits, Covered Earnings and Contribution Rates



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

Growth of the Fund

($ billions)



Office of the Chief Actuary Projections – 30th Actuarial Report

1. In 2050, the equivalent value in constant 2019 dollars for base CPP is $930 billion and for additional CPP is $695 billion.

Financial projections

The charts at right 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 from projections in the 30th Actuarial Report.

Both the base CPP and additional CPP accounts have two sources of growth: cash inflows from the CPP when contributions exceed benefits, and net investment income. For the base CPP, under the 30th Actuarial Report, annual benefits were expected to begin to exceed contributions in the 2022 calendar year; however, the decrease in employment earnings due to COVID-19 is expected to bring this forward. For the additional CPP, contributions are projected to 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.

The additional CPP is fully funded (see call-out box on page 22), whereas the base CPP is only partially funded. As a result, 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 from investment income is expected to grow slowly from 26% in 2020 to 41% in 2080. 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 2080.

Market risk target

CPP Investments expresses the market 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 26.) For the base CPP, CPP Investments has adopted a Reference Portfolio of 85% global equity/15% Canadian governments nominal bonds. As previously noted, investment income will perform a much larger role in sustaining the fully funded additional CPP than it does for the partially funded base CPP. As a result, additional CPP has a lower risk target, with a Reference Portfolio of 50% global equity/50% Canadian governments nominal bonds.

CPP Investments will review the Reference Portfolios for both the base CPP and the additional CPP at least every three years, in the calendar year following the publication of each applicable actuarial report.

Two-account, two-pool investment structure

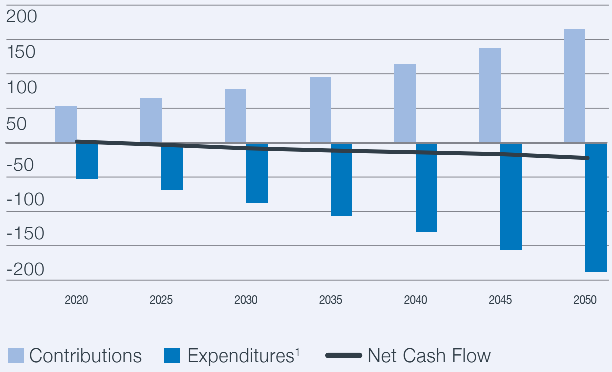
Each of the two parts of the CPP benefit equitably from all of CPP Investments' comparative advantages, operational capabilities and the investment programs we have developed. To ensure this, we must:

- Account for the base CPP and the additional CPP separately, including their respective cash flows, assets and economic interests in shared investments;
- Invest the assets and weekly net cash flows of both accounts in an equitable manner and at the same time; and
- Manage each account cost-effectively.

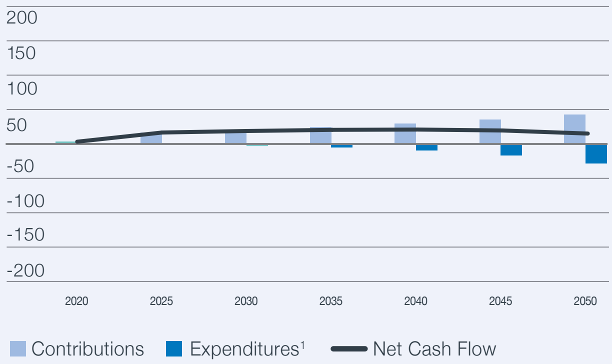
Projected Growth of Base and Additional CPP

($ billions)

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

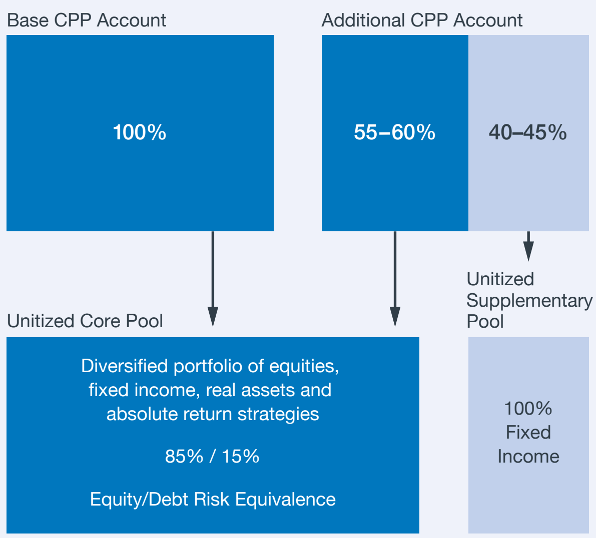


Additional CPP Contributions, Expenditures[1] and Net Cash Flow



1. CPP benefits plus CPP operating expenses.

Two-Account, Two-Pool Investment Structure



To meet these objectives while enabling the two accounts to have different overall market risk levels, CPP Investments maintains 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.

Net cash flows to or from the base CPP are entirely allocated to or from the Core Pool, and 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% – are allocated to the Core Pool. This unitized pool structure allows the base and additional CPP Investment Portfolios to benefit proportionately from 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 consists entirely 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.

Because returns in the Core and Supplementary Pools will differ, the proportions of the two pools held by the additional CPP account will change over time. CPP Investments rebalances 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 CPP Investments 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 a "Cash for Benefits" portfolio, which is used to ensure the CPP can meet its monthly benefit payment obligations on any business day, as well as pay CPP Investments' operating expenses. The Cash for Benefits portfolios are segregated from the long-term Investment Portfolios and are invested only in liquid money market instruments.

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 pension plan, as the additional CPP is required to be, assets are targeted at all times to equal or exceed the present value of benefits, including payments to beneficiaries and benefits that have been accrued to date by contributors. For such a plan in its mature state, 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 achieved, compared to those expected.

At the other end of the funding spectrum, a completely unfunded (or "pay-as-you-go") plan holds a relatively small amount of 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. To maintain a stable contribution rate, the Chief Actuary estimates that the base CPP's investment income will represent about 40% of total revenues in time. 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, for both the base CPP and the additional CPP, contributions are set such that current investments plus future contributions are expected to fully pay for all accrued and future benefits, while maintaining a stable contribution rate for current and future contributors.

Investment Beliefs

Our Investment Beliefs are collective judgments, each of them providing a beacon as CPP Investments navigates global capital markets to carry out its legislated objective under Section 5(c) of the *Canada Pension Plan Investment Board Act*, "... to invest with a view to achieving a maximum rate of return, without undue risk of loss, having regard to the factors that affect the funding of the Canada Pension Plan." They provide clarity and consistency in CPP Investments' decision-making to evaluate and select appropriate investment strategies globally and help the organization stay the course.

1. **Taking on risk is inseparable from maximizing long-term returns.**
Deliberately and prudently taking investment risk is necessary to earn long-term returns above the rate achievable on a minimum-risk investment. Risk characteristics of differing asset types and investment strategies vary over time, but they are significantly more stable than return outcomes. Overall risk profile is the dominant influence on long-term Fund returns. CPP Investments must take on appropriate, measured risks to meet its legislated objective and to achieve the long-term returns that will best sustain the CPP for future generations.

2. **Long-term investing can provide opportunities for greater rewards.**
Greater certainty of assets and predictability of cash flows allow truly long-term investors, such as CPP Investments, to resist the pressures of short-term market events, persist with soundly conceived strategies and await the rewards of patient investing. Long-term investors can profit from opportunities created by shorter-term investors, such as in times of distress, and from investments those investors are unable or unwilling to take on. Investors with longer horizons can also make greater use of longer-term indicators to better evaluate investment strategies and individual opportunities.

3. **Capital markets provide opportunities for advantaged investors to generate superior returns.**
Global capital markets are never perfectly priced at any level – be it an asset class, geography, sector or security. Public market prices exhibit noise, shorter-term momentum leading to over/underpricing, and some tendency for subsequent mean reversion. Private market prices show similar characteristics but generally with less observed volatility in their reported appraisal-based values. Individual markets, sectors, securities and investments can at times be significantly mispriced in the short term relative to longer-term intrinsic values. This creates opportunity for the skilled and well-informed investor to take positions (long or short) at favourable prices and ultimately reap enhanced value. Given its mandate and comparative advantages, CPP Investments can and should actively manage Fund assets to seek additional long-term returns that exceed the additional costs and risks of doing so.

4. **Sound diversification of assets and exposures builds resilient portfolios.**
Diversification is the most powerful way to enhance investment returns at a targeted level of market risk. Returns on asset classes or types are largely driven by a limited number of underlying and more independent risk-return factors. Truly effective diversification goes beyond standard categories such as asset classes, countries and currencies. It requires looking at underlying risk-return factors, and combining exposures to them to build the most resilient long-term portfolios at the targeted risk levels. Participation in both public and private investment strategies substantially broadens the range of investable assets and available skills. Global diversification of both assets and currency exposures is appropriate to offset purely domestic risks to the sustainability of the CPP.

5. **Active selection of individual investments can outperform passive market participation.**
Employing the expertise required to successfully select individual investments carries significant costs, especially in externally managed funds and private investments. However, in many markets, superior strategy and focused investment selection can add material value, after all costs, relative to passive alternatives or risk-comparable proxies. A wide range of internal skills allows CPP Investments to add net value to the Fund by selecting superior active strategies, managing certain strategies cost-effectively in-house and accessing world-class specialist external managers. Multiple active strategies, drawing upon distinct investment theses, significantly increase portfolio breadth and risk-adjusted returns. Active management can be complemented by low-cost, index-based strategies to achieve the overall factor exposures required for optimal diversification.

6. **Strategic positioning can create value and reduce risk.**
Conditions vary widely across global capital markets and over time, and market-implied returns and prospective risk-return trade-offs embedded in them correspondingly differ. The future direction of market movements can at times be predicted with some confidence, although the path and timing of movements are much less predictable, especially over short periods of time. CPP Investments can make risk-controlled shifts in market exposures in a material fashion to impact Fund-wide allocations, both to add returns by exploiting gaps between current market pricing and longer-term fundamental values, and to reduce risks when appropriate.

7. **Incorporating non-market and emergent factors into decision-making creates more sustainable value.**
Corporations and organizations that better identify and appropriately manage environmental, social and governance factors and other long-term strategic issues are more likely to endure, and create greater value over the long term, than those that do not. Also, more diverse teams that harness the power of inclusion can deliver higher returns. Climate change may well radically change economies and capital markets. Managing the risks and opportunities created by these and other broad factors is an integral part of CPP Investments' investment processes, to ensure the Fund is structured to create value and growth that is sustainable over the long term. CPP Investments engages actively with corporate management teams to foster enhanced business practices, particularly in investments where it has a significant ownership position but also as a responsible steward for all holdings.

8. **World-class governance, accountability and risk management strengthen delivery of maximized returns at appropriate levels of risk.**
CPP Investments is relentlessly focused on investment management and enhancing Fund returns in the best interests of CPP contributors and beneficiaries, and in accordance with our Guiding Principles. Clear accountability for decisions and results is critical to disciplined decision-making, without stifling innovation and appropriate risk-taking. Ongoing management of risks within stated appetites provides a well-defined environment within which to maximize returns.

Our Investment Strategy

CPP Investments' approach to meet the Fund's investment objectives has a dual focus. It is designed to:

- Achieve long-term total returns that will best sustain the CPP and pay pensions; and
- Generate returns materially above what could be achieved through a low-cost, passive investment strategy.

What differentiates CPP Investments' investment approach

To succeed in highly competitive global financial markets over the long term, an investor must have – and make good use of – significant comparative advantages. The enduring nature of the Fund, our governance, our culture and the strategic choices we make drive CPP Investments' global competitiveness and determine our strategies to maximize long-term Fund returns.

Our inherent advantages

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

Long horizon – The CPP must serve Canadians for many generations to come. As a result, the Fund has a much longer investment horizon than most investors. We can assess the prospects of our strategies and opportunities over decades, not just over quarters or years. We can withstand short-term downturns to create enduring value over the long run. Most investors take a shorter-term approach, whether by choice or because business pressures or regulation force them to do so. As such, they are more limited than CPP Investments in their ability to access or retain long-payoff investments.

Certainty of assets to invest – The Fund's future asset base is largely predictable and its pattern of cash flows into the future is generally stable. 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 build investment programs in reliable anticipation of future investment needs. This certainty of assets and cash flows underpins our ability to act as a trusted 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 world-class external partners. Scale also allows us to develop the investment technology and operational capabilities needed to support our 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 nine international centres. This global team creates enduring value by combining best practices, depth, skill, experience and expertise to manage assets both internally and with external partners. A respected brand allows us to attract, motivate and retain high-calibre executives, investment professionals and operational specialists from around the world, and helps differentiate the organization in hotly contested markets for select investments.

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 them, we gain additional access to major investment opportunities. We participate in co-investments and other joint efforts that are beyond the reach of many investors. Our external partners provide rigorous research and on-the-ground knowledge of the local environment, 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. Accordingly, we take into account 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 asset and investment program. Armed with this understanding, we can more effectively combine them into a truly diversified total portfolio that more accurately achieves our targeted market risk and preferred mix of global exposures designed to maximize returns at our targeted risk level.

How we create value for the Fund through active management

In 2006, CPP Investments made the strategic decision to actively manage the Fund to a much greater degree, with the Reference Portfolio as the performance benchmark. The combined value of the total Fund now stands at $409.6 billion. That is more than $52.6 billion higher than the Fund value would be if the assets at April 1, 2006 (plus all subsequent cash flows) earned the combined Reference Portfolios' rates of return.

We recognize that many active investors seek above-market risk-adjusted net 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 is prudent, responsible and consistent with our statutory objectives. We remain confident that our active management approach will generate sustained value-added 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 CPP Investments costs. CPP Investments' 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, CPP Investments, along with McKinsey & Company, BlackRock, Dow Chemical and Tata Sons founded FCLTGlobal. This non-profit organization is 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. In January 2020, CPP Investments' President and CEO was appointed as the chair of the FCLTGlobal board of directors. For more information, see fcltglobal.org.

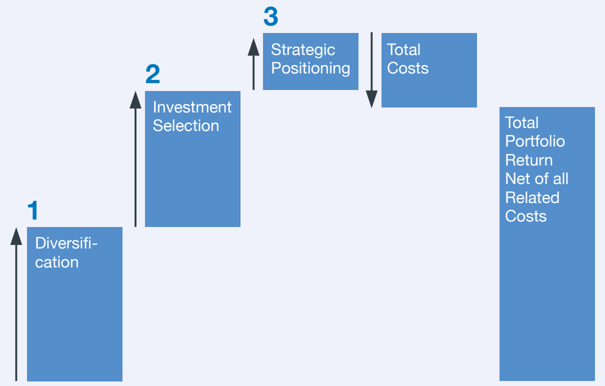
The three sources of total portfolio return and added value

Through active investment decision-making, we pursue both absolute returns and net value-added returns above those of the benchmark Reference Portfolios. Beyond the returns from simple, low-cost exposures to the foundational building blocks of equity and debt investments, three basic sources make up total added value on any portfolio:

1. Diversification

Diversification is the most powerful way to mitigate market downturns and to enhance long-term investment returns at a targeted level of market risk. To diversify soundly, we use the Total Portfolio Approach, one of our developed advantages (see page 24). 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, as described below. We use a prudent degree of leverage to achieve broad diversification across different types of investments at the chosen level of overall market risk, as described on page 33.

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 reduced through diversification, but not eliminated. We believe that, over sufficiently long periods, 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 returns, 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.

Each passive Reference Portfolio can be thought of as a simple two-asset portfolio, with one asset being investment in an index referencing the publicly traded common stocks of large- and mid-capitalization corporations across the world (i.e., global equities) and the other asset being investment in an index referencing the universe of nominal bonds issued by Canadian governments, both federal and provincial (i.e., Canadian governments' debt).

Our decision to diversify very broadly beyond the simple, low-cost Reference Portfolios, without increasing market 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:

i. **Public market investments –** 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 in developed and emerging markets.

ii. **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, however, they generate additional returns to compensate for complexity and illiquidity. We expect CPP Investments' private company investments to deliver higher average returns for alpha (see call-out box on page 25 for more about alpha) that more than cover the higher costs and additional risks associated with these investments. Further, these assets provide additional diversification into smaller companies that benefits the total Fund.

iii. **Real assets –** These investments generate returns from tangible assets through diverse fundamental sources, such as property income, facility-user fees and other revenues from 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 and private investments.

Growth of Investment Programs

($ billions)	**2020**	2019	2016	2011	2006
Balancing Programs	**179.7**	172.6	131.7	97.5	88.9
Active Public Programs[1]	**4.8**	4.9	14.5	2.6	0.2
Private Credit	**32.9**	32.7	21.1	5.1	–
Private Equity	**94.6**	87.7	51.5	22.4	4.4
Real Estate	**46.5**	47.5	36.7	10.9	4.2
Energy and Resources	**7.3**	8.2	1.4	0.3	–
Infrastructure	**35.1**	33.3	21.3	9.5	0.3
Power and Renewables	**8.7**	5.1	0.9	–	–
Total Net Investments	**409.6**	392.0	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. CPP Investments' 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 of assets. As previously noted, private investments generally offer a higher return in part to compensate for their illiquidity; CPP Investments carefully manages this risk within Board-approved overall liquidity requirements. Most important, the special expertise that we and our partners bring greatly increases the likelihood of success in these markets. The chart above shows the growth in our public and 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 at least as great as that from diversification. However, due to the highly competitive nature of investment selection, the long-term reliability of this skills-based value-added is less than that from diversification. Seeking to outperform a market index through active management requires both covering costs and achieving better returns than the average. Moreover, 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 skilful professionals, both internally and externally.

Several of CPP Investments' comparative advantages increase the long-term likelihood of investment selection success. First, our scale and brand enable us to identify and attract 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 often diverge significantly from long-term intrinsic value and earnings potential. This divergence creates opportunities for patient investors. 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.

Outperforming competitive markets is a challenging task and doing so sustainably is even more so. To reduce the risk of undue reliance on a few specific managers and their approaches, we diversify investment selection across multiple active programs and strategies. This allows us to draw upon distinct investment skills. These strategies include:

i. **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. These transactions include private and public equity, lending and credit provision, infrastructure, real estate, natural resources and renewables.

ii. **Private markets deals –** Skilfully selecting, negotiating, financing and managing individual private equity and debt investments. As owners with large stakes – and in some cases representation on the company board – we can make meaningful contributions to improving the operation of businesses and properties. Since we are not forced to sell, we can exit or realize investments at a time of our choosing.

iii. **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.

iv. **Thematic investing –** Investing through "themes" by anticipating long-term structural changes and broad trends such as demographic shifts or alternative energy transitions. Each theme represents future developments 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 has been 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 positioning

Strategic positioning 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 markets are falling and prices have become unduly depressed. Or, we may reduce positions in rising but overvalued markets when we project near- to mid-term future returns will be below long-term expectations.

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

i. Conditions vary widely across global markets over time. We believe that the future directions of market prices can at times be predicted with some confidence, and we can then make appropriate, risk-controlled shifts in portfolio allocations.

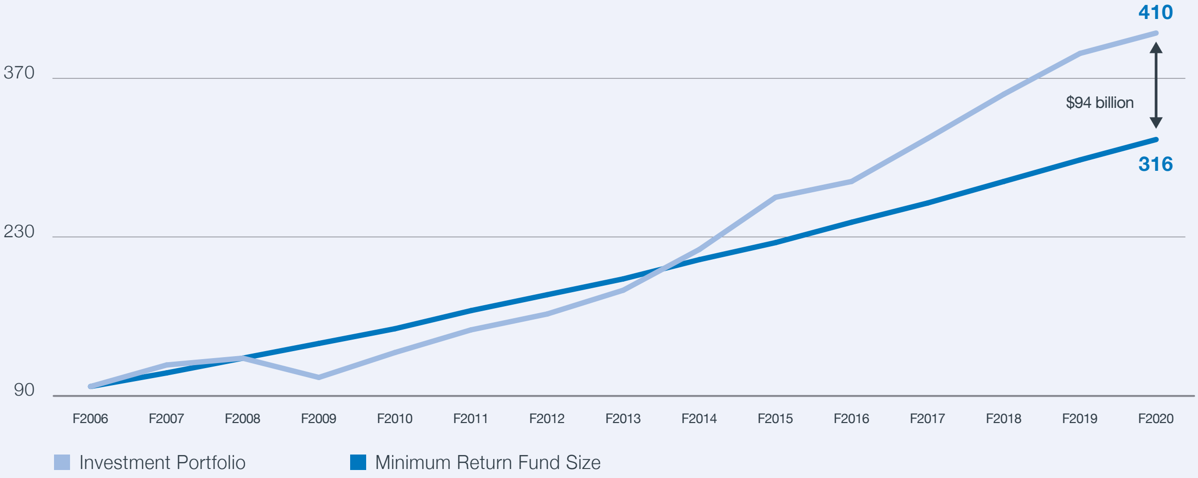
ii. The strategy aligns with our long investment horizon and ability to withstand short-term adverse movements. This allows us to be more concerned with the potential size and likelihood of the opportunity or risk, and less concerned with precisely when the assets will return to their fundamental values.

We continue to develop our strategic positioning processes and programs internally, subject to Board-approved risk limits. While strategic positioning is not typically as powerful in the long run as diversification and investment selection, it can at times add materially to total returns, or protect Fund asset values, or both.

Excess Return since Inception of Active Management

Versus minimum return required for Plan sustainability[1]

($ billions)



1. Based on CPP Investments' calculation of the minimum required rate of return derived using triennial Actuarial Report contributions and expenditures projections.

Adding resilience to the CPP through excess returns

Under normal volatility in global capital markets, the financing of the CPP and the risk positioning of the Fund are designed to provide a measure of resilience for sustaining the existing CPP benefits and contribution rates. The following provides a high-level explanation of how that resiliency emerges if CPP Investments succeeds in generating returns higher than those required to sustain the CPP.

The Excess Return chart above shows how the Fund has grown under CPP Investments' active management strategy since April 1, 2006, relative to the lower cumulative Fund growth had returns simply matched the long-term minimum net real returns required for CPP sustainability[1].

While the chart illustrates the realized cumulative effects on Fund size, in practice all investment gains and losses are immediately recognized in the triennial Actuarial Reports as they occur; excess returns are not held in reserve as a buffer. Rather, at the time of each Actuarial Report the Office of the Chief Actuary will re-compute the Minimum Contribution Rates for each of the base and additional CPP accounts, given the actual outcomes that have occurred since the prior report. If all other actuarial assumptions were exactly realized in the three-year period, any gains due to investment returns higher than required for sustainability would reduce the Minimum Contribution Rate (and conversely for returns lower than required).

If CPP Investments continues to outperform the required rates of return, then all else being equal, the positive margin of the legislated contribution rates over the Minimum Contribution Rates will widen over time. Should the CPP experience adverse outcomes for investment returns, the margin will tend to narrow. The higher the contribution rate margin at the start of each three-year period, the more resilient the CPP is to an adverse experience in that period. If the margin disappears, i.e., the Minimum Contribution Rate exceeds the current legislated rate, the CPP may become subject to an adjustment in contribution rates or benefits.

Realized investment returns are only one factor related to the potential for an adjustment to CPP contributions and benefits. This likelihood and size of adjustment is also dependent on many other factors including 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 the contribution rate or benefits due to sufficiently large impacts of these other factors.

1. Estimates derived by CPP Investments from Actuarial Reports

Our view on foreign currency exposures

Changes in foreign exchange rates on our non-Canadian investments have a substantial impact on short-term investment performance expressed in Canadian dollars. 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 at times generating it quickly to meet hedging contract obligations.

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

1. For a Canadian global investor, hedging foreign equity returns tends to increase, rather than reduce, overall return volatility. 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 Fund's foreign investments.
3. The cost of hedging currencies of many developing countries is high. 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 Fund returns in either direction. In years of major strengthening or weakening of the Canadian dollar, total performance of the 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.

Balancing internal and external expertise

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

- Our Relationship Investments group within the Active Equities department 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 Capital Markets and Factor Investing department can draw on specialized strategies, trading and structuring capabilities. Our Quantitative Strategies & Risk Premia group, for instance, can bring to bear the advantage of using insights based on various time horizons combined with analytical and modelling capabilities.
- Our Real Assets, Private Equity and Credit Investments departments each have the ability to invest directly in many types of investments around the world, and also to co-invest cost-effectively with well-aligned external partners.
- Our international offices are a critical component in maintaining valuable expertise, insights and partnerships in all international markets.

Equally, however, we recognize the enormous breadth of external expertise that can benefit the Fund. We will consider engaging an external manager in any desired strategy that we cannot execute as effectively, net of all costs, on our own or that complements existing programs. These strategies must be relevant, distinct and meaningful. Expert external managers not only provide specialist strategies, but they often also share valuable knowledge with us as long-term partners.

The Investment Committee of 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. Accordingly, 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 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 external management capabilities from those that are fleeting, weakly founded, conflicted or poorly executed.

Climate change

CPP Investments seeks to be a leader among asset owners and managers in understanding the investment risks and opportunities presented by climate change. This aligns with our legislative objectives.

Our multi-departmental Climate Change Program plays a leading role in enhancing our understanding of this important issue.

As part of our climate change work, CPP Investments has been a strong supporter of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD). The Financial Stability Board is an international body created by the G20 in the wake of the 2008 Global Financial Crisis to monitor financial system stability. CPP Investments aims to fully adopt the TCFD's recommendations by the end of fiscal 2021. The recommendations have four pillars. CPP Investments' approach to each is detailed below.

1. Governance

CPP Investments' Board of Directors oversees enterprise-wide efforts to understand and manage climate-related risks and opportunities. At least once a year, Management reports to the Board about our activities related to climate change, including the most material investment risks and opportunities presented by climate change. Our Chief Financial and Risk Officer (CFRO) and our Risk group report regularly to the Risk Committee of the Board on climate change risks. This includes updates on carbon footprint metrics and the results of scenario analysis. The Investment Committee of the Board also reviews and approves the most significant investments and material climate change risks related thereto.

Our President & CEO sets Management's overall approach for governance and risk management. Our CFRO is accountable to recommend to the Board the risk appetite and limits of the Fund across all dimensions of risk, consistent with the Integrated Risk Framework (see page 95) having specific regard for CPP Investments' unique objectives.

CPP Investments' Climate Change Steering Committee comprises our CFRO and Chief Investment Strategist, along with senior representatives from Active Equities, Real Assets, Public Affairs and Communications and the Office of the CEO. This committee has overall accountability for the development and implementation of the mostly firmwide Climate Change Program. Our Global Head of Active Equities is Chair of this committee and sponsors the Program. This committee oversees the work of CPP Investments' Climate Change Management Committee, which guides and supports the organization's climate-related top-down and bottom-up work. Some members of these committees, as well as employees elsewhere in the organization, have part of their variable pay tied to progress on climate change-related objectives.

2. Strategy

Specifically addressing climate change in our investment activities puts us in a better position to make more informed decisions over the long term. Major portions of our portfolio – including transportation and logistics, fossil fuel producers and many other companies – are particularly exposed to climate change related-transition risks. These risks include governmental policy, legal, technology and market risk as the world shifts to a lower-carbon economy. Some assets, such as real estate and infrastructure, may also be vulnerable to physical risks, such as natural disasters related to climate change. Simultaneously, new investment opportunities in sectors such as renewable power and resource efficiency will continue to emerge. To this end, we have dedicated resources across CPP Investments to understand, top-down and bottom-up, the risks and opportunities brought on by climate change from a financial point of view.

The Total Portfolio Management (TPM) department takes a top-down approach with the goal of, eventually, directly factoring a full range of climate change risks and opportunities into CPP Investments' investment strategy and total portfolio design. It works to understand potential climate change and energy transition pathways for various countries, along with the resulting economic and market impacts. Physical risks are captured using CPP Investments' new internally estimated damage function, which specifies how physical risks affect economic activity at various levels of global warming. Transition risks arise from the potential shift to a low-carbon economy, which is dependent on factors including extensive changes in policy, technology and the development of carbon markets. The range of uncertainty around transition risk is inherently wide. This year, we quantified this range using models and scenarios from the UN Intergovernmental Panel on Climate Change.

In order to help each investment department determine the materiality of energy transition and climate change scenarios on its activities, TPM is developing a framework to customize and refine our view of these risks and opportunities going forward. We started with standard scenarios produced by external providers and are moving towards our own internal scenarios. These will allow us to create consistency with other internal forecasting teams. They will also provide the level of detail required for our investment decision-making.

In addition, this year we started tracking an initial set of key indicators, or "signposts," to better understand which energy transition and climate change scenarios are most likely. These signposts include energy demand, technology, policy and physical effects.

To complement this top-down work, our Finance, Analytics and Risk (FAR) department is identifying, assessing and monitoring climate change risks. This includes 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 our Investment Portfolios. The objective is to implement controls to reduce their risks. Our assessments consider various time horizons. They will allow us to quantify the potential financial impact and assess compliance with CPP Investments' Risk Appetite Statements, which are an integral part of our Integrated Risk Framework (see page 95).

In 2019, we engaged third-party service providers to further explore options to quantify the potential financial impact of different global warming scenarios on CPP Investments' portfolios over different time horizons. Although this work is in the early stages of development, it provided directional estimates that enable us to identify portfolios or companies that may be relatively more sensitive to climate change transition risk and physical risk under the extreme scenarios. We also gained a better understanding of areas requiring further methodological enhancements.

From a bottom-up perspective, our assessment framework incorporates consideration of climate change-related risks into our most material individual investments. The framework allows investment teams and approval committees to identify and incorporate key transition and physical risks and opportunities into their due diligence process and assessment of fair value for these fundamental investment strategies. This framework will be extended into the review of existing investments in the year ahead.

As part of our strategy, CPP Investments created the Power & Renewables (P&R) group in 2017 to better position the Fund to invest in climate change-related opportunities with the goal of helping diversify the portfolio as the world transitions to a lower-carbon energy supply. Since then, the P&R group has been making significant investments in renewable energy projects around the globe. The combined value of these assets in the group's portfolio is now more than $6.0 billion, or 1.5% of the Fund.

CPP Investments was the world's first pension fund manager to issue a green bond to help support our investments in such opportunities as pursued by Power & Renewables and other groups. Green bonds provide CPP Investments with additional funding as we pursue acquisitions of eligible assets including renewable energy producers and LEED Platinum-certified buildings. To date, we have issued four green bonds. This included a $1.5 billion Canadian dollar-denominated green bond sale, and two sales of euro-denominated issuance worth €1 billion each. We also issued a green US$500 million Floating Rate Note. Green bond financing expands our investor base as we invest in assets that are resilient to the energy transition.

CPP Investments' Energy & Resources (E&R) group operates an Innovation, Technology and Services strategy. This strategy capitalizes on opportunities created by the global energy transition, such as networks to charge electric vehicles. E&R carefully considers the transition when investing in traditional energy and natural resource assets. Our Thematic Investing team has launched a new climate change opportunities investment strategy.

3. Risk Management

Climate change is a key risk in CPP Investments' Integrated Risk Framework. The Climate Change Steering Committee guides our multi-year effort to identify, assess and manage climate-related risks and opportunities at both the organizational and investment group levels.

Disclosure by our portfolio companies plays a critical role in helping us assess climate-related risks. Because of this, we actively engage with companies to improve climate change-related disclosures. Over time, we have pressed large greenhouse gas emitters in oil and gas, utilities and other sectors for improved disclosure on this issue. CPP Investments also uses its voting power to support shareholder proposals that encourage companies to improve disclosure of climate change-related risks.

For example, since July 2015, CPP Investments has supported more than 130 climate change-related shareholder resolutions. These resolutions have sought deeper disclosure on climate change risk and opportunity management, including: ongoing operational emissions management, asset portfolio resilience, low carbon energy research, public policy intervention and climate change risks in supply chains.

We believe our support of TCFD recommendations will contribute to improved global disclosure of climate change risks. This, in turn, should help asset owners, including CPP Investments, better assess these risks and make sounder investment decisions. We believe that the way corporations engage with environmental, social and governance (ESG) opportunities and risks, including those related to climate change, will contribute to material value creation or erosion over the long term. As a result, we continue to push for enhanced disclosures to inform appropriate risk-adjusted investment decisions fully aligned with our mandate.

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

4. Metrics and Targets

In 2019, CPP Investments published its first carbon footprint, Scope 1 and 2, of both our public and private investments. Scope 1 refers to direct greenhouse gas (GHG) emissions from an organization's owned and controlled sources. Scope 2 refers to indirect emissions from the generation of purchased energy. This included metrics on total carbon emissions and carbon intensity. The full report can be found in our *2019 Report on Sustainable Investing*.

We also consider key performance indicators for GHG emissions, water consumption and energy efficiency in our individual investments.

In addition, we continue to advance our thinking on the appropriate metrics and supporting methodologies to help us measure and monitor climate risk. We will explore options to partner with climate data providers and expand our measures to potentially introduce forward-looking metrics in the coming years. Those metrics will help us better understand transition risk across value chains.

A strategic direction for CPP Investments in 2025

Over the past two years, Management and the Board of Directors have worked to develop our CPP Investments 2025 strategy, which positions CPP Investments as a world-class investment organization in terms of its governance, talent, partnerships and superior financial returns. Approved in April 2018, CPP Investments 2025 positions the organization to scale into 2025 and beyond. It increases the Fund's resilience to a major market downturn, such as we see this year, and to the impacts from forces such as disruptive technology, climate change and geopolitical shifts.

The four areas of focus in the implementation plan and roadmap to execute CPP Investments 2025 are:

- Our Investing Strategy – scaling our private and public investment programs, creating investment agility and investing up to one-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, which add even greater value to our investment process and international competitiveness; and
- Evolving our culture to be even more innovative, ambitious and agile, as well as more inclusive and diverse.

Our Total Portfolio Investment Framework

To successfully maximize returns from all three of their sources – diversification, investment selection and strategic positioning (see page 25) – while controlling a variety of risks, we have developed our Total Portfolio Investment Framework. It has four principal components:

1. **Risk Appetite** – expressed through the Integrated Risk Framework (see page 95) incorporating Board-approved Risk Appetite Statements, leading to the Reference Portfolios as the overall market risk targets in the base and additional CPP Investment Portfolios;
2. **Diversification** – guided by the forward-looking Strategic Exposures targeted for the base and additional CPP;
3. **Portfolio Management** – executed through the current year Target Exposures 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** – primarily maintained by holding the market risk of each Investment Portfolio within a narrow range around the risk of its corresponding Reference Portfolio while adhering to all limits contained in the Risk Policy.

1. Risk appetite – the Risk Appetite Statements

The foundation of overall 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.

The Risk Appetite Statements address, among other items:

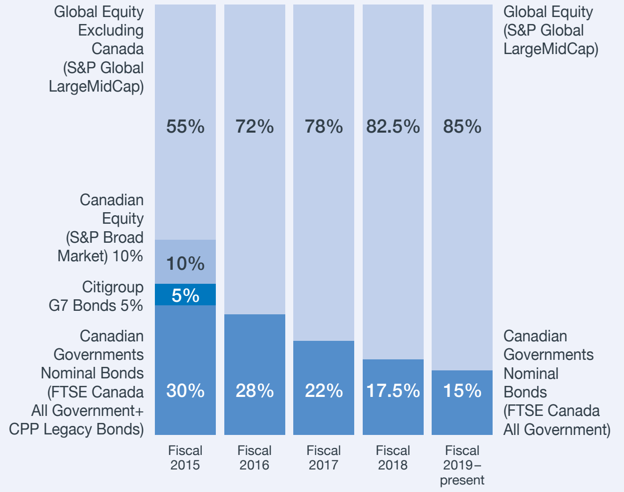
- Market and credit risk, in terms of:
  - Maximum acceptable loss of Fund value over the next one-year and five-year periods; and
  - Maximum acceptable probability of adverse CPP plan adjustment arising from insufficient investment returns within the next 20 years.
- Liquidity risk, in terms of minimum liquidity required to ensure sufficient cash availability to:
  - Sustain CPP Investments' "AAA" credit rating;
  - Rebalance the Fund exposures when necessary; and
  - Fund new investments.
- Strategic risk, including:
  - Inappropriate investing strategies including the use of active management and the selection of our market and leverage risk targets;
  - Inability to satisfactorily implement strategies; or
  - Insufficient agility to respond to changes in the global investing environment.

We currently express the appropriate market risk targets for the base CPP and additional CPP primarily by means of their Reference Portfolios. Both 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 on page 33 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. The Reference Portfolios also serve as the published benchmarks for the return performance of each CPP account, net of all investment costs and CPP Investments operating expenses (see page 57).

CPP Investments' Management and the Board of Directors review the Reference Portfolios at least once every three years and will do so in fiscal 2021. They take into account the increasing maturity of the CPP, the evolving funded status of each part of the Plan, and CPP Investments' 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. It calculates this 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 asset class weights, as shown on page 33, are currently appropriate for the Reference Portfolios.

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



To achieve these distinct market 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 55% to 60% 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 21.

Global equities

"Global equities" includes both developed and emerging markets and takes into account the evolving market capitalization in each country. 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, 2020, this weighting was approximately 2.6%. 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.

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

We manage each of the Investment Portfolios to closely match its market risk with that of the associated Reference Portfolio using a blend of investments and strategies that fit CPP Investments' comparative advantages.

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%

As the diagram below shows, we can invest in a higher proportion of bonds than the Reference Portfolio and add major asset classes with stable and growing income. These include real estate, infrastructure and other real assets. 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. We increase expected revenue by raising risk to the targeted level and by introducing a carefully calibrated degree of leverage through the issuance of CPP Investments' 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;
- Enhance overall diversification;
- Maximize return potential at the targeted overall risk; and
- Maintain sufficient liquidity at all times.

Characteristics of Investment Portfolio with Enhanced Return-Risk Profile

Simple Passive Portfolio in Two Asset Classes

Simple Passive Portfolio	Characteristic	Illustrative Portfolio
85/15	Equity/Debt Risk Equivalence	85/15
None	Active Programs Contribution	Moderate
Higher	Public Equity Allocation	Moderate
Lower	Diversification	Higher
Lower	Comparative Advantage Alignment	Higher
Higher	Potential Loss due to Market Risk	Moderate
No	Best Return-Risk Profile	Yes

Illustrative Portfolio in Multiple Asset Classes and Programs

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 and leverage (the "Strategic Exposures"), best suited to meet each Investment Portfolio's long-term objectives at the same market 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. We ensure that the active investment programs contribute sufficiently to the desired exposures and the additional returns generated through their managers' skills. We also review the requisite balancing programs and external borrowing that are necessary to maintain total portfolio exposure 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 on the right. This Strategic Portfolio also conveys our long-term expectations 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, which has significantly higher expected return than the Reference Portfolio and greater resilience to extreme downturns.

Based on our strategic allocation process and taking into account the practical business and investment plans of each investment department and group, clear annual guidance is centrally provided for investment departments, such as:

- The intended portfolio characteristics of each investment program, including, geographic region, sectors and types of investments;
- Intended contributions to total portfolio exposures;
- Targeted size of assets and/or risk allocation in five years' time; and
- Long-term, steady-state expected returns.

As always, however, 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, exposure or geographic region.

3. Portfolio management – the 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 values and exposures of portfolio investments change daily as investments are bought, sold and re-priced.

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

- The Active Portfolio comprises the collective holdings that directly result from the specific investment selections of the investment departments, as influenced by their programs' top-down guidance.
- The Balancing Portfolio comprises the remainder of total assets, held entirely in readily tradable public market securities.

These combined portfolios are always subject to the Board-approved Target Portfolio bands controlling total portfolio asset class and geographic exposures, as well as absolute risk limits and maintenance of 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 execute trades within the Balancing Portfolio to bring the Core Pool back into line.

We complete the Balancing Process 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.

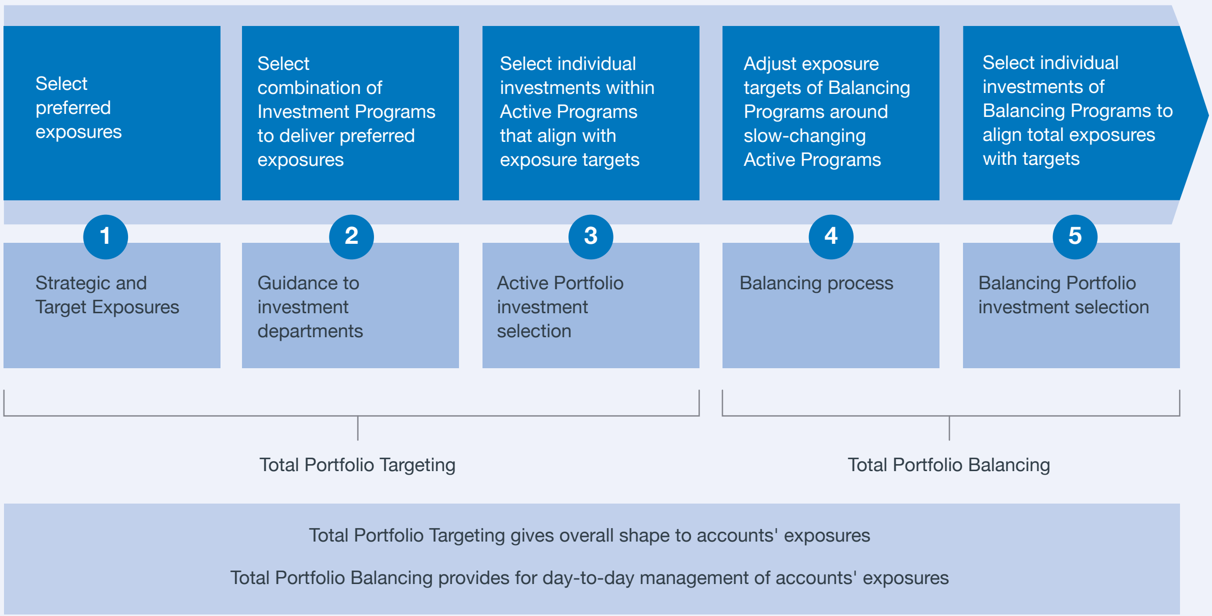
Strategic Portfolio Asset Class and Geographic Classifications and Percentage Weights

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 (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 market risk level and helps maintain necessary liquidity.

Total Portfolio Investment Framework



4. Risk monitoring and management

In fiscal 2018, CPP Investments completed development of our Long-Term Risk (LTR) model. This model is used to measure and compare potential investment losses over longer horizons. It also compares the market 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. The model incorporates forward-looking views, on key factors driving potential returns, over longer time horizons.
3. Primary quantification of potential reported loss is expressed over a five-year horizon. The LTR model 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. The model incorporates all major contributors to returns and risks. This includes non-systematic risks that are particular to an asset or to active portfolio management decisions.
5. The absolute value of the LTR risk metric is translated into its equivalent equity/debt allocation percentages. These allocations are 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.

Aligning the Investment Framework Throughout the Organization

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 is their internal financial leverage or debt level. 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 have identified five underlying key return-risk factors that can be used throughout the Total Portfolio Investment Framework. We model and map each investment or program based on the extent to which each risk factor affects it. The key factors identified in our risk model address the returns, risks and correlations of:

- Economic growth, which drives equity investment returns over the long term. We distinguish between developed and emerging markets;
- Government bond yields. Again, we separate developed and emerging markets;
- Returns to publicly traded real estate;
- Credit spreads over government bond yields; and
- Firm size (i.e., the excess of small cap versus large/mid-cap equity returns).

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 expected additional risk and net return of active programs. We use these characteristics to analyze how major new investments or divestments might 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 unduly in the Core Pool through private assets.

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 (see page 94). 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 Risk Policy includes the Absolute Risk Operating Ranges for the upcoming fiscal year. These range limits are expressed in equity/debt equivalent terms, dictating how far the total risk of the Investment Portfolios can stray from that of the Reference Portfolios without specific Board approval.
2. **Reference Portfolio –** Each Reference Portfolio 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.
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 Statements –** These are publicly available documents that the Board approves annually. They are required by the Regulations to the *Canada Pension Plan Investment Board Act* (CPPIB Act) and published on our website. They set out the investment objectives, policies, long-term return expectations and risk management for the Investment Portfolios and the Cash for Benefits Portfolios.

The Board also approves:

- Investments above authorized size thresholds; and
- As required under the CPPIB Act, 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 to monitor:

- Growth and composition of the Investment Portfolios and accounts;
- Management's progress against the year's business plan;
- 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 Management is accountable 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 35 shows how we align all our activities throughout the organization.

Investment Planning Committee

In fiscal 2020, the Investment Planning Committee (IPC) is the primary Management committee with investment strategy and risk 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 34) for all investment departments and recommended them for CEO approval.

The IPC takes into account recommendations by departments and subcommittees. It approves the framework for governing, targeting, measuring and managing investment performance and risk, as well as the Total Portfolio Investment Framework described on page 35. The IPC specifically approves:

- Formal statements of CPP Investments' Investment Beliefs;
- Long-term strategy to balance and maximize the three sources of returns (see page 25);
- Risk management frameworks;
- Definition and appetite for distinct return-risk factors in the Investment Portfolio;
- The 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 CPP Investments;
- New investment programs and their mandates, as well as recommendations to curtail programs; and
- Principles and frameworks for key models and methodologies used for making investment decisions.

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 is able to undertake strategic investments that would fall under its accountability while delegating their day-to-day management to a particular investment group.

Subsequent to the end of fiscal 2020, the IPC was replaced by the Investment Strategy and Risk Committee (ISRC) and certain subcommittees, which collectively cover all risks in CPP Investments' Integrated Risk Framework and ensure that risk and investment strategy are considered on an integrated basis. The ISRC structure of committees has taken carriage of the IPC's prior accountabilities.

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 incidents similar to the Global Financial Crisis of 2008–09, and of other predictive stresses related to material geopolitical and other events such as the COVID-19 pandemic.

CPP Investments uses multiple statistical techniques including Value-at-Risk to measure the aggregated level of potential losses. These include equity, currency, interest rate, credit and other risks within our portfolios. Potential losses are measured over a variety of time horizons. They include losses resulting from borrowers defaulting on loans from CPP Investments and losses from counterparties in financial contracts who fail to meet their financial obligations to CPP Investments.

CPP Investments' Integrated Risk Framework is further described on page 95.

Transaction approvals

The CEO establishes Investment Management Authorities that set out the authorities of investment departments to make specific investment transactions for the Fund. Under the authorities, the Investment Department Decision Committee must approve transactions above certain sizes set out in its terms of reference. In addition, the Investment Committee of the Board must approve transactions above certain amounts.

Sources of liquidity

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

- Issuing debt securities to investors through our Commercial Paper (short-term) and Term Debt programs (medium- and long-term);
- Obtaining and managing desired investment exposures using derivatives in place of physical holdings in certain instances; and
- Borrowing and lending securities through our:
  - prime broker accounts;
  - direct bilateral arrangements with leading financial institutions; and
  - repurchase agreements.

Investment departments and groups

Each investment department or group within a department is accountable for:

- Decisions to propose or reject new strategies and to resize or reposition existing strategies, within the overall IPC guidance and management limits;
- Identifying, accessing, selecting, sizing and exiting from investment opportunities and external partnerships;
- Individual investment transactions to build and manage portfolios, as guided by the applicable investment department guidance; and
- Cost-effective execution of active or balancing 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, relative to the appropriate risk-comparable performance benchmarks.

How we assess and determine fair value

CPP Investments has in place robust valuation processes to measure the fair values of our investments. Fair value is defined under International Financial Reporting Standards as the price that would be received in the sale of an asset, or paid to transfer a liability, in an orderly transaction between market participants at a moment in time. Establishing reliable fair values is critical to reporting on our assets and performance, as well as managing our Investment Portfolios and risks.

The approach for determining fair value differs for public and private investments:

- Public investments: The fair values of investments in public stocks, bonds and other securities that are traded in active markets are determined using quoted prices from stock exchanges and other market data providers. These prices are sourced and reviewed daily by multiple groups across the organization. Valuation controls for these investments focus on the integrity of the processes that source data, update positions and generate the valuation.
- Private investments: The fair values of investments in private equity, real estate, infrastructure and other similar asset classes are determined through valuation techniques that include inputs observed in public markets, such as a multiple of earnings derived from a set of publicly traded comparable companies used to inform the valuation of a private equity investment. Additional techniques include the use of recent transactions, the current fair value of another investment that is substantially the same, discounted cash flow analysis, pricing models and other industry accepted valuation methods.

Since estimating the fair value of private investments requires the application of judgment alongside data, we employ several layers of checks and controls:

- CPP Investments' Finance team is responsible for the oversight of valuation processes, controls and results, independent from investment departments. The team is comprised of certified valuation professionals with extensive experience valuing private assets at accounting firms, asset managers and other large, sophisticated pension funds.
- We use third-party appraisers and external valuation experts in a risk-based manner to provide independent views on the most subjective fair values.
- The fair values reflected in our Consolidated Financial Statements (Financial Statements) are subject to external review and audit.

In instances where fair values are obtained directly from external investment managers, such as for Private Equity Funds and External Portfolio Management investment strategies, we regularly review our partners' valuation practices to be fully satisfied that the information provided is robust. This often includes on-site visits.

Governance over valuation processes and controls is provided by both Management (through the Valuation Committee) and the Board of Directors (through the Audit Committee), with an additional governance layer provided by internal and external auditors.

Valuation practices are continuously reviewed to ensure that we maintain high-quality risk management and governance standards that are required to uphold and sustain the confidence and trust of our stakeholders.

More information on valuations and fair-value measurements can be found on page 102 of this report, as well as in Note 3 of the Financial Statements on page 147.

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 three 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 five-year periods, aligning with our long-term perspective;
2. Department and group performance, judged against a variety of objectives set in annual business plans; and
3. Individual performance.

Full details of our compensation system are provided in the Compensation Discussion and Analysis section, beginning on page 104.

All returns used to inform incentive compensation are calculated after deducting all costs.

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. The recommended value-added targets above the performance benchmarks tie directly back to the steady-state return assumptions that are used in determining the allocations to the relevant investment programs. These target spreads reflect 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 we use to determine the actual and benchmark returns at the total Fund level.

The specific benchmarks for individual investment programs are summarized below:

- Public Markets absolute return strategies: Cash return benchmark on net cash deployed, except zero-return benchmark for pure risk premium strategies, and net dollar return targets for each program.
- Private Equity: For investments excluding Asia, developed markets large/mid-cap public equity index. For Asia investments, weighted blend of developed and emerging markets Asia-Pacific All Country large/mid-cap public equity indexes.
- Credit Investments: For multi-asset strategies, weighted blend of four indexes – global aggregate investment-grade corporate bonds, global high-yield corporate bonds, U.S. leveraged loans, and emerging market bonds. For a major single asset holding, U.S. large/mid-cap equity index.
- Private Real Estate Equity: IPD Global Fund Manager Property Index.
- Energy and Resources: Developed Energy large/mid-cap public equity index.
- Infrastructure and Power Generation: Weighted blend of indexes of global large/mid-cap public equities and G7 government bonds.
- Balancing Portfolio: Custom benchmark representing the evolving systematic risk-return of each component in its programs. This reflects its ever-changing composition and its focus on delivering factor exposures rather than alpha.

CPP Investments response to the global COVID-19 pandemic

In the fourth quarter of the fiscal year, the COVID-19 pandemic resulted in reduced economic activity, exceptional volatility and strain in financial markets and a widespread impact on people around the world. It also ushered in an unprecedented period of working from home for businesses globally and for most CPP Investments employees.

Despite the extraordinary circumstances we face, as a long-term investor we continue to carry out our strategy to the best of our ability under challenging business and personal conditions.

While health and economic outcomes are still evolving at the time of publication, CPP Investments maintains its long-term perspective along with a responsive approach to the situation.

Sustainability of CPP Investments and the Fund

The Fund's sustainability over generations remains strong. Although its current value cannot entirely avoid the impact of recent market declines, our Investment Portfolios are robust, resilient and well positioned to weather severe market events. We remain committed to our investment strategy, including long-term objectives and risk targets. The core principles of our investment approach, such as diversification across types of assets and many different active programs, and within individual portfolios, are paying off.

Employee wellness

During an unprecedented time of social isolation, ensuring the physical and mental health of our employees is a top priority as we respond to the pandemic together and continue to drive our investing priorities.

Risk Management, liquidity and governance

There are several ways we assess and manage risk across the Fund, including our risk framework, risk appetite statements and limits, and our Risk Committee of the Board of Directors. We remain within all risk limits established by our Board of Directors, including limits related to liquidity, risk levels and potential losses. We will continue to stress test our portfolios, looking at investment outcomes under a variety of extreme scenarios so we can be confident that, whatever happens over the coming weeks and months, the Fund remains strong.

Long-term economic views

We do not plan to make significant revisions to our long-term outlook while the pandemic is still underway, nor do we expect a temporary shock of this type to lead to near-term revisions to the fundamental elements of our investment strategy. The Fund remains steadfast in generating long-term value for current and future beneficiaries.

Short-term investment approach

Our investment departments are focused on daily management of their individual portfolios. This includes minimizing losses from existing positions and prudently assessing the liquidity of our portfolio companies as they navigate the pandemic.

Investment opportunities and capital deployment are being considered judiciously – taking advantage of new investment opportunities only where we can sufficiently price their risks under great uncertainty and volatility.

Rebalancing the Fund

Global financial markets reacted to the spread of the novel coronavirus and the negative economic consequences of restrictions imposed by governments. The result was expectations for near-term economic contraction and unemployment, which gave way to a rapid decline in the asset valuations such as equity and credit, and a rally in the price of "safe-haven" assets, such as sovereign bonds. As a result, the composition of CPP Investments' Core Pool was altered materially, with the weight of sovereign bonds increasing in proportion to declining values of equities and credit. Given this, the pool was rebalanced to buy lower-priced equity and credit investments and sell sovereign bonds. Such rebalancing is part of our normal process, and it ensured that the Core Pool remained within the specified risk governance limits and has our desired long-term exposures.

We continue to evaluate our private investments in terms of operational impact, and made material valuation adjustments where appropriate, with a limited number of longer-term issues identified.

Mobilizing our Financial Crisis Management Team

CPP Investments' Financial Crisis Management Team was created in late 2017 to ensure we were well equipped to act prudently, and quickly, in a financial crisis. Senior leaders from across the organization are represented in the group, with executives acting as advisors. The Team was mobilized in February 2020 to coordinate CPP Investments' response to the novel coronavirus.

How we view the potential for decreased CPP contributions

CPP Investments is closely monitoring changes in CPP contributions inflows over the near term and is ensuring that our liquidity management and our investment transactions pipeline and commitments factor in these impacts.

Building organizational resiliency

CPP Investments views the COVID-19 shock to economies around the world as severe, but nevertheless largely temporary and recoverable. The sudden stop in global activity driven by efforts to help contain the spread of COVID-19 has had a dramatic impact on employment and the near-term outlook. At present, CPP Investments does not view this shock as being one that would significantly alter our views of long-term GDP growth or risk premia, nor the overall planned composition of Fund investments. We will remain vigilant and re-evaluate this view as the world emerges from the current shock.

Investment departments overview

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

- Total Portfolio Management
- Capital Markets and Factor Investing
- Active Equities
- Credit Investments
- Private Equity
- Real Assets

Details about the fiscal 2020 and longer-term performance for each investment department begins on page 65.

Total Portfolio Management

The Total Portfolio Management (TPM) department focuses on long- and medium-term design of the Investment Portfolios, and ongoing implementation of the Total Portfolio Investment Framework (see page 35). TPM coordinates and guides the organization's investing activities for both the base CPP and additional CPP accounts to equitably manage each account to maximize its long-term returns without undue risk. TPM has the following broad responsibilities:

- Develop the recommended Reference Portfolios, and the long-term return-risk factor allocations leading to the Strategic Exposures (as described on page 33), for each of the Investment Portfolios.
- Develop the medium-term construction of the Core Pool in which both Investment Portfolios invest, in terms of the targeted sizing and roles of its active and balancing investment programs.
- Develop the current-year target exposures, and the asset and geographic range expectations for the composition of the Investment Portfolios.
- Align the investment activities of other departments and investing groups so that each one contributes to the Investment Portfolios in a coherent way.
- Manage the components of the Core Pool Balancing Portfolio to achieve and maintain intended total portfolio exposures on a day-to-day basis. TPM works closely with the Financing, Collateral and Trading group to optimize the efficient construction of the Balancing Portfolio components through public securities selection and trading.
- Guide the Investment Portfolios' overall foreign currency exposures (with the exception of active tactical currency allocation).

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 CPP Investments invests. This group determines the long-term desired 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 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. This includes a periodic review of the Reference Portfolios.

Active Portfolio Management

The Active Portfolio Management group aligns active program activities with CPP Investments' desired long-term portfolios. Applying its ongoing research into investment strategies, the group annually provides coordinated strategic factor allocations and other characteristics 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. This investment department guidance ensures the optimal diversification benefits of factor exposures and active management strategies across investment programs. The group also leads the organization-wide Knowledge Sharing and Collaboration program (as described on page 13).

Balancing Portfolio Management

The Balancing Portfolio Management group is responsible for the day-to-day management of the Balancing Portfolio. The objective is to ensure that the Core Pool has the desired exposures when the active and balancing portfolios are combined, intentionally complementing one another. Monitoring the evolving overall exposures of the Core Pool, the group determines when, to what extent and by what means rebalancing is required to adjust exposures. This group works with the Financing, Collateral and Trading and Public Credit groups to design and execute appropriate and cost-efficient re-balancing trades. The Balancing Portfolio Management group is also responsible for the day-to-day management of the Core and Supplementary Pool weights in the additional CPP account.

Portfolio Engineering

The Portfolio Engineering group designs and builds investment processes that support the design of CPP Investments' overall investment strategy and the management of the Investment Portfolios. Its ongoing research also provides analytics and insights to support total portfolio management decision-making.

TPM's annual portfolio design process is integral to the ongoing development of the Investment Portfolios. In conjunction with other investment departments, TPM determines the full range of potentially attractive investment areas in each active program over one- and five-year periods. TPM works with each of the other investment departments, narrowing down the potential investment areas to each program's preferred five-year deployment range. In doing this, they take into consideration the total Fund and both the base and additional CPP accounts. This enables each of the two accounts to achieve their desired return-risk factor allocations in a feasible and practical manner. The Investment Planning Committee approves long-term portfolio construction and investment department guidance annually.

Capital Markets and Factor Investing

The primary goal of the Capital Markets and Factor Investing (CMF) department is to ensure that CPP Investments has the flexibility to efficiently gain access to many different sources of return. These include global returns from public equities, fixed income securities, currency, commodities and derivatives. CMF also engages investment managers and makes co-investments in public market securities. The department adds value primarily through diversification and tactical positioning. These exposures complement and extend the returns that CMF can achieve through other investment programs, based primarily on security selection.

CMF's activities cover three broad categories to:

1. Use CPP Investments' comparative advantages to generate alpha in various systematic and discretionary investment programs. This includes external investment management partners.
2. Generate 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, doing so in close co-operation with the Total Portfolio Management department, and under the supervision of the Investment Planning Committee.
3. Manage financing, collateral and trading needs. This includes total Fund liquidity and CPP Investments' secured and unsecured debt programs.

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

External Portfolio Management

External Portfolio Management (EPM) oversees a portfolio of externally managed funds and separate accounts that complement CPP Investments' internal investment programs. The group has relationships with 60 asset managers globally. Fund mandates include 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 fund partners.

Financing, Collateral & Trading

Financing, Collateral & Trading (FCT) is responsible for CPP Investments' financing activities, trading and balance sheet optimization. This includes managing collateral and sourcing liquidity by issuing secured and unsecured debt. It also sources liquidity through alternative vehicles such as synthetic financing. The group is responsible for the asset/liability management of the Fund's portfolio. Finally, FCT teams in Toronto and London oversee global trading and execution of all public assets (excluding credit) across all major markets. They do this on behalf of all investment teams and the Balancing Portfolio.

Macro Strategies

Macro Strategies manages five discretionary investment programs for CMF, including strategic positioning programs both internally and externally (see page 27). It invests across multiple asset classes in all major developed and emerging markets in 24 countries. The group uses CPP Investments' inherent advantages of scale, a long time horizon and developed expertise to generate returns in excess of market benchmarks.

Quantitative Strategies & Risk Premia

The Quantitative Strategies & Risk Premia group delivers returns by building and maintaining a portfolio that spans 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 will 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 is also designed to be diversifying over time to broad market indexes.

Research & Innovation Group

The Research & Innovation Group (RIG) focuses on defining and leading global research in CMF. They develop the research agenda in partnership with the department's other groups. RIG has a strong focus on innovation. It actively pursues unique approaches to the development and application of novel forecasting, analysis and portfolio construction techniques. RIG also focuses on data sourcing and data engineering. RIG works on data discovery as part of its research, identifying valuable new sources of information and incorporating them into investment programs.

Alpha Generation Lab

The Alpha Generation Lab (Lab) was created to identify and pursue research initiatives and transformational changes focused on the intersection of investing, technology and data. The Lab was established with staff from CMF, Technology & Data and Active Equities. The Lab's mandate is to develop significant advantages for CPP Investments in the search for alpha by accelerating innovative investment capabilities focused on technology and data. This group is accountable for conceptualizing, incubating and building new alpha-generating capabilities across the organization.

Active Equities

Active Equities (AE) invests globally in public or soon-to-be public companies by way of 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, as well as in select earlier-stage private companies and through external managers. The Sustainable Investing group (see below) assesses environmental, social and governance (ESG) factors, including climate change, supporting investment teams across the organization.

AE is organized into the following seven groups:

Active Fundamental Equities

Active Fundamental Equities (AFE) invests in public equities and soon-to-be listed companies, primarily in North America and Europe. It uses long-term fundamental analysis to select high-conviction, single-company investments. AFE assembles these investments into a long/short, market-neutral portfolio using an optimization process. This approach aims to minimize or remove unintended factor exposures. The result is a portfolio with maximum exposure to long-term fundamental research insights.

Direct Equity Investments Latin America

Direct Equity Investments Latin America (DEILA) was formed in fiscal 2020 with a primary focus on investments in the Latin America region. DEILA is a regional program with a broad, flexible mandate that incorporates private equity (directly and through funds) and public equity investments. The DEILA team establishes long-term partnerships with like-minded investors, reputable family offices and other strategic individuals or organizations to support long-term growth and value creation in Latin America.

Fundamental Equities Asia

Fundamental Equities Asia (FEA) performs fundamental research on public equities, or soon-to-be public equities throughout Asia. The group manages a portfolio of high conviction, single-company investments as part of a fundamental long/short investment strategy. It also makes significant, direct minority ownership investments, with an emphasis on 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. Its geographic focus is North America and Europe. Acting as a cornerstone investor, RI aligns with management teams and boards of directors, often with governance rights, to support long-term value creation in target companies. RI chooses situations in which capital from CPP Investments can make a meaningful difference to the success of the company and can help it to outperform its peers in the long term. The group focuses on transformative growth opportunities, material shareholder transactions involving large ownership blocks, and significant capital events.

In most cases, RI obtains governance rights commensurate with the importance of its stake. In turn, the company benefits from having a supportive, patient and knowledgeable cornerstone investor with a longer time horizon.

Research & Portfolio Strategy

Research & Portfolio Strategy is a new group formed in fiscal 2020. The Research team is responsible for delivering alpha through direct, data-driven insights and for partnering with investment teams across CPP Investments. This enhances traditional research with advanced analytical capabilities that use large, unstructured and alternative data. The Portfolio Strategy team oversees the overall portfolio design and construction for AE to maximize alpha generation across geographies, sectors and strategies.

Sustainable Investing

The Sustainable Investing (SI) group has expertise in matters of environmental, social and governance (ESG), including climate change. SI assesses ESG risks and opportunities and works with investment departments across CPP Investments. Considering ESG factors in investment decisions will lead to better long-term investment performance across the Fund.

SI strives to enhance the long-term performance of companies in which CPP Investments invests through its engagement activities, leading the organization in its role as an active, engaged owner. This includes proxy voting and engaging with companies, either individually or collaboratively with other investors. SI has five engagement focus areas: climate change, water, human rights, executive compensation and board effectiveness (which includes our focus on diversity). SI will expand these focus areas in the year ahead. The group also houses the ESG database and materiality matrix and supports the Sustainable Equities beta-test of an investment portfolio. This is expected to yield enterprise-wide knowledge-sharing opportunities.

SI's climate change work supports CPP Investments' broader efforts on this issue, as described on page 30.

Thematic Investing

Thematic Investing (TI) conducts in-depth, top-down research to identify long-term structural trends. It then makes investments to gain global exposure to these themes. TI's in-depth research provides an informed view on the business impact of innovation in technology, business models and behaviours. Since these themes evolve over many years (in some cases decades), they align well with CPP Investments' long-term investment strategy. Capital may be deployed using public equities, select earlier-stage private companies and external investment managers. The objective is to outperform in the long term, relative to global equity markets.

Credit Investments

Credit Investments (CI) manages CPP Investments' public and private credit investments globally. CI invests in all credit and credit-like products across the capital structure, in all sectors and along the rating spectrum, with the exception of local-currency sovereign bonds (see page 29). The department focuses on liquid/syndicated and direct investing in both investment and sub-investment grade corporate and consumer credit. CI invests in both physical and synthetic financial instruments.

CI makes direct investments in many areas, including corporate debt, consumer credit, structured credit, real asset-backed financing and royalty-related income streams. The department sources these through participation in 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 and efficient access to certain markets, CI invests in platforms and other capital deployment vehicles and may gain 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 corporate credit or credit-like opportunities in both primary and secondary markets across the Americas. The group focuses on liquid and illiquid debt across the capital structure. 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 & Financials

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

APAC Credit

APAC Credit (APAC) is focused on sub-investment grade corporate, structured and real asset credit in the Asia-Pacific region, in both primary and secondary markets. The group invests both at the asset and corporate level using a variety of instruments including leveraged loans, high-yield bonds, convertible bonds, senior and mezzanine loans, as well as structured credit products including non-performing loan assets. APAC invests primarily in China, India and Australia, as well as other developed and emerging markets in the region. The strategy is largely sector agnostic and can provide both U.S. dollar and local currency solutions. The group also engages selectively in strategic partnerships in core local markets to achieve scale and gain local access.

European Credit

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

Public Credit

Public Credit (PC) invests in investment and sub-investment grade, public, single-name credits (such as corporate credits in an individual company) and credit indexes globally across all sectors. The group invests in liquid credit products across the capital structure with a focus on products with higher credit ratings. Instruments 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 manages the balancing credit portfolio to maintain the total Fund's credit exposure to the desired level. (See page 34 for more details about the Fund's Balancing Portfolio.) The group also executes public trades for all strategies in CI.

Real Assets Credit

Real Assets Credit (RAC) invests in both public and private markets. The focus is on opportunities to lend against high-quality real asset projects. Asset classes include real estate, infrastructure, energy and resources. Within real estate, products include first mortgages, B-notes, mezzanine debt, preferred equity and single-asset commercial mortgage-backed securities. In the infrastructure, energy and resources sectors, investments include project financing, loan financing, bond financing, senior debt, subordinated debt, preferred equity and mineral royalties.

Private Equity

The Private Equity (PE) department makes private equity investments globally, both directly and with partners. These investments are well suited for large, patient and knowledgeable investors. PE focuses on close alignment of interests between shareholders and management, delivering attractive risk-adjusted returns over extended time horizons. PE maintains relationships with over 150 private equity fund managers and other specialized partners. It seeks to generate investment opportunities that will scale assets under management and add incremental returns efficiently.

The PE department is organized into four investment groups:

Direct Private Equity

Direct Private Equity (DPE) focuses on making direct investments in private companies across North America and Europe. DPE considers investments across the full spectrum of ownership structures, from passive, minority positions to 100% control. The group invests in all sectors except real assets, focusing on sizeable investments alongside aligned partners. These partners include private equity funds, 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, secondary markets and direct investments in private companies, alongside private equity fund partners and other aligned partners.

Private Equity Funds

Private Equity Funds has a diverse and well-established portfolio of investments through its partnerships with private equity managers. PE pursues investments that are expected to outperform public benchmarks and create partnering opportunities across CPP Investments departments. The group makes multi-year commitments to established large- and middle-market buyout and growth equity funds in North America and Europe. It selectively backs emerging managers with limited track records or institutional history. The group also makes minority, passive direct investments that are smaller in size alongside our private equity fund partners.

In addition, the group recently launched the Venture Capital (VC) program in San Francisco. The VC team seeks to make fund commitments and co-invest alongside top-tier VC managers to generate strong returns, while also introducing innovation and growth ideas to the broader CPP Investments organization.

Secondaries

Secondaries participates in the private equity secondary market in North America and Europe. The group's core strategies include the acquisition of limited partnership interests (LP Secondaries). They also invest in General Partner (GP)-led transactions that provide partial or whole-fund liquidity solutions (GP-led Secondaries). In addition, the group makes 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 following sectors: real estate, infrastructure, power and renewables, and energy and resources. Investments in these sectors typically focus on long-term, capital-intensive businesses. These businesses generate relatively predictable cash flows that increase 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.

RA comprises four investment groups:

Energy & Resources

The Energy & Resources (E&R) group makes diversified investments in oil and gas, energy midstream, merchant power, liquefied natural gas, refining and petrochemicals, mining and energy-related technology. The E&R group focuses on key investment themes related to the global energy transition through investments in gas, electrification and energy infrastructure assets around the world.

E&R pursues investments in wholly owned platforms focusing on building companies with strong management teams and long-term value creation potential. The group is also involved in direct resource investments, providing 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, generally for shorter-duration investments. Through these strategies, E&R has developed partnerships across the energy sector.

To further broaden its range of opportunities, the group's Innovation, Technology and Services strategy seeks early stage investments in technologies. These are aligned with E&R's broad, subsector strategies and energy transition. The energy sector is undergoing significant changes. These are the result of new, earlier-stage technology companies that create new processes and technologies and improve existing ones. This results in additional investment opportunities.

Infrastructure

The Infrastructure group invests globally in large-scale infrastructure companies. These companies 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. They provide significant shareholding stakes and meaningful governance rights.

The Infrastructure group targets 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. It works alongside management teams to proactively drive operational and financial improvements for the benefit of multiple stakeholders.

Portfolio Value Creation

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

Power & Renewables

The Power & Renewables (P&R) team invests globally 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 operational. It has a mix of lower-risk, longer-term contracts and power market exposure.

The transition from carbon-intensive economies to environmentally conscious, electric energy markets has created a dynamic and capital-intensive industry. The decreasing cost of renewable energy, combined with global and regional climate change policies, is creating new investment opportunities.

Greater electrification and energy intensity in emerging markets is increasingly being delivered through renewable energy. This enables P&R to deliver meaningful emerging market exposure to CPP Investments. P&R takes advantage of growth opportunities as the energy sector evolves and global power demand grows, especially for low-carbon energy alternatives.

P&R targets larger investments and opportunities to gain significant influence or control. This approach typically results in diversified regional or global portfolios.

Real Estate

The Real Estate (RE) group invests globally in high-quality commercial properties through both the private and public markets. The group takes a targeted approach by focusing on investing with experienced, well-capitalized real estate companies. This is typically done through joint ventures; the group seeks significant co-investments to ensure alignment of interests. Furthermore, RE actively assesses investments within the portfolio to identify opportunities for disposition, when current market pricing may be materially more attractive than a long-term hold. They also identify situations for recycling capital into higher-return investments.

The group's portfolio consists primarily of investments in top-tier, income-producing properties. These generate a stable income stream and are suitable for long-term ownership. RE also pursues development-oriented strategies where favourable supply and demand dynamics will generate attractive risk-adjusted returns. This "build-to-core" strategy is designed to develop high-quality assets that will be suitable for a long-term hold once completed. As the portfolio matures, select value-added investments are included to enhance the portfolio's core return profile. Such investments typically result from asset rehabilitation or repositioning strategies that require active asset management. To broaden its opportunities, RE recently began making strategic investments in real estate operating companies.

RE is focused on the developed markets of Canada, the U.S., the U.K. and Australia, as well as emerging markets of Brazil, Greater China and India. The team seeks investment opportunities within the four main commercial property sectors: office, retail, industrial and housing. These are among the largest and most liquid real estate investment markets and sectors. They continue to form the majority of the portfolio.

In addition, the Listed Real Estate program further enhances 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. The program invests in situations where real estate exposure is fundamentally more affordable in the public market than in the private market.

Purpose and people drive performance

Due to the compelling mission of helping individuals achieve lifetime financial security, CPP Investments has a purpose-driven culture that remains a critical driver of our success and reputation as we grow and evolve. Our people are highly motivated to do their best work to help support the safety, soundness, stability and sustainability of a national retirement plan designed to serve more than 20 million contributors and beneficiaries in Canada. This public, socioeconomic purpose fuels high performance and connects employees across all global offices. Anchors of our efforts include CPP Investments' Guiding Principles of Integrity, Partnership and High Performance as well as our Code of Conduct. These encompass the organization's core values and provide guidance and inspiration to our team in everyday situations.

During an unprecedented time of physical distancing, ensuring the physical and mental health of our employees became a top priority as we collectively responded to the pandemic, evolved our working styles and continued to drive investing priorities.

CPP Investments' 2025 strategy calls for evolving how employees work, encouraging them to strive for increased agility, ambition, innovation and inclusion. It also focuses on becoming a truly global enterprise in which employees across all offices feel fully included, collaborate with colleagues and have a consistent workplace experience. In support of these objectives, led by our Chief Talent Officer, with the full support of the Senior Management Team, we are making efforts to drive a more integrated approach to culture. The organization's Corporate Affairs group delivers programs with a shared global mindset, fostering even higher levels of engagement and a consistent employee experience wherever our people work.

Recognizing the importance of culture and the workplace environment in motivating good performance, we consider all the factors that have an impact on our people's engagement and their ability to work to their full potential. We have made a concerted effort this past year to better inform and engage employees. Examples of new or enhanced communications include leadership video blogs, a speaker-series program and an internal portal dedicated to knowledge sharing and collaboration. As most of our people worked from home as a result of the COVID-19 pandemic, the employee experience at CPP Investments also evolved. Engagement activities, such as virtual town halls, increased. A dedicated mobile employee information hub was also formed to facilitate cross-enterprise learnings and safeguard enterprise-wide cohesion.

Long-term global mindset

Our workplace strategy has a long-term, global perspective to align with our investment approach. It calls for important changes to how we work, building on the enduring strength of our Guiding Principles. The strategy cuts across programs, policies and activities, including enterprise-wide forecasting and planning for global growth. Employees are fully engaged in efforts to instil and support a more innovative mindset in the organization. There is also a deep commitment to foster a truly inclusive and diverse organization, where every employee can feel free to be themselves.

Our global orientation and diversity are aligned with the continued growth of CPP Investments' presence outside Canada. We recently opened a ninth office, located in San Francisco, and one quarter of our employee population is now based outside of Toronto, up from 21% in fiscal 2019. This global profile requires the consideration and accommodation of cultural and geographic differences while ensuring a consistent, compelling workplace experience for all employees, no matter where they work. We have also built immersive, in-market leadership development programs to enhance understanding of local business and geopolitical issues.

Strong cultural foundation

One of the foundational elements of CPP Investments' culture is the annual *Living our Guiding Principles* day, a program that consistently generates positive feedback among employees (with 97% of respondents rating the event as good or very good). Senior leaders moderate the interactive sessions and unite the entire CPP Investments' workforce on the same day to engage in candid, focused dialogue about how our Guiding Principles are meant to apply in very practical ways based on real events. The day serves as an important reinforcement of our ethical commitment and public accountability. Our annual employee performance review process also includes an assessment of how each employee has demonstrated these Principles in their daily work. We evaluate an employee's performance not only on their results, but also on how those results were achieved.

CPP Investments' Code of Conduct outlines the ethical and regulatory framework under which employees are expected to act. It is regularly reinforced and refined to ensure our people uphold the organization's high standards for behaviour and transparency. In addition, our President & CEO, Board Chairperson and General Counsel host regular new employee meetings with CPP Investments' Conduct Review Advisor. These meetings reinforce the importance of the Code of Conduct, while encouraging employees to speak up when they see or hear something that does not represent who we are or how we behave.

Formal surveys, pulse checks, informal polls and feedback meetings regularly measure employees' alignment with these cultural priorities, and their broader satisfaction and engagement with the organization. Results from the fiscal 2020 employee survey, which had a strong 84% participation rate, remain positive. There were notable year-over-year gains in areas related to team and manager dynamics, as well as inclusion and diversity. We also introduced an enhanced Upward Feedback program for people managers, generating valuable feedback reports for 94% of participating managers. The most highly rated competencies for managers related to modelling our Guiding Principles and creating an inclusive environment. We continue to apply this valuable employee feedback to prioritize and improve the workplace and programs. One dedicated global effort for next year is further evolving CPP Investments' culture in support of our 2025 strategy. We will further strengthen our core cultural tenets and continue to enhance the employee experience. Notably, we will be providing a more seamless digital experience and efficient program delivery. We will also strive to improve areas employees identified through the engagement survey.

High-performing teams

As a leading global investor in a competitive marketplace, we are relentlessly focused on attracting, developing and retaining the best global talent. These efforts span all talent dimensions. However, we prioritized three critical areas this past year: inclusion and diversity, talent acquisition and talent development.

Inclusion and diversity are central to CPP Investments' strategic goals and efforts to distinguish our organization as the employer of choice for high-performing, diverse talent. This year, we took important steps to drive measurable and meaningful improvement in key performance indicators. These include increasing overall diversity, as well as specific, under-represented groups. We emphasized inclusive leadership by building the understanding and capabilities of our managers through training, measurement and evaluation. Enhanced metrics such as our first employee survey on diversity help us to track progress. This self-disclosure metric will more accurately assess workforce representation. CPP Investments also participated in an industry-wide survey, The Inclusion Project. This data-driven approach will help identify areas for improvement and track efforts compared to other leading organizations.

While we have a broad perspective that includes multiple forms of diversity, CPP Investments continues to make concerted efforts to increase gender representation. As of March 31, 2020, 46% of global employees are women. Women also make up 36% of the Senior Management Team and 37% of our investment professionals.

Employee resource groups – Out, WIN, Mosaic, GoGreen and our newest, MindMatters (see below) – encourage employees to champion causes through a range of programs and activities. These include industry panels, social events and information sessions. The resource groups help to build understanding and inform programs on issues ranging from cultural differences to sustainability, gender equity and LGBT+ inclusion. Participation in these grassroots teams is robust and growing. Membership for established groups, including allies, ranges from 39 to well over 650. We will evolve our inclusion and diversity work by continuing to assess programs and ensuring best practices to drive positive outcomes.

We also remain committed to removing unconscious bias in the hiring processes. This past year, the campus recruitment program added 46 full-time hires and 113 intern hires; 23 interns accepted future full-time positions. Looking ahead, we plan to expand the campus program in select markets and enhance our assessment practices.

Employee resource groups

GoGreen

Go Green

Raises employee awareness to improve collective environmental efficiency and reduce CPP Investments' internal environmental footprint.

Mind Matters

MindMatters

Promotes mental health and a psychologically healthy workplace for each of us.

MOSAIC

Mosaic

Builds awareness of the rich cultural diversity at CPP Investments.

OUT

OUT

Contributes to a diverse and inclusive culture through building awareness of and engagement with the LGBT+ community.

WIN
WOMEN'S INITIATIVE

WIN (Women's Initiative)

Aims to improve organizational culture by attracting, developing and retaining high-performing female professionals.

Investing in our people

Our focus continues to be on developing and growing our talented, global employee base. We continue to refine development programs designed for new and long-serving employees of the organization, capturing all levels up to and including Senior Managing Directors.

This year, we conducted more than 163 development sessions, encompassing 50 courses, for almost 2,500 total participants. We have also made notable progress with "Gigs" (optional short-term assignments) and expanded the mentorship program, in which 375 employees participated.

We introduced Ignite, a new development program for Investment Associates, Senior Analysts, Advisors, IT Analysts and Developers, and other equivalent employees from our core services departments. This program completes the lineup of organization-wide curricula to support careers at every level at CPP Investments.

New opportunities continue to be an important aspect of career development at CPP Investments. This year, 241 colleagues were promoted, 68 took secondment opportunities and 81 grew their career with lateral role changes. A continued emphasis on global mobility is reflected in 54 international assignments and transfers.

To thrive in an era of disruption, industry leaders must share insights and learn from one another. Over the past year, our CEO invited external industry executives to visit our organization and engage employees in thought-provoking conversation. The sessions featured senior leaders of our partner firms as well as companies in which we invest. They also included industry leaders such as Shopify, Affirm, Maple Leaf Sports & Entertainment, Morgan Stanley, ValueAct, BlackRock and Blackstone. This guest speaker program also featured half-day forums on retail and health care investing as well as panel discussions on a range of topics from climate change to career mentorship and sponsorship. Our Board of Directors also took time to engage directly with employees, sharing their perspectives on topics of interest with our team.

Our enterprise-wide learning focus in the year ahead will be the design and deployment of development programs aligned to key elements of our CPP Investments 2025 strategy. This will include Global Investor Curricula and investments in enterprise-wide data and analytics skills.

Furthering operational capabilities

The growth and globalization of our investment programs required the ongoing development of sophisticated operational capabilities. During fiscal 2020, we continued to advance our processes and controls to protect our assets and increase efficiency in our operations.

We began the multi-year implementation of the new Integrated Risk Framework, described on page 95, which was introduced last year. We developed new measures to enhance our ability to monitor and manage risks arising from our recourse liabilities, including our use of derivatives. We also enhanced our reputation impact assessment process to better identify, assess and monitor risks, including across the passive and quantitative public market holdings that may have a significant impact on CPP Investments. To ensure we are well prepared to protect our assets in distressed situations, we expanded our crisis management framework to cover a range of operational and financial stress scenarios. Accelerated scenario planning and exercises over the course of the last three years, as well as procedural preparedness by the Financial Crisis Management Team, allowed us to quickly and effectively respond to the impacts of the COVID-19 pandemic.

During the year, we developed a Technology & Data strategy, aligned to our CPP Investments 2025 strategy, defining our approach to scaling our technology and data capabilities and enabling an industry-leading set of business outcomes. This strategy defines our approach to develop new capabilities for alpha generation, improve the throughput of our teams, and modernize and simplify our existing infrastructure, applications, and data ecosystem to ensure we strengthen our foundation across our investment lifecycle and rapidly enable more advanced analytics and innovation. As examples, we began implementing the strategy with strategic initiatives including modernization of the trading ecosystem, migration to a hybrid cloud environment, advancement of our data governance approaches and improvements to our digital workplace experience.

We advanced our practices for establishing the fair values of the Fund's investments by formalizing a risk-based approach with three lines of defence, in alignment with CPP Investments' Integrated Risk Framework. To improve our decision-making process, we refined our methodology to understand and systematically review the relative performance of our investments at a more granular level, including the various risks and exposures of the portfolio. We improved oversight over key enterprise projects, strengthening the Project Management Office which successfully managed a broad portfolio of key enterprise projects, partnering with business groups to lead planning and execution, while promoting project management best practices across the organization. We implemented cohesive legal investment support across all geographies and Investment Departments, partnering legal personnel with investment teams to enhance the level of legal investment support provided.

Accountability

CPP Investments 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, along with corporate messages and updates on a range of relevant subjects through social media networks. We engage with news organizations, reaching millions of stakeholders, and we are committed to timely and continuous disclosure of significant investments and corporate developments. We also meet regularly with stakeholder groups representing business, labour, retirees, financial literacy advocates and other parts of civil society, as well as think tanks and pension experts.

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 CPP Investments. Public meetings will be held in fiscal 2021, adopting a modified format in adherence to the expectations and advice of public health experts and government officials at all levels with a view to the safety of all participants, hosts and technical support.

CPP Investments has committed to appearing annually before the House of Commons Standing Committee on Finance to deliver an update on our activities and results and respond to questions from 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 CPP Investments 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 other 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 include measures designed to preserve public trust.

One of these measures is our Code of Conduct for the Board of Directors and employees. This Code, which is available on our website, requires everyone at CPP Investments 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. Sheila Block, an internationally recognized litigation and dispute resolution lawyer, has served as Conduct Review Advisor for CPP Investments since January 2018. The advisor submits a report and meets in person with the Board at least once a year to discuss the advisor's activities.

In addition to the Conduct Review Advisor, our whistleblower hotline allows employees to report wrongdoing or unethical behaviour related to CPP Investments 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, which is the lifeblood of any national financial system.

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 our annual report, which contains extensive information about our strategy, Fund performance, investment activities, governance, costs, key risks 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 CPP Investments' governing legislation and regulations, by-laws, governance manual and policies. These policies include the investment statements that guide us in managing the long-term Investment Portfolios, including our Investment Beliefs on page 23. We also maintain digital social channels to widely communicate new developments.

Beyond statutory disclosure, CPP Investments continued to undertake programs in fiscal 2020 to directly reach CPP contributors and beneficiaries, to help them better understand how management of the Fund is intended to work for them. This included the modernization of the CPP Investments website to create a flexible disclosure platform. It will allow stakeholders and partners to easily access information and offer a consistent experience on both desktop and mobile devices.

CPP Investments trade name

In fiscal 2020, CPP Investments undertook a brand update to better reflect our identity and commercial perception globally. The global investment landscape is increasingly characterized by stricter barriers to deploy capital depending on the status or treatment of each organization, especially sovereign wealth funds.

The new CPP Investments trade name and logo provide domestic and global stakeholders with greater clarity about our organization's singular purpose: *investment*.

The change marks the first significant adjustment to the brand in our 21-year history. While the Canada Pension Plan Investment Board legal name endures, our new visual identity helps improve visibility among the clutter of peers and other global institutional investment partners who have continuously evolved and refreshed their brands in the face of intensifying competition across all investment markets.

Specifically, CPP Investments sought to reduce the use of the word 'Board' in its market-facing name, as it is intuitively associated with government, impeding activity in key markets where sovereign wealth funds face more investment restrictions today than ever. The new CPP Investments trade name aims to diminish the confusion that persists among Canadians about our relationship with the Canadian government and its role in the administration of the CPP.

Our new trade name is designed to position CPP Investments to better compete for top talent and sought-after assets around the world.

Fiscal 2021 objectives for CPP Investments

The corporate objectives for fiscal 2021 are:

1. Continue to scale our investment programs and increase our global presence.
2. Foster a culture that promotes innovation, ambition, agility and inclusiveness.
3. Further develop key technology infrastructure and data analysis capabilities.
4. Build on our risk framework to deliver world-class risk management and risk governance.
5. Drive alpha-generating capabilities to enhance the quality of investment analysis and decision-making.

Management's Discussion and Analysis

This annual report contains forward-looking statements reflecting Management's objectives, outlook and expectations as at May 15, 2020. These statements involve risks and uncertainties. Therefore, our future investment activities may vary from those outlined herein.

Fiscal 2020

Net Assets
$409.6 billion

Operating Expenses
$1.3 billion

Net Income
$12.1 billion

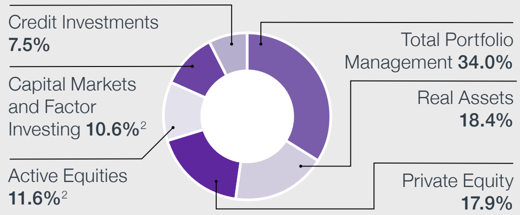
Net Return (annualized)

10-year	5-year	1-year
9.9%	7.7%	3.1%

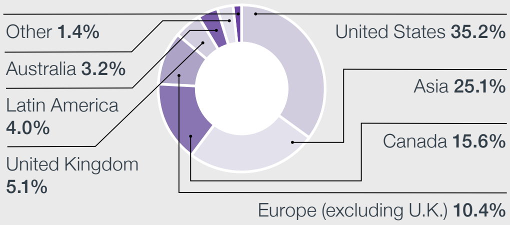
Dollar Value-Added ($ billions)

10-year[1]	5-year[1]	1-year
$56.9	$44.0	$23.5

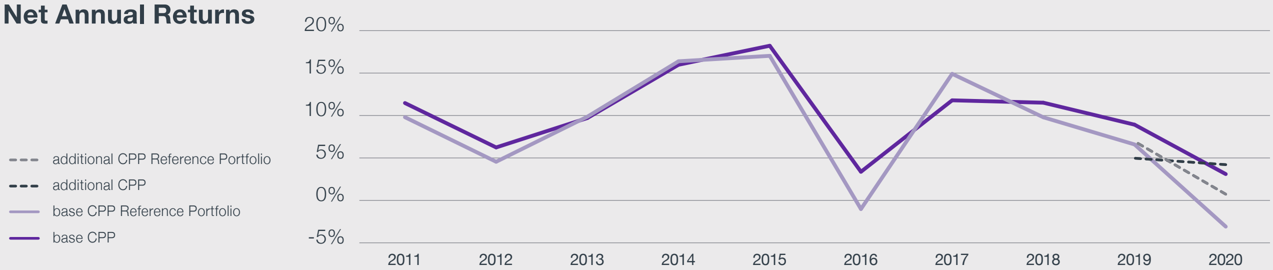
Assets Under Management by Investment Department



Global Diversification by Region



Net Annual Returns



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

Management's Discussion and Analysis

The following information provides analysis of the operations and financial position of Canada Pension Plan Investment Board (CPP Investments) and should be read in conjunction with the Consolidated Financial Statements (Financial Statements) and accompanying Notes for the year ended March 31, 2020. The Financial Statements have been prepared in accordance with International Financial Reporting Standards (IFRS).

The disclosure of certain non-IFRS measures in this section is intended to provide readers with a better understanding of Management's perspective on the Fund's performance and may not be comparable to similar measures disclosed by other institutions. Definitions of IFRS and non-IFRS measures can be found on page 103.

Fiscal 2020 financial highlights

CPP Investments ended the fiscal year with $409.6 billion in net assets, an increase of $17.6 billion (or 4.5%) over the end of fiscal 2019. This increase consisted of $12.1 billion in net income after CPP Investments costs and $5.5 billion in net Canada Pension Plan (CPP) contributions.

CPP Investments' major asset classes delivered mixed returns in fiscal 2020. For the first three quarters of the fiscal year, all asset classes contributed positive returns to the Fund driven by favourable global economic fundamentals. However, growth was significantly interrupted by the COVID-19 pandemic in the last quarter of the fiscal year, which caused a deterioration in global markets and economic conditions. To place results in context, the Fund produced a 12.6% return on a 2019 calendar basis, comparing favourably to other investment fund peers.

In fiscal 2020, the Fund generated a net rate of return of 3.1% or $12.1 billion after deducting CPP Investments costs. The base CPP account, which represented $407.3 billion or 99.4% of the Fund's net assets at the end of the fiscal year, earned a net return of 3.1% or $12.1 billion. The additional CPP account represented 0.6% or $2.3 billion of the Fund's net assets and earned a net return of 4.2% or $13 million.

CPP Investments generated $23.5 billion in dollar value-added (DVA) in fiscal 2020, which was driven by the Fund's relative underweight exposure to global public equities compared to the Reference Portfolios during the global downturn in equity markets at the end of the fiscal year, as well as positive value-added contributions from most investment departments.

Total Fund performance

The Fund's positive return was driven by foreign exchange gains of $14.0 billion, as the Canadian dollar depreciated due to the decline in oil prices and the economic downturn as a result of the COVID-19 pandemic. Economic fallout from the pandemic also had dramatic effects on global equity and credit markets in the fourth quarter. Major equity indexes suffered steep declines and credit markets experienced widening credit spreads. The adverse market environment contributed to losses of $0.6 billion in local currency terms from investment activities, particularly in equities and credit. Private investments, which generated steady returns earlier in the fiscal year, were also impacted, although to a lesser extent, by the unfavourable market conditions.

Public equities investments, mainly in the Balancing Portfolio, underperformed this fiscal year generating returns of -2.6% (or -7.6% in local currency terms). Earlier in the fiscal year, public equities experienced strong gains reflecting a rising equity market environment as global indexes posted historical highs. However, those gains were erased by a sharp market sell-off in the fourth quarter. The S&P Global LargeMidCap Index lost 9.4% in local currency terms with most of those losses driven by the underperformance of emerging markets relative to developed markets in the reporting period. In Canada, the decline in oil prices and its impact on the energy sector contributed to a further deterioration in Canadian equity performance, which returned -12.2% in the fiscal year.

The challenging economic conditions were also reflected in credit underperformance with a return of 0.5% (or -4.2% in local currency terms). The sudden widening of credit spreads, in response to the unfavourable economic conditions in the fourth quarter, negatively impacted corporate credit yields. For example, global high-yield corporate credit bonds fell 10.0% in local currency terms in the fiscal year.

Government bonds performed well and returned 13.5%, reflecting a "flight to safety" with investors seeking lower-risk assets as well as a reversal in the interest rate outlook across major markets. The Canadian and United States government bond markets returned 5.6% and 13.2%, respectively, in local currency terms. This contributed to the gains in the Balancing Portfolio, which was comprised of $100.8 billion in net assets in fixed income at the end of the fiscal year.

Private equities and real assets also contributed positive returns to the Fund driven by steady gains earlier in the fiscal year and favourable foreign currency gains. The positive market conditions until the fourth quarter, particularly in emerging markets, contributed to outperformance in private equities and real assets. However, the negative market sentiment resulting from depressed energy markets and the COVID-19 pandemic contributed to underperformance in Canadian private equities and energy and resources, which returned -5.1% and -23.4%, respectively. Infrastructure was negatively impacted by foreign exchange losses given its exposure to emerging markets and returned -1.0% (or 1.0% in local currency terms).

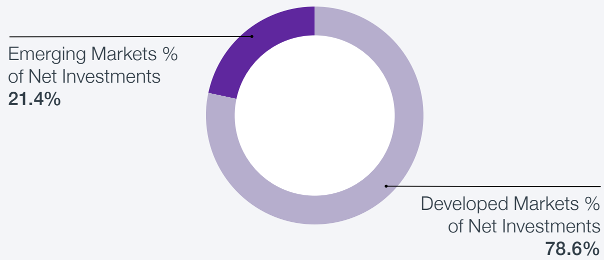
The depreciation of the Canadian dollar against the U.S. dollar was influenced by the decline in oil prices and the economic downturn as a result of the COVID-19 pandemic. Starting in March 2020, all major central banks began cutting key interest rates to near zero in an effort to shore up the global economy. The Bank of Canada cut its key overnight interest rate to 0.25%, which was a level previously seen subsequent to the 2008 Global Financial Crisis. The chart on page 54 shows the overall foreign currency impact for each of the past five fiscal years, in billions of dollars and as a percentage of the Investment Portfolios.

Foreign currency exposures represented 85.0% of the Fund and this diversification contributed to the $14.0 billion foreign currency gain this fiscal year. Currency diversification is based on the underlying currency exposure of our investments, whereas global diversification is based on the exposure to various geographic markets.

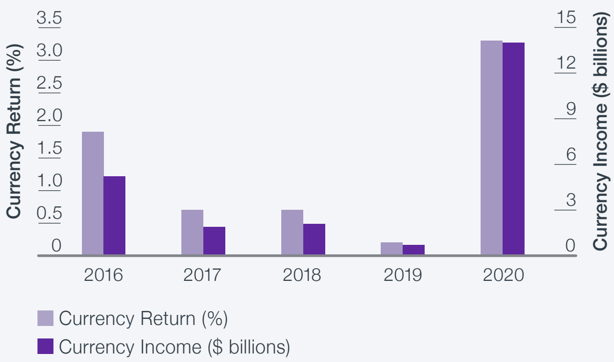
The Fund continued to progress well towards CPP Investments' 2025 strategic objectives to scale private and public investment programs and invest up to one-third of the Fund in emerging markets. During the fiscal year, the Fund increased its emerging market exposures to $87.6 billion with contributions from all investment departments. Emerging markets accounted for 21.4% of the Fund at the end of fiscal 2020, compared to 19.9% in the previous year. However, the Fund's emerging market exposures returned -1.1% this fiscal year, compared to 2.2% in the previous year, following a sharp decline in emerging equity markets, particularly in China, India and Brazil.

Market Classification

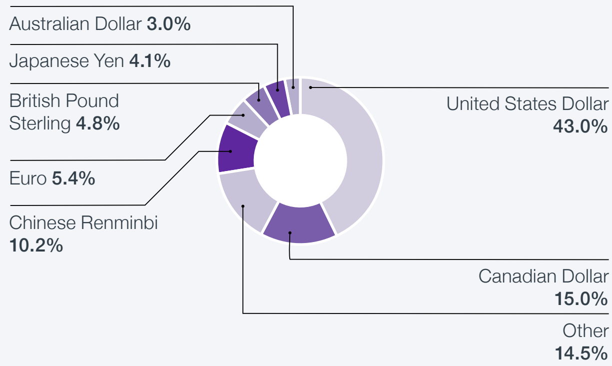
As at March 31, 2020



Currency Impact 5-Years



Currency Diversification



Asset Mix

	As at March 31, 2020		As at March 31, 2019	
Asset Class	($ billions)	(%)	($ billions)	(%)
Public Equities				
Canadian	**7.1**	**1.7%**	7.9	2.0%
Foreign	**70.5**	**17.2%**	82.7	21.1%
Emerging	**38.1**	**9.3%**	39.4	10.1%
	115.7	**28.2%**	130.0	33.2%
Private Equities				
Canadian	**1.1**	**0.3%**	1.0	0.2%
Foreign	**86.4**	**21.1%**	80.0	20.4%
Emerging	**13.4**	**3.3%**	12.1	3.1%
	100.9	**24.7%**	93.1	23.7%
Government Bonds				
Non-marketable	**21.1**	**5.2%**	22.2	5.7%
Marketable	**76.6**	**18.7%**	63.9	16.3%
	97.7	**23.9%**	86.1	22.0%
Credit	**50.8**	**12.4%**	35.8	9.1%
Real Assets				
Real estate	**46.5**	**11.3%**	47.5	12.1%
Infrastructure	**35.1**	**8.6%**	33.3	8.5%
Energy and resources	**7.3**	**1.8%**	8.2	2.1%
Power and renewables	**8.7**	**2.1%**	5.1	1.3%
	97.6	**23.8%**	94.1	24.0%
External Debt Issuance	**(38.4)**	**(9.4%)**	(30.9)	(7.9%)
Cash and Absolute Return Strategies[1]	**(14.7)**	**(3.6%)**	(16.2)	(4.1%)
NET INVESTMENTS	**409.6**	**100.0%**	392.0	100.0%
Non-Investment Assets[2]	**–**		–	
NET ASSETS[3]	**409.6**		392.0	

1. The negative balance of $14.7 billion in Cash and Absolute Return Strategies represents the net amount of financing through derivatives and repurchase agreements, and the current net position from Absolute Return Strategies.
2. Includes assets such as premises and equipment and non-investment liabilities.
3. Includes $407.3 billion in the base CPP account and $2.3 billion in the additional CPP account.

Total Fund Returns[1]

ASSET CLASS	Fiscal 2020	Fiscal 2019
Public Equities		
Canadian	(12.2%)	7.9%
Foreign	1.6%	7.5%
Emerging	(9.1%)	(1.7%)
	(2.6%)	6.3%
Private Equities		
Canadian	(5.1%)	5.7%
Foreign	6.0%	18.0%
Emerging	8.0%	11.8%
	6.2%	17.0%
Government Bonds		
Non-marketable	4.7%	4.8%
Marketable	16.1%	5.3%
	13.5%	5.2%
Credit	0.5%	8.7%
Real Assets		
Real estate	5.1%	6.4%
Infrastructure	(1.0%)	14.0%
Energy and resources	(23.4%)	(0.6%)
Power and renewables	4.4%	1.2%
	0.0%	8.0%
Total Fund[2]	3.1%	8.9%

1. Returns by asset class are inclusive of both the base and additional CPP accounts, before CPP Investments operating expenses. Subtotals are not arithmetically derived, since performance metrics are reported using time-weighted returns.
2. The total Fund net return is after all costs, including operating expenses of $1.3 billion ($1.2 billion in fiscal 2019). The total Fund return includes the results of certain investment activities that are not attributed to an asset class return reported in this table, such as performance of $(3.0) billion from currency management activities ($(1.2) billion in fiscal 2019), $(0.3) billion from cash and liquidity management activities ($(0.7) billion in fiscal 2019), $0.9 billion from absolute return strategies ($0.6 billion in fiscal 2019).

Base CPP and additional CPP

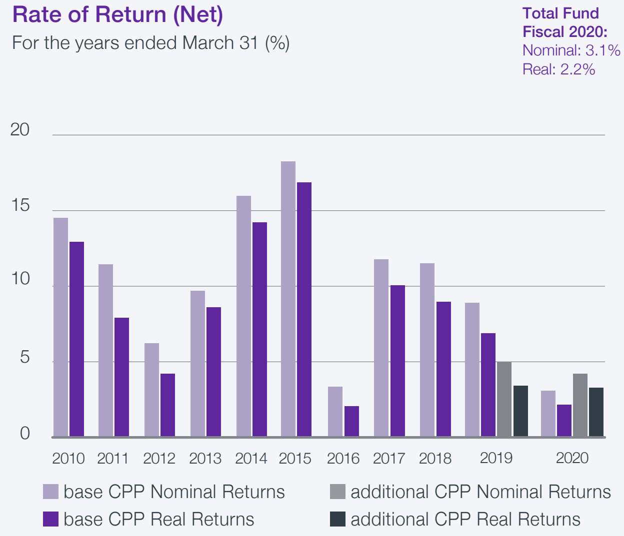
Since January 2019, the Canada Pension Plan has been made up of two parts as described on page 20. The base Canada Pension Plan (base CPP) refers to the portion of benefits and contributions continuing at the rates used before January 2019. The additional Canada Pension Plan (additional CPP) refers to the increased benefits and contributions that started in January 2019.

The base CPP and additional CPP accounts each consist of holdings in units of two investment pools ("Core" and "Supplementary") that are valued daily. Both Core and Supplementary Pools were established in January 2019. Initially, the Core Pool consisted of all assets managed by CPP Investments prior to January 2019, while the Supplementary Pool consisted of new domestic fixed income investments based on contributions from the additional CPP. Each of the base CPP and additional CPP accounts will invest their long-term Investment Portfolios through holdings of these units.

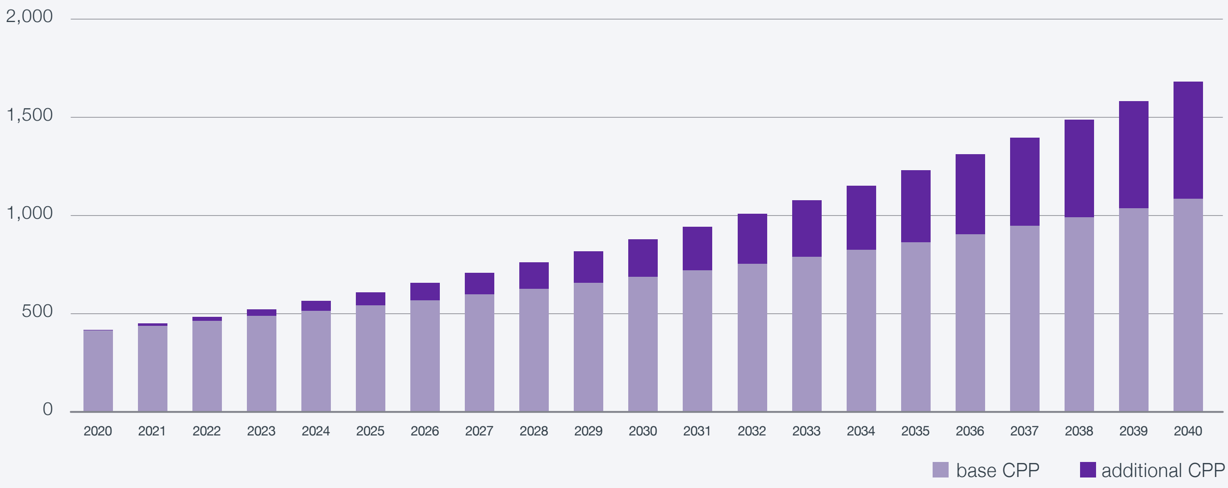
Over the fiscal year, the additional CPP account grew 452.7% or $1.9 billion. This growth in net assets consisted of net contributions of $1.9 billion, and net income of $13 million.

The additional CPP account delivered a net return of 4.2%, since the Supplementary Pool's fixed income securities performed well in the fourth quarter. The base CPP account, which is fully invested in the Core Pool, delivered a net return of 3.1% mainly driven by favourable contributions from foreign exchange gains.

Rate of Return (Net)
For the years ended March 31 (%)



Growth of the CPP – Base CPP and Additional CPP Accounts (as at December 31)
Office of the Chief Actuary projections – 30th Actuarial Report
($ billions)



Longer-term performance

As a long-term investor, five- and 10-year periods provide a more meaningful assessment to evaluate the performance of CPP Investments' strategy. For the five-year period ending March 31, 2020, the Fund generated total net income of $123.4 billion or an annualized nominal return of 7.7% after deducting CPP Investments costs. For the 10-year period, the Fund generated $235.2 billion or an annualized nominal return of 9.9% after CPP Investments costs.

Every three years, the Office of the Chief Actuary conducts an independent review of the sustainability of the base and additional CPP over the next 75 years. In the most recent triennial review, the Chief Actuary reaffirmed that, as at December 31, 2018, both the base and additional CPP continue to be sustainable over the 75-year projection period at the current legislated contribution rates.

The Chief Actuary's projections are based on the assumption that, over the 75 years following 2018, the base CPP account will earn an average annual real rate of return of 3.95%. This figure is above the rate of Canadian consumer price inflation and is also after all costs. The corresponding assumption is that the additional CPP account will earn an average annual real rate of return of 3.38%.

The Fund, combining both the base CPP and additional CPP accounts, achieved 10-year and five-year annualized net real returns of 8.1% and 6.0%, respectively.

Total Fund Returns

	Fiscal 2020		Fiscal 2019	
Net Returns	% (annualized)	$ billions (cumulative)	% (annualized)	$ billions (cumulative)
base CPP				
1-year net return	**3.1**	**12.1**	8.9	32.0
5-year net return	**7.7**	**123.4**	10.7	152.0
10-year net return	**9.9**	**235.2**	11.1	239.0
additional CPP				
1-year net return[1]	**4.2**	**0.0**	5.0	0.0
Since inception net return[2]	**7.4**	**0.0**		

1. Fiscal 2019 additional CPP net return is not annualized given additional CPP inception in January 2019. Additional CPP net return excludes $9 million in start-up expenses.
2. Return is since inception of additional CPP in January 2019, for a 15-month measurement period.

Reference Portfolios returns

The Reference Portfolios are notional, two-asset passive portfolios consisting of public market global equities and nominal bonds issued by Canadian federal and provincial governments, each represented by broad market indexes, which serve as benchmarks against which CPP Investments' performance can be compared. As such, they provide the targeted level of market risk and benchmarks for the long-term total returns of both the base CPP and additional CPP Investment Portfolios. The Reference Portfolios differ between the base CPP and additional CPP accounts to reflect the different risk levels prudently targeted for each of their long-term Investment Portfolios. See page 33 for more information.

Below are the Reference Portfolios' rates of return over a longer-term basis:

% (annualized)	Fiscal 2020	Fiscal 2019
base CPP Reference Portfolio Returns		
1-year	**(3.1)**	6.6
5-year	**5.2**	9.3
10-year	**8.3**	10.7
additional CPP Reference Portfolio Returns		
1-year[1]	**0.7**	7.0
Since inception[2]	**6.1**	

1. Fiscal 2019 additional CPP net return is not annualized given additional CPP inception in January 2019.
2. Return is since inception of additional CPP in January 2019, for a 15-month measurement period.

Performance against Reference Portfolios

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.

The Fund earned a net return of 3.1% and net income of $12.1 billion in fiscal 2020, after deducting CPP Investments costs. This result is above the aggregated Reference Portfolios' returns for both the base and additional CPP accounts, leading to a net dollar value-added of $23.5 billion. CPP Investments' DVA relative to the aggregated Reference Portfolios is primarily due to the impact of COVID-19 on the global equity market in the last quarter of the fiscal year. The aggregated Reference Portfolios lost $11.4 billion or 3.1% in the fiscal year.

At an account level, the base CPP Reference Portfolio return of -3.1% resulted in a net DVA of $23.4 billion, while the additional CPP Reference Portfolio return of 0.7% resulted in a net DVA of $0.1 billion. See page 25 for more details on active management and the sources of return.

In any given year, 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 and real assets. By comparison, the Reference Portfolio contains only two asset classes heavily weighted to public equities (85% since 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	**2020 Return (%)**	2019 Return (%)
Equity	S&P Global LargeMidCap Index[1]	**(4.8)**	6.7
Fixed Income	FTSE TMX Canada All Governments Nominal Bond Index	**5.6**	5.4
Total base CPP Reference Portfolio[2]		**(3.1)**	6.6
Total additional CPP Reference Portfolio[2]		**0.7**	7.0

1. Net of CPP Investments 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 85/15 and 50/50 for base CPP and additional CPP, respectively). In addition, for fiscal 2019, additional CPP Reference Portfolio has partial year results given additional CPP inception in January 2019.

The average allocation of Fund assets to major asset classes in fiscal 2020 is shown below:

		Fiscal 2020
Average Asset Class Weights	**base CPP**	**additional CPP**
Public Equities	**32%**	**18%**
Private Equities	**24%**	**14%**
Government Bonds	**22%**	**55%**
Credit	**10%**	**6%**
Real Assets[1]	**23%**	**13%**
Cash and Absolute Return Strategies[2]	**(11%)**	**(6%)**
Total	**100%**	**100%**

1. Includes 12% for Real Estate, 8% for Infrastructure, 2% for Energy and Resources, and 1% for Power and Renewables for base CPP, and 6% for Real Estate, 5% for Infrastructure, 1% for Energy and Resources, and 1% for Power and Renewables for additional CPP.
2. Net of external debt issuances.

When global public equity markets have a strong year, the Reference Portfolios' returns, dominated by public equities, will naturally tend to be higher than those of 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. Using leverage to increase the gross amount of assets we invest in at a targeted level of market risk leads to both broader diversification and higher returns over the long term.

2. **Investment selection –** Investment selection refers to how we select, buy, weight and sell individual assets in line with their program's mandates and intended factor exposures. Generating value through investment selection over longer time horizons requires skill. Nevertheless, we believe that the variety and breadth of our investment programs help to both increase and 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 38 for more details about the valuation process. In the short term, private assets often exhibit less volatility in value than the daily-moving prices of comparable public market equivalent investments. In periods when public equities rise rapidly, we often see that values observed in private assets rise less rapidly, resulting in negative dollar value-added. Conversely, in periods where publicly traded assets are falling rapidly, we often observe private market values that are more resilient, resulting in positive reported dollar value-added.

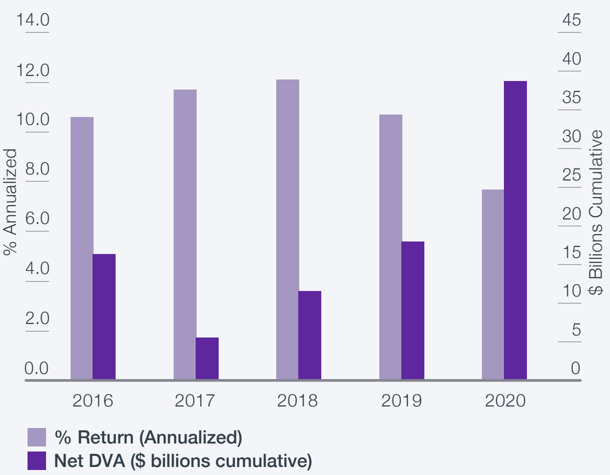
We do not place undue emphasis on results in any single year, whether positive or negative, mainly due to market volatility in most asset classes from one year to the next. Our investment strategy and decisions intentionally look through time horizons spanning multiple years and decades. We focus on tracking absolute and dollar value-added performance over five-year periods. This measurement period aligns with our long-term investment mandate and our compensation framework, as described on page 104. While it does not necessarily represent a full market cycle, historical patterns show that the five-year period provides a reasonable basis for assessing longer-term performance when viewed over multiple such periods.

At March 31, 2020, CPP Investments has generated $52.6 billion of compounded DVA since the inception of active management on April 1, 2006. The chart below shows the compounded DVA for the full period since inception, and for the past 10 and five years.

Compounded dollar value-added

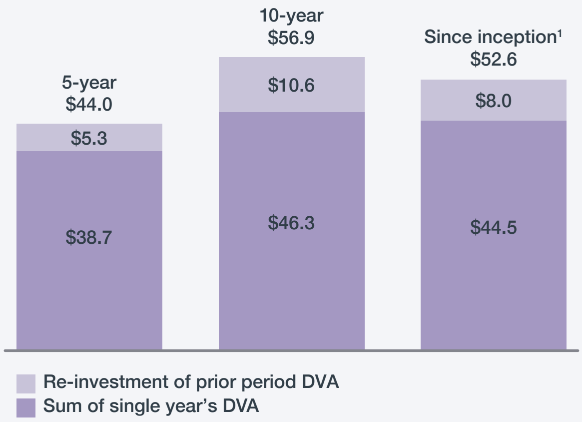
The dollar value-added is not only the sum of every single year's value-added but also the compounding effect of continuous reinvestment of gains (or losses). We therefore calculate compounded dollar value-added as the total net dollar value that CPP Investments has added to the Fund over the long term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

5-Year Net Return and DVA



Compounded Dollar Value-Added Returns

($ billions)



1. Figures do not add up due to rounding.

5-Year Net DVA

($ billions)	2016	2017	2018	2019	**2020**
base CPP	16.4	5.6	11.6	18.0	**38.6**
additional CPP	0.0	0.0	0.0	0.0	**0.1**
Total	16.4	5.6	11.6	18.0	**38.7**

Managing costs

Building CPP Investments today and for the future

CPP Investments 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 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 program requires more unique capabilities not cost-effectively available internally, we will seek external partners. We remain vigilant as we continue to build an organization designed to realize our public purpose.

In 2006, CPP Investments made the decision to adopt an active management strategy seeking 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. It requires resources to build an enduring, skills-based organization with diverse, internationally competitive investment programs designed to maximize long-term, risk-adjusted returns after all costs.

To evaluate active management, we measure results relative to risk against available alternatives. This serves to check whether we are on track 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 other factors include wage growth, demographics, fertility rates, immigration and longevity, all of which are outside the control of CPP Investments.

Consistent with the growth in the Fund and the development of our active management strategy, CPP Investments costs have also grown accordingly over the years. We are continuously building our in-house capabilities required to operate as a top-tier 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 in order to both access investment opportunities and closely manage our investments over the ownership period. We believe it is in the Fund's best interest, from both cost and competitive perspectives, to continue building internal investment expertise and capabilities where CPP Investments has comparative advantages. Infrastructure investing is a case in point. We estimate that the costs for an externally managed $25.2 billion pool of committed capital would range on average from $1 billion to $1.2 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. Fee arrangements are structured to ensure our interests are aligned. See page 63 for more details.

Growth of CPP Investments

	Fiscal 2020	Fiscal 2006[1]
Net assets[2]	**$409.6 billion**	$98.0 billion
% foreign investments	**84.4%**	35.7%
Total employees (full-time)	**1,824**	164
Number of offices	**Nine**	One
Number of investment programs	**23**	Six
Number of external partners	**283**	62

1. Current year results are compared to fiscal 2006 prior to implementing our active management programs.
2. Includes net assets of $407.3 billion for base CPP and $2.3 billion for additional CPP in fiscal 2020.

Our global scale allows us to attract and retain professionals from across the world, compete for the most attractive investments and win against formidable competitors. Scale also allows us to establish and effectively manage more distinct investment programs, meeting the goal of diversification and to apply insights from one program to enhance others.

CPP Investments seeks to realize the financial benefits of spreading costs over an increasing amount of assets under management. We seek to generate further operational efficiencies as we move toward 2025 through continued investment in technology and data. One measure that will demonstrate such efficiency is the net assets managed per full-time employee. While the assets we manage and oversee have grown significantly over the years in size, location and complexity, we currently manage $225 million in net assets per employee, consistent with the average of the last five years.

We regularly assess our cost-effectiveness against peers through participation in external benchmarking studies such as that of CEM Benchmarking, an independent provider of objective and actionable benchmarking information for pension funds, sovereign wealth funds and other long-term asset owners. Results from the 2019 CEM Benchmarking study (the most recent report available) indicate that CPP Investments costs were aligned with our peers relative to the assets under management. CPP Investments' staffing levels also continue to align with the peer benchmark developed by CEM. We monitor these relationships closely and ensure this level of staffing provides us with the resources necessary to support investment activities and properly govern and administer the assets we manage.

While we benchmark our costs to ensure they are appropriate, CPP Investments also participates in benchmarking of our net returns through CEM. For the five-year period ending March 31, 2019 (the most recent data available) our net annualized return of 10.7% after all costs was 1.9% higher than the median of our global peer group and 3.1% higher than the Canadian peer median.

Cost governance framework

We apply the resources required to deliver above-market returns for the Fund. At the same time, we are diligent in ensuring value for money spent. 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, our employee travel and expense policy requires that the expenses incurred be appropriate for 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 2020 costs

CPP Investments directly incurred $2,370 million of investment-related expenses and $1,254 million of operating expenses for fiscal 2020, as reported on page 138 in the *Consolidated Statement of Comprehensive Income*. Investment-related expenses include $603 million in investment management fees paid to external managers and $244 million of transaction costs. Borrowing costs of $1,523 million were also incurred as part of the Fund's management of leverage. (See page 64 for details on CPP Investments costs associated with managing leverage.)

Through investment holding subsidiaries, CPP Investments indirectly incurred $1,205 million of investment management fees paid to external managers and $146 million of transaction costs. Investment management fees and transaction costs incurred by CPP Investments together with its investment holding subsidiaries totalled $1,808 million and $390 million, respectively. This compares to the prior year's costs of $1,586 million in total investment management fees and $429 million in total transaction costs.

Management and the Board of Directors govern the costs of CPP Investments and its investment holding subsidiaries on a holistic basis. The costs illustrated in the diagram below reflect resources required to invest, manage and govern CPP Investments' Investment Portfolios, exclusive of the costs associated with the Fund's use of leverage.

Costs to Invest the Fund

INVESTMENT MANAGEMENT FEES

PAID ON COMMITMENTS & ASSETS INVESTED

Management fees
$1,188 million

What does it pay for?
Payments to external fund managers to pay for their operating costs and basic profit margins.

Why do we incur the costs?
To seek exceptional performance net of all costs, while diversifying the Fund through different strategies and regions.

PAID ON RETURNS GENERATED BY EXTERNAL PARTNERS

Performance fees
$620 million

What does it pay for?
A form of profit sharing when returns exceed a predetermined hurdle.

Why do we incur the costs?
Enhanced fund performance through alignment of interests between CPP Investments and the external fund managers.

Transaction costs
$390 million

What does it pay for?
Legal and tax advisors, consultants and trading commissions.

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.

Operating expenses
$1,254 million

What does it pay for?
Personnel, technology, data, global offices and other operating costs.

Why do we incur the costs?
To prudently maximize the Fund returns, we employ top-tier talent and have offices in key markets to access and manage investment opportunities.

All costs defined above are incurred directly by CPP Investments or indirectly through its investment holding subsidiaries.

The table below illustrates the adjusted investment income (loss) and the associated costs incurred by each investment department to support their activities. Adjusted investment income consists of investment income, as reported in the *Consolidated Statement of Comprehensive Income*, excluding the investment management fees and transaction costs incurred by investment holding subsidiaries, as well as the difference between financing costs and borrowing costs. Further details on the difference between financing costs and borrowing costs can be found on page 64. Refer to Note 7 of the Financial Statements for a reconciliation of adjusted investment income to investment income as reported in the *Consolidated Statement of Comprehensive Income* on page 138.

Net Income (Loss) by Investment Department

	Fiscal 2020							Fiscal 2019[1]	5-year[1]
($ millions)	Total Portfolio Management	Capital Markets and Factor Investing	Active Equities	Credit Investments	Private Equity	Real Assets	Total	Total	Total
Adjusted Investment Income (Loss)	10,395	(1,910)	3,916	(838)	6,068	347	17,978	37,112	144,539
Financing Costs	2,429	–	–	–	–	–	2,429	1,884	5,903
Investment Management Fees	–	1,010	6	17	585	190	1,808	1,586	7,926
Transaction Costs	53	45	56	37	63	136	390	429	1,985
Net Investment Income (Loss)	7,913	(2,965)	3,854	(892)	5,420	21	13,351	33,213	128,725
Operating Expenses	200	205	179	147	227	296	1,254	1,203	5,309
Net Income (Loss)	7,713	(3,170)	3,675	(1,039)	5,193	(275)	12,097	32,010	123,416

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

Investment management fees

In order to obtain broad diversification of active management skills, we seek exposure to a wide range of asset classes, geographic markets and 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 exhibit 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 programs.

Investment management fees include payments to external managers who invest and manage capital committed by CPP Investments, whether directly or through funds. They also include performance fees paid when CPP Investments earns a return above a pre-determined hurdle.

Investment management fees of $1,808 million in fiscal 2020 reflect $1,188 million in management fees paid primarily to private equity funds and hedge funds, and $620 million related to investment performance. Investment management fees increased by 14% or $222 million in the fiscal year, driven by more assets under management by fund managers and higher performance fees paid to external fund managers in public market strategies. Performance fees are calculated on a calendar year basis and represent very strong manager performance for the calendar year 2019, which were higher than our absolute returns in 2018.

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 $22.8 billion of net investment income relative to $4.5 billion in management fees, as well as $2.4 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 resulting in $37.5 billion of invested capital since inception and $12.2 billion of net investment income over the last five years with no associated fees.

CMF's External Portfolio Management group invests through managers that are expected to generate attractive, sustainable results on a risk-adjusted basis, net of all costs. The PE Funds group 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. Below are some examples of our approach to improve alignment, reduce costs and increase net returns.

External Portfolio Management 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, which generally incur significantly lower fees than co-mingled vehicles;
- 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 more favourable fees with several of our managers in fiscal 2020.

PE Funds 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. However, we decline allocations to potential target managers when we are unable to negotiate acceptable terms.

Transaction costs

Transaction costs for fiscal 2020 totalled $390 million compared to $429 million in the prior year, a decrease of 9% ($39 million), driven by lower costs for private investment strategies. This year, we completed 46 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 on potential investments. 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 65.

Costs associated with managing leverage

CPP Investments uses leverage as part of an integrated strategy in seeking to maximize the rate of return for the Fund over the long term. Leverage enables CPP Investments to make additional and more diversified investments while maintaining the Fund's approach to market risk. (This is described in more detail on page 33.) CPP Investments' strong balance sheet, measured by a "AAA" credit rating, has increasingly provided access to a range of cost-effective financing options. Given the growing size and prominence of leverage in our investment strategy, CPP Investments is providing additional disclosure regarding our use of leverage and its associated financing costs.

Financing costs include borrowing costs, as reported in Note 6 of the Financial Statements. Borrowing costs are composed of expenses from debt financing liabilities, securities sold under repurchase agreements, prime brokerage and other securities borrowing transactions as well as securities lending transactions where cash is received. Gains and losses associated with certain interest rate derivatives used as part of financing activities are also included in borrowing costs.

For the purposes of monitoring the costs associated with all forms of leverage used across the Fund, Management and the Board track a measure referred to as financing costs. Financing costs include borrowing costs as well as the costs associated with the leverage-generating elements of additional derivative transactions. This measure is consistent with the "Total Financing Liabilities" measure described in the Risk Management section on page 98. In fiscal 2020, CPP Investments incurred total financing costs of $2,429 million, which was comprised of $1,523 million in borrowing costs and $906 million in additional derivative transaction costs. This compares to the prior year's financing costs of $1,884 million, which included $1,163 million in borrowing costs and $721 million in additional derivative transaction costs. The Fund's return is reported net of financing costs.

Operating expenses

Total operating expenses were $1,254 million this year representing 30.6 cents for every $100 of invested assets compared to $1,203 million in fiscal 2019 or 32.8 cents.

Total operating expenses increased 4% or $51 million year-over-year primarily due to higher personnel costs and increased investment in information technology and data services. These increases were partially offset by a lower use of professional services.

Total personnel costs were $837 million in fiscal 2020, an increase of 4% (or $35 million) compared to the prior year. The higher personnel costs reflect an increase in staffing levels, from 1,661 in fiscal 2019 to 1,824 full-time employees in fiscal 2020, which were required to manage the growing size and reach of the Fund. Incentive compensation payouts increased in fiscal 2020, reflecting the Fund's strong 5-year net return and dollar value-added relative to the Reference Portfolios.

To support the growing Fund, as well as continued diversification of assets across sectors and geographies, CPP Investments has expanded its international operations in key markets over the past six years, including opening an office in San Francisco. Six years ago, there were just over 100 employees in the international offices combined. Today, there are almost 450 employees supporting those offices, which will continue to grow in the future as CPP Investments looks to manage a higher percentage of assets in fast-growth emerging markets.

Information technology and data service expenses of $139 million were 18% (or $21 million) higher on a year-over-year basis and reflect the continued investment in technology and data as outlined in our 2025 strategy. The increased spend of $21 million reflects our Technology & Data strategy to leverage the cloud platform to build CPP Investments' data analytics capability, support our strategic priorities, modernize our infrastructure and invest in additional tools and data sets.

The adoption of new lease accounting standards in fiscal 2020 resulted in a net increase of $12 million over the prior year in premises and equipment and related amortization.

Professional services of $93 million decreased by 13% or $14 million year over year, as fiscal 2019 included work related to strategy development and the establishment of the additional CPP.

Allocation of costs between the base CPP and the additional CPP

CPP Investments costs consist of investment-related expenses and operating expenses. CPP Investments 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 primarily on assets under management.

This cost allocation process results in allocations to each of the Core and Supplementary 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 in 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. For more details on the actual costs allocated to each account in fiscal 2020, please see Note 19 of the Financial Statements on page 175.

Performance of the investment departments

We conduct all 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 43. These and other Board-approved policies are available on our website at www.cppinvestments.com. Responsibilities of investment departments are described on page 41. What follows is a review of how each investment department performed during fiscal 2020.

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

($ millions)	Total Portfolio Management	Capital Markets and Factor Investing	Active Equities	Credit Investments	Private Equity	Real Assets	Total
Public Equities	115,031	–	–	–	637	–	115,668
Private Equities	–	–	–	7,004	93,927	–	100,931
Government Bonds	97,334	–	–	375	–	–	97,709
Credit	18,252	–	–	32,593	–	–	50,845
Real Assets	–	–	–	–	–	97,641	97,641
External Debt Issuance	(38,395)	–	–	–	–	–	(38,395)
Cash and Absolute Return Strategies[1]	(12,485)	(2,686)	430	(7)	(7)	–	(14,755)
Net Investments	179,737	(2,686)	430	39,965	94,557	97,641	409,644
Absolute Return Strategies – Assets[2]		*56,014*	*61,365*				
Absolute Return Strategies – Liabilities[3]		*(58,700)*	*(60,935)*				

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.

We continued to expand our capabilities around the world through multiple investment programs. Maintaining offices in key markets helps us to source deals, establish partnerships and relationships, manage assets and attract professionals with local knowledge. The table on page 66 shows the contributions of each investment department to net income, after CPP Investments costs, for the current fiscal year. It also shows the historical five-year period.

Several investment departments contributed positively to total Fund returns over the fiscal year despite the severe impact of the COVID-19 pandemic in the fourth quarter. Our actively managed programs delivered $4.4 billion in net income, compared to $21.9 billion in the previous year, while the Balancing Portfolio returned $7.7 billion in net income compared to $10.1 billion last year.

The sell-off in global equity markets in the fourth quarter resulted in negative performance across Real Assets and Credit Investments. Real Assets and Credit Investments generated $0.3 billion and $1.0 billion in net losses, respectively, in fiscal 2020. This compared to a respective $6.7 billion and $3.0 billion in net income in 2019. The decrease was a result of the negative economic impact of COVID-19. Capital Markets and Factor Investing generated $3.2 billion in net losses compared to $0.8 billion in net losses last fiscal year, which was driven by broad market volatility that led to widespread deleveraging by investors and dislocation across global asset classes.

Offsetting these impacts, the Private Equity and Active Equities departments contributed positively to the Fund's results with $5.2 billion and $3.7 billion in net income, respectively, as a result of strong investment selection. That compared to $12.0 billion and $1.0 billion in net income, respectively, for the Private Equity and Active Equities departments in the prior year.

Net Income (Loss) by Investment Department

($ millions)	1-Year	5-Year
Total Portfolio Management	7,713	50,065
Capital Markets and Factor Investing	(3,170)	(2,063)
Active Equities	3,675	5,955
Credit Investments	(1,039)	8,052
Private Equity	5,193	38,012
Real Assets	(275)	23,395
TOTAL	**12,097**	**123,416**

The dollar value-added 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 takes 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 currency gains and financing costs, which are excluded from the value-added shown for the other investment departments.

Net Value-Added Contributions by Investment Department[1,2]

($ billions)	1-Year	5-Year
Total Portfolio Management	11.6	6.6
Capital Markets and Factor Investing	(3.2)	(1.8)
Active Equities	3.7	6.0
Credit Investments	(3.4)	0.3
Private Equity	9.6	13.7
Real Assets	5.3	14.0
TOTAL	**23.5**	**38.7**

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 67 for more details.
2. Figures do not add up due to rounding.

Total Portfolio Management

Investment Department

Fiscal 2020 Net Return	Key Focus this Year
$7.7 billion 4.8%	• Began building frameworks to deliver better guidance to investment departments • Enhanced Balancing Portfolio management processes and capabilities • Improved total portfolio design methods and techniques • Advanced attribution and monitoring capabilities
Net Investments $179.7 billion	

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. TPM's mission is to coordinate and guide the Fund'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.

Summary

TPM contributes to total Fund investment performance in two major ways:

1. Managing the Balancing Portfolio to achieve the desired set of investment exposures in the Core Pool (see page 21), used 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 CPP Investments' objectives.

Total Portfolio Management

(%)	Fiscal 2020	Fiscal 2019
Returns		
1-year	4.9%	6.4%
1-year net	4.8%	6.3%

($ billions)	Fiscal 2020	Fiscal 2019
Contribution to Net Value-Added[1]		
1-year	11.6	(0.7)
5-year	6.6	(5.3)

1. Includes net dollar value-added from Balancing Portfolio, diversification and other total portfolio impacts.

Balancing Portfolio fiscal 2020 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 brings the actual exposures of the Core Pool into alignment with its targeted exposures, once the contributions of the active investment programs have been considered.

During the fiscal year, the Balancing Portfolio experienced a net return of 4.8% and net gain of $7.7 billion. Despite the sell-off in stocks in the last quarter of the fiscal year, resulting in a -2.7% return on equities for the full year, global public equity markets still experienced solid performance over the past five years. For fiscal 2020, substantial gains on global government bonds investments, augmented by gains on credit investments, more than offset the losses on equities.

The returns are net of TPM's $2,682 million of costs which include financing costs, transaction costs and operating expenses. Financing costs of $2,429 million include borrowing costs, as reported in Note 6 of the Financial Statements, as well as the leverage-generating elements of additional derivative transactions. Financing costs are $545 million higher than the prior year due to greater use of leverage and partially offset by a lower effective financing rate. (For more information on financing costs, see page 64.)

Transaction costs of $53 million include primarily public market commissions and trade settlement costs. The increase in transaction costs over last year is mainly driven by regulatory requirements for swap trading. Operating expenses of $200 million for the year include TPM's departmental expenses as well as its allocation of expenses from other departments such as trading execution teams, investment service management functions and finance. Operating expenses are lower than last year due to a higher proportion of TPM resources being allocated to corporate strategic projects and support for other investment departments. Fiscal 2019 also included start-up costs relating to the additional CPP.

Net Income for Total Portfolio Management

($ millions)	Fiscal 2020	Fiscal 2019[1]	5-Year[1]
Adjusted Investment Income	**10,395**	12,261	57,272
Financing Costs	**2,429**	1,884	5,903
Investment Management Fees	**–**	–	–
Transaction Costs	**53**	42	192
Net Investment Income	**7,913**	10,335	51,177
Operating Expenses	**200**	253	1,112
Net Income	**7,713**	10,082	50,065

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

Balancing Portfolio composition and trading activity

The Balancing Portfolio holdings of public equity, fixed income and leverage have increased over the past five years by $43.5 billion, with more recent increases in emerging market and credit holdings. These changes progressively aligned the total Core Pool portfolio more closely with CPP Investments' desired long-term exposures.

In the earlier part of fiscal 2020, TPM sold public market equities and fixed income to increase holdings of credit investments and cash, but in the final quarter purchased equities following their price decline. This maintained overall targeted exposures through the balancing process.

Major impacts on Investment Portfolio five-year performance (Fiscal 2016–2020)

Two key decisions have a significant impact on total Fund performance:

- The overall targeted market risk level; and
- The diversification of assets beyond the two asset classes and proportions in the Reference Portfolio.

First, on behalf of the Investment Planning Committee and the Board, TPM develops recommendations for the market and credit risk levels of each Investment Portfolio. Second, TPM develops recommendations concerning the optimal leverage and targeted return-risk factor exposures of the portfolios. Both are longer-term decisions, so they should be viewed with a perspective of at least five years.

These two basic decisions are not the only factors that affect overall Investment Portfolio returns. Other diversification decisions – such as allocations to active programs and their strategies – also have an impact, as do investment selection decisions within each of the programs.

Risk Level

To gauge the impact of progressively raising total portfolio market risk, we compare realized returns under alternative Reference Portfolio specifications (see page 26). For fiscal years 2007 through 2015, CPP Investments' Reference Portfolio was composed of 65% public equity and 35% sovereign debt. TPM simulated returns associated with this 65/35 equity/debt Reference Portfolio over the past five fiscal years. This provided a proxy for performance had CPP Investments not progressively increased the risk level of the Investment Portfolio over the fiscal years 2016 through 2018. It is then possible to compare the simulated returns with the actual transition path of the Reference Portfolio from 65/35 equity/debt at April 1, 2014 to 85/15 equity/debt with full effect from April 1, 2018.

Over the past five years, given the strong equity market returns observed over much of the period, the high-risk actual Reference Portfolio outperformed the former 65/35 Reference Portfolio by approximately 34 basis points on an annualized basis. This represents an increase in Fund value of $5.5 billion cumulatively over the five years.

Diversification

TPM directs and manages the processes necessary to implement the overall market risk, leverage and exposure diversification targets for the Investment Portfolios. An enhanced and extended balancing process was designed in fiscal 2019, and although a five-year period has not been completed for evaluation, its results are emerging as expected. In general, diversification helps to control risks. The degree of risk control depends on whether different markets are moving together or more independently. Under normal circumstances, diversification can be expected to protect against market downturns and add value over the long term. During extreme downturns, the current values of all riskier assets tend to decline together, and the diversification benefit is lessened. Amid the COVID-19 market declines in the fourth quarter of fiscal 2020, two key factors supported the Fund: CPP Investments' substantially higher proportion of fixed income in the Investment Portfolio compared to the 15% weighting in the Reference Portfolio; and higher returns of the Investment Portfolios' global fixed income exposures compared to the Reference Portfolios' Canadian governments' bonds. However, the values of many smaller capitalization equities, real estate properties and higher-yielding bonds all fell dramatically, offsetting these gains.

Conversely, in periods when the Reference Portfolios' returns are dominated by strong public equity markets, the Fund will typically underperform the two-asset Reference Portfolios.

Fiscal 2020 activities

At the end of fiscal 2020, TPM's team comprised 101 professionals located in Toronto. During the year, the team advanced its mission to effect optimal management of the total portfolio of assets entrusted to CPP Investments 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.

Building frameworks to deliver better guidance to investment departments

Throughout fiscal 2020, TPM worked with the other investment departments to enhance accessible and actionable investment department guidance. This work is ongoing and will help investment departments more effectively bridge long-term portfolio design with the realities of deploying or realizing capital in the current market.

Developing Balancing Portfolio management processes and capabilities

The new balancing process was successfully implemented in the first quarter of fiscal 2020 and has been running effectively through the year. Over the course of fiscal 2020, TPM has continued to refine components of the process and develop new enhancements. This includes improvements to methodology to incorporate a wider variety of exposures, as well as the introduction of new balancing portfolios. Together these measures provide greater precision and tighter ongoing control of total Fund composition. Key measures include:

- Adding Emerging Markets Fixed Income as a tradable balancing portfolio;
- Enhancing controls over the composition of China exposure in the balancing portfolio;
- Enhancing controls over the mix of physical and synthetic credit investments and the amount of rate exposure in the credit balancing portfolio; and
- Advancing the recognition of liquidity, leverage and geographical composition into the rebalancing methodology.

TPM also deployed the necessary processes to manage the Supplementary Pool and the additional CPP account, and to rebalance pool weights.

Improving portfolio design methods and techniques

TPM delivered a suite of improvements to both the models and governance processes for portfolio design in fiscal 2020. This included enhancements to the models TPM uses to characterize global markets, with further improvements planned based on research completed this year. The department continued to deliver incremental improvements to the processes and models used for long-term portfolio design through research, back-testing and analytics of the key drivers of portfolio design decisions. TPM also implemented production models that improve the governance of, and confidence in, final outputs.

Advancing attribution and monitoring capabilities

Investment Outcome Analytics (IOA) is a firmwide strategic initiative to provide more robust information on past investment results, leading to deeper insights and, ultimately, enhancement of investment decision-making. The framework includes:

- Achieving comprehensive attribution and internally consistent analysis of past performance; and
- Attributing returns, dollar value-added and risks to the investment decisions that generated them.

TPM and the Finance, Analytics and Risk (FAR) department jointly lead the initiative. In fiscal 2020, redesign was completed for the top-down return attribution framework, and the analytics for attributing risk-return factor exposures, changes and drivers. TPM also contributed to the development of the parallel framework for risk attribution.

In addition, TPM prototyped a comprehensive set of Active Portfolio Management monitoring dashboards. TPM uses these to help ensure delivery of investments and risk-return factor exposures that align with the guidance provided to the investment departments.

Looking ahead

The primary objectives for TPM in fiscal 2021 include:

- Deliver long-term target investment performance from diversification as a primary source of return for the Fund;
- Support CPP Investments' Climate Change program by developing and disseminating climate change energy models and transition scenarios to deliver solutions that will directly inform investment decision-making;
- Continue to lead the Knowledge Sharing and Collaboration program across CPP Investments. This provides systematic access to the comprehensive transaction pipeline and equips teams with key intelligence on investment activities and prospects;
- Review the choice and relationships of return-risk factor exposures to improve recognition of underlying economic drivers; and
- Enhance the process and transparency of the annual strategic allocation of assets, liquidity and risk among active and balancing programs. This includes the ability to incorporate costs and business judgment more directly into allocation decisions.

Capital Markets and Factor Investing

Investment Department

Fiscal 2020 Net Return

Absolute Return Strategies[1]

-$3.2 billion

Net Investments

-$2.7 billion

Assets Under Management

$56.0 billion

Key Focus this Year

- Built new investment programs and refined existing ones
- Facilitated a greater focus on total return and delivered increased emerging markets exposure
- Launched the Alpha Generation Lab along with Technology & Data and Active Equities to accelerate innovative investment capabilities, new technologies and advanced data analytics
- Reviewed the department's infrastructure to advance its capabilities, enhance its ability to scale investment programs and improve efficiency and controls

The primary goal of the Capital Markets and Factor Investing (CMF) department is to ensure that CPP Investments has 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.

Summary

Total assets under management at fiscal year end were $56.0 billion, representing a decline of $10.5 billion compared to last year. The decrease primarily reflects reduced exposure in the Quantitative Strategies program.

1. Absolute Return Strategies (ARS) hold offsetting systematic exposures through long and short investments. (See page 27 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 and the net value of derivatives 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.

The distribution and decrease in CMF's assets under management are shown below at the current and prior year ends.

The following chart shows the contribution of CMF's Absolute Return Strategies to the dollar value-added in fiscal 2020. As in prior years, 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, 2020	March 31, 2019[1]
Absolute Return Strategies (ARS) – Assets		
External Portfolio Management	**40.9**	42.1
Macro Strategies	**11.5**	8.1
Quantitative Strategies & Risk Premia	**3.6**	16.3
ARS Assets Under Management (AUM)[2]	**56.0**	66.5
ARS Liabilities[3]	**(58.7)**	(66.5)
Net Investments	**(2.7)**	–

1. Certain comparatives have been updated to conform with the current year's presentation.
2. Absolute Return Strategies (ARS) hold offsetting systematic exposures through long and short investments (see page 27 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, which represents the sum of the long investments in each of the programs and the net value of derivative holdings. For Quantitative Strategies & Risk Premia, the fiscal 2020 change in assets under management represents primarily the change in net long investments and to a lesser extent the market value of the net derivative positions.
3. Includes short positions and hedges of systematic risks arising in Absolute Return Strategies.

($ billions)	Fiscal 2020	Fiscal 2019
Contribution to Portfolio Net Value-Added		
1-year	**(3.2)**	(0.8)
5-year	**(1.8)**	3.2

CMF produced a net loss of $3.2 billion in fiscal 2020 with losses concentrated in the fourth quarter, as the fallout from the COVID-19 pandemic roiled financial markets. The highly volatile environment was particularly challenging, with losses experienced across most programs.

Fiscal 2020 Net Return

The drivers of CMF's performance this fiscal year varied across investment programs. The department responded to the changes in the market environment by scaling back exposures to select factors and geographies while broadening the diversification of its investment strategies, resulting in a 16% decrease of assets under management year-over-year to $56.0 billion.

- **External Portfolio Management (EPM) generated a net loss of $0.7 billion** following a sharp increase in volatility in the fourth quarter, which triggered broad-based deleveraging across the hedge fund industry. The market conditions in March 2020 drove negative performance across most investment strategies. Before March, EPM was trending towards strong positive results for the fiscal year.
- **Macro Strategies (MS) generated a net loss of $0.5 billion** reflecting a steep drawdown in the fourth quarter, as the fallout from COVID-19 pandemic negatively impacted most strategies. Heading into March, MS was positioned to benefit from expansionary economic trends, however the onset of the financial market crisis in March had significant negative impacts on those views.
- **Quantitative Strategies (QS) contributed to a net loss of $1.0 billion** due to declines in the first three quarters of the fiscal year when value-oriented factors among others underperformed in the U.S. and European portfolios. As the investment program adopted a more balanced allocation across factors, QS performance was flat in the fourth quarter despite the challenging market environment.
- **Risk Premia generated a net loss of $1.0 billion** with the result largely driven by market dislocation in the fourth quarter. Volatility strategies experienced net losses of $0.7 billion mostly in equity and commodity volatility that reflected the chaotic market environment and the drop in crude oil prices. The Dynamic Carry strategy, which takes positions in currencies, interest rates, equities, and commodities, also ended the year in a $0.3 billion loss. Momentum-based strategies typically provide diversification to Dynamic Carry during market downturns, but they were not immediately effective given the speed of market changes. Consequently, the strategy's gains from the first three quarters were reversed.

CMF's net loss includes costs comprised of investment management fees of $1,010 million, operating costs of $205 million and transaction costs of $45 million. Investment management fees of $1,010 million represent $584 million for performance fees and $426 million for management fees paid to external fund managers. Management fees have increased relative to asset growth while performance fees were paid on returns generated by our external fund managers for the calendar year 2019 (see page 63 on the use of external fund managers). Operating expenses increased over last year as newer programs scaled up their strategies and increased their assets under management.

Net Income (Loss) for Capital Markets and Factor Investing

($ millions)	Fiscal 2020	Fiscal 2019[1]	5-Year[1]
Adjusted Investment Income (Loss)	**(1,910)**	114	3,332
Investment Management Fees	**1,010**	730	4,348
Transaction Costs	**45**	39	164
Net Investment Loss	**(2,965)**	(655)	(1,180)
Operating Expenses	**205**	182	883
Net Loss	**(3,170)**	(837)	(2,063)

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

Fiscal 2020 activities

In fiscal 2020, CMF continued to scale and expand new programs, while also growing exposure to emerging markets. CMF supported the launch of the Alpha Generation Lab, which is dedicated to developing significant advantages for CPP Investments in the search for alpha by accelerating innovative investment capabilities focused on technology and data. (See page 25 for more on alpha.) CMF has 186 professionals located across four global offices.

External Portfolio Management

External Portfolio Management (EPM) experienced losses this year largely due to events related to the COVID-19 pandemic in March 2020 where equities sold off, as well as due to deleveraging of the broader hedge fund industry and dislocation across asset classes. Overall, most strategies were negatively impacted by the market environment, although Fixed Income and Global Macro managers performed well. Assets under management were $38.3 billion representing a small decrease from $39.5 billion last year. EPM continued to deploy capital to new managers and top up investments with existing managers. EPM also deployed a number of new co-investments this year, particularly in emerging markets. The portfolio now includes 60 managers, up from 58 at the end of fiscal 2019.

Notable highlights for the fiscal year:

- Significantly scaled its Co-Investment Program with both existing partners as well as fund managers with whom EPM does not currently invest, demonstrating the group's increasing flexibility in investment execution;
- Continued to grow EPM's Emerging Managers program by providing seed and acceleration capital to early stage managers; and
- Continued to focus on fee reduction through the above programs and by negotiating better-aligned terms with existing partners.

Financing, Collateral & Trading

Financing, Collateral & Trading (FCT) continued to integrate the Fund's financing, collateral optimization and execution functions within a centralized model. To effectively manage the Fund's leverage and liquidity requirements, the team continues to develop a financing toolkit, which includes the term debt issuance program and capabilities across global markets (including emerging markets).

Notable highlights for the fiscal year:

- Established a presence in the London office, expanding its global trading expertise and financing capabilities.
- Issued the Fund's first US$500 million green bond floating rate security linked to the Secured Overnight Financing Rate (SOFR). This was part of the industry's move away from the legacy London Interbank Offered Rate (LIBOR) as the principal reference rate for short-term interbank financing (see page 93). This new green bond was the Fund's third since becoming the first pension fund to issue a green bond in June 2018.
- Established the Regulatory Program to ensure compliance with evolving global markets regulations. The initial priorities included FCT's preparedness for uncleared margin rules (UMR), central clearing and LIBOR transition. FCT has since established central clearing capabilities for mandated cleared trades, is implementing processes for UMR and is assessing the potential risks and impacts of LIBOR transition.

Macro Strategies

In fiscal 2020, Macro Strategies (MS) scaled up its strategies, with assets under management growing to $11.5 billion from $8.1 billion last year. MS invests across asset classes with exposure to 24 countries. The group experienced losses this year due to the challenging market environment. As the COVID-19 pandemic intensified in March 2020, most MS strategies were negatively impacted by significant volatility in global markets. During this period, investments positioned to benefit from improving economic growth in selected countries experienced losses. Consistent with its mandate, MS has adjusted to the rapidly changing market landscape, leveraging its investment process to identify and capture the most significant market opportunities. MS remains focused on investments where it believes pricing has become dislocated from long-term fundamentals.

Notable highlights for the fiscal year:

- Developed an enhanced analytical framework to ensure the durability of its investment process. In addition to using its own analytical tools, MS collaborated across departments to deliver in-depth research in support of actionable investments;
- Expanded its emerging markets capabilities and market coverage. Through effective cross-departmental collaboration, MS identified significant trends and positioned its portfolio accordingly; and
- Committed US$2 billion to the Bridgewater BWTA Fund I as part of CPP Investments strategic positioning strategy. CPP Investments uses strategic positioning as a deliberate, meaningful, but temporary shift of asset allocations and factor exposures away from the Fund's established targets.

Quantitative Strategies & Risk Premia

This fiscal year was a challenging period for the quantitative equity portfolio and more generally for the longer-horizon quantitative equity hedge fund universe. In particular, value-oriented factors continued to decline, and factors that assess quality and continued asset price momentum had less consistent returns. It was the weakest performance in several years for many programs employing value-oriented strategies preferring less expensive stocks over more expensive ones. These programs also struggled in the previous year. Momentum and quality strategies that typically diversify these value-oriented strategies also had weak performance. With broader quantitative equity strategies challenged, investors withdrew significant assets from the space, which put further pressure on the performance of such strategies. Given that the duration of the headwinds facing our models was unknown, the level of capital was reduced in the quantitative equity portfolio and diversification increased towards a more balanced allocation across factors and geographic regions. These efforts at diversification bore fruit in the fourth quarter as the Quantitative Strategies portfolio's performance improved despite heightened market volatility.

The Risk Premia portfolio suffered the majority of its losses for the year during the market dislocation in March 2020. Strategies in the portfolio seek to benefit from leveraging investor behaviour biases as well as bearing risk that market participants wish to transfer. As market participants realized that the COVID-19 virus outbreak was worse than expected and oil prices plummeted on production disagreements, the positive performance to February for bearing these risks was insufficient to compensate for the market volatility that ensued in March.

We build and implement these Risk Premia strategies as one component of a larger, balanced portfolio and size them appropriately for their potential risks and returns, in accordance with CPP Investments' overall risk framework. This sizing includes modelling for scenarios such as past market stress events and considering whether the ratio of reward to potential losses remains attractive and sensible given the Fund's objectives and advantages. Given the size and scope of the market pullback seen in the fourth quarter of the fiscal year, the Risk Premia strategies experienced losses, as expected under the applicable circumstances. However, the strategies were well within limits and expectations established for the programs at the start of the year.

Earlier in the year, the Risk Premia strategies had successfully navigated Brexit uncertainty as well as the drone strike on Saudi Arabian oil processing facility that affected the crude market. Until March, the portfolio had positive results from strategies encompassing positive-yielding trades (commonly known as "carry trades") in rates, foreign exchange and equities.

Notable highlights for the fiscal year:

- Enhanced portfolio construction techniques and tools, in collaboration with Technology & Data. Together they designed the architecture and developed a prototype of a consolidated Research and Portfolio Management Platform;
- Partnered with colleagues in the Research & Innovation Group to enhance the resiliency of the quantitative equity portfolio. This included greater geographic diversification and a more balanced allocation across factors; and
- Scaled the dynamic carry and completion portfolio to full size within the Risk Premia program.

Looking ahead

Building on the progress made in fiscal 2020, CMF will focus its efforts in fiscal 2021 to:

- Place a greater focus on total Fund return through the development of long-biased investment strategies;
- Further advance programs that support the delivery of desired levels of emerging markets exposure; and
- Continue to enhance CMF's infrastructure through multi-year initiatives to scale its investment programs, improve investment agility and support CPP Investments' long-term growth. This growth strategy is set out in CPP Investments' 2025 strategy, described on page 32.

Active Equities

Investment Department

Fiscal 2020 Net Return

Absolute Return Strategies[1]

$3.7 billion

Net Investments

$0.4 billion

Assets Under Management

$61.4 billion

Key Focus this Year

- Increased the Fund's capabilities in Asia and Latin America
- Collaborated with Real Assets to further enhance the Climate Change Security Selection Framework
- Advanced data-driven research capabilities and supported the Alpha Generation Lab

Active Equities (AE) invests globally, primarily in public and soon-to-be public companies. AE comprises five investment groups, as well as a Research & Strategy group and the Fund's dedicated Sustainable Investing group.

Summary

Active Equities (AE) total assets under management were $61.4 billion at the end of the fiscal year, representing a decrease of $1.8 billion compared to last year. The small decline reflects the impact from the market drawdown in the fourth quarter offset against AE's growing position in emerging markets, with a focus on Asia and Latin America.

1. Absolute Return Strategies (ARS) hold offsetting systematic exposures through long and short investments. (See page 27 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 and the net value of derivatives 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.

The distribution and growth of AE's assets under management appear below at the current and prior year ends.

The following chart also shows AE's contribution to dollar value-added in fiscal 2020. The returns are reported in dollar amounts only, because activities are conducted on a market-neutral or long/short basis. Net income is equivalent to dollar value-added for long/short strategies. Net income represents both market return and dollar value-added for long-only strategies.

Active Equities

($ billions)	March 31, 2020	March 31, 2019
Absolute Return Strategies (ARS) – Assets		
Active Fundamental Equities	**21.9**	27.5
Direct Equity Investments Latin America	**1.6**	–
Fundamental Equities Asia	**20.3**	17.9
Relationship Investments	**11.7**	12.0
Thematic Investing	**5.9**	5.8
ARS Assets Under Management (AUM)[1]	**61.4**	63.2
ARS Liabilities[2]	**(61.0)**	(62.2)
Net Investments	**0.4**	1.0

1. Absolute Return Strategies (ARS) hold offsetting systematic exposures through long and short investments (See page 27 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, which represents the sum of the long investments and the net value of derivatives in each of the programs.
2. Includes short positions and hedges of systematic risks arising in Absolute Return Strategies.

($ billions)	Fiscal 2020	Fiscal 2019
Contribution to Portfolio Net Value-Added		
1-year	**3.7**	1.1
5-year	**6.0**	2.7

AE delivered net income of $3.7 billion in fiscal 2020. This was driven by the outperformance of active investments relative to the broader market, especially in emerging markets. The majority of programs contributed to outperformance this year. AE programs are structured as long/short absolute return portfolios; therefore, their net income represents dollar value-added as a relative measure of performance.

AE's net income includes costs of $241 million. AE's costs are slightly lower than fiscal 2019 due to lower investment management fees. Both transaction costs of $56 million, which include public market commissions and trade settlement costs, and operating expenses of $179 million remained relatively consistent with the prior year.

As a result of the worldwide impact of the COVID-19 pandemic, AE experienced impacts to travel and leisure-related businesses more broadly, and energy investments. Outperformance was driven by large long-term holdings with low leverage and companies that benefit from increased demand for data and online activities. There has also been positive performance on a few investments in the companies focused on COVID-19 vaccine production and online medical consultations. The impact of market uncertainty and negative sentiment tends to increase the correlation of stocks during market dislocations; however, the diversification of AE's strategies and the general strength of its portfolio companies supported this year's outperformance.

Net Income for Active Equities

($ millions)	Fiscal 2020	Fiscal 2019[1]	5-Year[1]
Adjusted Investment Income	**3,916**	1,306	6,938
Investment Management Fees	**6**	12	27
Transaction Costs	**56**	59	241
Net Investment Income	**3,854**	1,235	6,670
Operating Expenses	**179**	173	715
Net Income	**3,675**	1,062	5,955

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

Fiscal 2020 activities

In fiscal 2020, AE continued to advance its emerging markets strategy with the launch of the Direct Equity Investments Latin America (DEILA) group in São Paulo. It provides dedicated, on-the-ground coverage across both public and private market investments and private equity funds in the region. AE also established a presence in the recently opened San Francisco office, which will provide direct access to networks and companies in the world's largest innovation hub. AE has 161 professionals located across six international offices.

As executive sponsor of the Climate Change Program, AE continued to support CPP Investments' efforts to be a leader among asset owners and managers in understanding the investment risks and opportunities presented by climate change.

Key achievements of the program in fiscal 2020 included:

- The implementation of a new Climate Change Security Selection Framework to perform bottom-up analyses of climate change risks and opportunities on material investments;
- Further refinement of the in-house methodology to estimate carbon footprint; and
- Enhanced understanding of the potential impacts of climate change on national economic growth.

The Investment Analytics and Insights (IAI) team within AE's Research and Portfolio Strategy group is a cross-functional team. IAI incubated a data analytics platform and used it to complete specialized investment research projects for multiple investment groups. These included Active Fundamental Equities and Thematic Investing within AE and other groups throughout the organization, such as Credit Investments and Direct Private Equity.

Active Fundamental Equities

Active Fundamental Equities (AFE) had positive performance prior to the equity market shock caused by the COVID-19 pandemic. As a result of the market shock, AFE delivered negative performance in fiscal 2020 primarily driven by impacts to the travel and leisure-related businesses in the portfolio. Assets under management were $21.9 billion, representing a decline of $5.6 billion from $27.5 billion last year. The decline was driven by the sale of investments in the year, market drawdown in the fourth quarter and a transfer of assets to the newly formed Direct Equity Investments Latin America group.

Notable highlights for the fiscal year:

- Committed an additional €210 million in E.ON SE, a German utility company that owns and operates electricity and gas grids, as well as energy supply businesses;
- Realized net proceeds of C$250 million on the sale of Intact Financial Corporation, a Canadian company that provides property and casualty insurance; and
- Realized net proceeds of C$919 million on the sale of Worldpay Inc. The company offers proprietary technology platforms that enable merchants to accept credit and debit card payments in-store or online, through telephones and smartphones.

Direct Equity Investments Latin America

Direct Equity Investments Latin America (DEILA) made a positive contribution in its inaugural year as a standalone group primarily driven by its investments in telecom, financial services and utilities in Brazil. The group launched by consolidating Latin American investments from the existing private equity funds and public markets groups. It also invested in one new direct investment and one new fund commitment. DEILA ended the year with assets under management of $1.6 billion.

Notable highlights for the fiscal year:

- Invested C$340 million for a 12.4% stake in Smart Fit, Latin America's largest fitness chain based in Brazil – the group's first direct private investment; and
- Committed US$200 million to Advent Latin American Private Equity Fund VII.

Fundamental Equities Asia

Fundamental Equities Asia (FEA) was a significant driver of AE's positive results in fiscal 2020, with active investments outperforming the broader market. Assets under management were $20.3 billion compared to $17.9 billion last fiscal year, with the increase reflecting additional deployments this year. Despite volatility and broad-based declines in equities in Asia this year, resulting from both geopolitical tensions in Hong Kong, and later the financial market fallout from the COVID-19 pandemic, FEA was able to deliver outperformance based on strong results from long-term, high-conviction investments and active management of the portfolio based on localized market knowledge.

Notable highlights for the fiscal year:

- Invested C$500 million in Z Holdings Corp., a Japanese provider of electronic commerce and settlement finance services and the operator of the internet search engine "Yahoo! Japan";
- Invested US$375 million in Tencent Music Entertainment Group, an operator of an online music platform in China; and
- Made a US$115 million investment in Delhivery Pvt Ltd., one of India's leading third-party logistics providers.

Relationship Investments

Relationship Investments (RI) was among the top contributors to AE's positive net income in fiscal 2020 primarily from investments in the telecommunications infrastructure, engineering and data and analytics sectors. Assets under management were $11.7 billion, remaining stable from $12.0 billion last fiscal year, as the exit from several portfolio investments offset new deployments.

Notable highlights for the fiscal year:

- Invested US$750 million for an 8.8% stake in water utility company, Essential Utilities (formerly known as Aqua America), to support its acquisition of Peoples Natural Gas;
- Invested C$200 million for an approximately 7% stake in Premium Brands Holdings Corp., an owner of leading specialty food manufacturing and distribution businesses in North America, to support its future growth strategy; and
- Sold our ownership stake in Entertainment One following the company's acquisition by Hasbro, Inc., which generated net proceeds of approximately C$830 million, representing a 2.4 times multiple of capital invested since inception.

Thematic Investing

Thematic Investing (TI) generated positive results this year as portfolio investments generally outperformed broad market hedges. Investments in innovative companies in both the retail and health care sectors performed well amid the challenging market environment in the fourth quarter. Assets under management were $5.9 billion, remaining relatively stable from $5.8 billion last year. TI refined its strategy into six themes during the fiscal year and made several investments in early-stage, privately held companies. TI is taking advantage of the recent opening of CPP Investments' office in San Francisco to further develop networks in the Silicon Valley innovation hub and gain deeper insight into disruptive technologies and cutting-edge trends.

Notable highlights for the fiscal year:

- Expanded the automobility theme by C$421 million, which included a US$45 million investment in Sila Nanotechnologies, which specializes in the design and manufacture of highly efficient batteries for use in automobiles and electronics;
- Expanded the Data to Value theme by C$375 million as TI continued to leverage the PE Funds team's relationships with general partners (GPs) such as Sequoia Capital Global Equities and Accel. TI contributed to the closing of a US$75 million investment in Netskope, a leading cloud access security broker; and
- Launched the Health Care Innovations theme, with preliminary investments such as US$10 million in Fusion Pharmaceuticals Inc., a clinical-stage cancer drug development company focused on radiopharmaceuticals.

Sustainable Investing

During fiscal 2020, Sustainable Investing (SI) continued to advance the integration of environmental, social and governance (ESG) considerations, including climate change, into the investment process. SI also continued to play an important role in CPP Investments' Climate Change program, as outlined on page 30, notably through significant contributions to the new Climate Change Security Selection Framework. This framework incorporates assessments of climate change-related risks and opportunities into the most material individual investments. It requires investment teams and approval committees to assess key climate change risks and opportunities. In fiscal 2020, SI worked with investment teams to consider climate change in close to 100 transactions, with over 30 of those including significant climate change-related due diligence and impact assessments. In the year ahead, SI will support the extension of the framework to existing portfolio companies.

SI continued to play a leading role in climate change engagement and proxy voting, as described on page 30. In fiscal 2020, SI supported more than 20 shareholder proposals related to climate change.

SI continued to undertake activities to support CPP Investments' view that there is a clear business case for diversity. The long-standing position is that diversity directly links to positive long-term value creation. SI views lack of diversity as a business and financial risk. Efforts include involvement in the 30% Club of Canada and related engagements with portfolio companies. Another example is the continued expansion of the gender diversity voting policy in Canada and globally. These activities will remain significant areas of focus going forward.

SI launched Sustainable Equities, a beta-test of an investment portfolio that leverages the ESG database. The team is actively investigating this alpha opportunity through research and back-testing. Seven investments have been made to date, and SI will continue to develop this portfolio in the coming fiscal year.

Looking ahead

Building on the progress made in fiscal 2020, AE will focus its efforts to:

- Increase exposure in emerging markets through new investments and in-depth research;
- Institutionalize investment analytics and insights to extend across the organization. This will involve using alternative data to directly impact investment decisions and returns; and
- Continue to lead the Climate Change program across CPP Investments, in partnership with TPM, Finance, Analytics and Risk, Public Affairs and Communications and Human Resources. The department will work towards including climate change considerations in portfolio design, risk and investment selection decisions.

Credit Investments

Investment Department

Fiscal 2020 Net Return
-$1.0 billion
-2.4%

Net Investments
$40.0 billion

Key Focus this Year

- Built out a Public Credit active program and grew our emerging markets exposure
- Developed a portfolio management framework to evaluate and allocate capital based on best relative value among Credit Investments strategies globally
- Further scaled our investment activities along the entire credit spectrum

Credit Investments (CI) manages all of CPP Investments' public and private credit investments globally. CI invests in all credit and credit-like products across the capital structure, in all sectors and along the rating spectrum, with the exception of local-currency sovereign bonds.

Summary

The CI portfolio has grown from $36.6 billion at the end of fiscal 2019 to $40.0 billion at the end of fiscal 2020. This growth was primarily driven by new investment activities of $18.3 billion and foreign exchange gains of $2.1 billion, partially offset by $12.1 billion of dispositions and valuation losses of $5.0 billion. CI's net assets represent approximately 9.8% of the Fund and are managed by 116 professionals located across four offices globally. As shown on page 80, 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 table below summarizes aggregated returns in absolute terms. Rates of return are calculated on an unhedged time-weighted basis, as well as currency-neutralized dollar value-added.

Credit Investments

(%)	Fiscal 2020	Fiscal 2019
Returns		
1-year excluding foreign currency impact	**(6.8)**	9.8
1-year	**(2.0)**	11.2
1-year net	**(2.4)**	10.8
1-year return comparator[1]	**2.5**	5.4

($ billions)	Fiscal 2020	Fiscal 2019
Contribution to Portfolio Net Value-Added[1,2]		
1-year	**(3.4)**	1.3
5-year	**0.3**	3.4

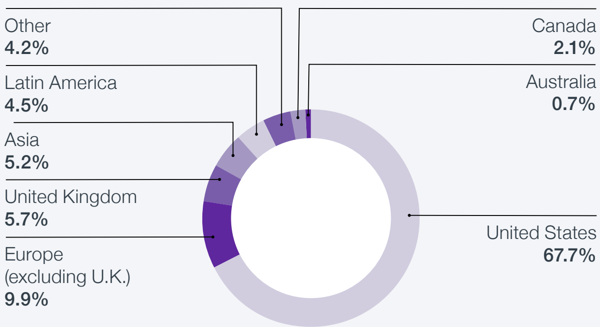
1. Return comparator is the weighted return of return-risk factors representative of the department's investment programs. Dollar value-added is relative to the return comparator.
2. Foreign currency fluctuations have no impact on departmental value-added. See page 29 for more details.

The CI department ended fiscal 2020 with a net loss as a result of significant market volatility towards the end of the fiscal year. Mark-to-market losses in the fourth quarter more than offset income flows, realizations and foreign exchange gains from earlier in the fiscal year. However, the diversified CI portfolio continued 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 8.0% and net income of $8.1 billion.

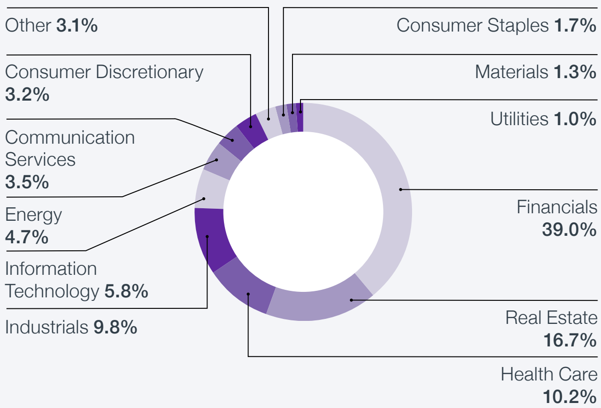
During fiscal 2020, CI generated a net loss of $1.0 billion including costs of $201 million to support investment activities. Management fees of $17 million mainly represent fees for structured credit and deployment vehicles. Transaction costs of $37 million primarily stem from the professional and advisory services related to acquisitions and dispositions. Operating expenses of $147 million for CI have increased compared to last year consistent with the growth in CI's new investment activities.

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

Credit Investments – Geographic Diversification
As at March 31, 2020



Credit Investments – Sector Diversification
As at March 31, 2020



Net Income (Loss) for Credit Investments

($ millions)	Fiscal 2020	Fiscal 2019	5-Year
Adjusted Investment Income (Loss)	**(838)**	3,161	8,892
Investment Management Fees	**17**	24	82
Transaction Costs	**37**	48	261
Net Investment Income (Loss)	**(892)**	3,089	8,549
Operating Expenses	**147**	113	497
Net Income (Loss)	**(1,039)**	2,976	8,052

Fiscal 2020 activities

Since the formation of CI in fiscal 2019, the department has extended its investment activities along the entire credit spectrum and grown its emerging markets exposure. The department expanded its Active Public Credit program and launched a China onshore public credit program. During fiscal 2020, CI formulated the infrastructure credit strategy, and continued to expand investments in structured credit and other credit-like assets. CI further advanced its portfolio management capabilities by developing a framework to allocate capital based on the best relative value among CI strategies, embracing technology and establishing a framework to prepare the department for market downturns.

Following strong performance during the first three quarters of fiscal 2020, credit markets globally experienced significant volatility amid the COVID-19 pandemic in the fourth quarter. Credit spreads widened across the spectrum and new issuances slowed despite monetary and fiscal stimulus. However, CI was well positioned to withstand the market downturn as the department proactively managed the portfolio by rotating into high-quality corporate and non-correlated assets throughout the year. In fiscal 2020, CI deployed $18.3 billion in capital across the credit spectrum and geographies and had $12.1 billion in dispositions. The dispositions were primarily comprised of non-investment grade credit when the markets were more robust.

Americas Leveraged Finance

At year end, Americas Leveraged Finance (ALF) assets totalled $13.7 billion, compared to $13.3 billion at the end of fiscal 2019. The portfolio remained relatively flat, as dispositions (including maturities and redemptions) totalling $4.4 billion and $0.8 billion in valuation losses offset $4.9 billion in new investment activity and $0.7 billion in foreign exchange gains. In fiscal 2020, ALF created a special situations program, which will focus on solution-oriented rescue financings as well as stressed and deep-value credit opportunities.

A notable highlight for the fiscal year:

- Diversified the ALF portfolio through strategic rotation amongst high yield bonds, leveraged loans and credit opportunities, in preparation for market downturn.

Americas Structured Credit & Financials

At year end, Americas Structured Credit & Financials (ASCF) assets totalled $5.8 billion, compared to $4.7 billion at the end of fiscal 2019. The growth in the portfolio was driven primarily by $5.1 billion in new investment activity and $0.4 billion in foreign exchange gains. This was partially offset by portfolio distributions, refinancings and dispositions totalling $3.1 billion, as well as $1.2 billion in valuation losses. ASCF continues to leverage data and technology to enhance investment decisions and portfolio management.

A notable highlight for the fiscal year:

- Acquired a portion of LifeArc's royalty interests on worldwide sales of Keytruda® (pembrolizumab) for approximately US$1.3 billion. Keytruda is an anti-PD-1 therapy developed and commercialized by Merck (known as MSD outside the U.S. and Canada). This marks CPP Investments' largest pharmaceutical royalty and intellectual property investment to date.

APAC Credit

At year end, APAC Credit (APAC) assets totalled $1.3 billion, compared to $1.2 billion at the end of fiscal 2019. The growth in the portfolio was driven primarily by $0.8 billion in new investment activity. This was partially offset by $0.6 billion of dispositions (including maturities and redemptions) and $0.1 billion of valuation losses. During the year, APAC welcomed a new head and the group focused on scaling the portfolio with new programs in China and India.

A notable highlight for the fiscal year:

- Committed US$225 million to the India Resurgence Fund platform. This is a distressed assets buyout platform set up with Piramal Enterprises Limited and Bain Capital Credit as joint sponsors.

European Credit

At year end, European Credit (EC) assets totalled $4.1 billion, compared to $4.6 billion at the end of fiscal 2019. The decrease in the portfolio was due to $3.0 billion of dispositions (including maturities and redemptions) and $0.5 billion of mark-to-market losses more than offsetting $2.8 billion in new investment activity and $0.1 billion in foreign exchange gains. The group implemented strategies to manage the European structured credit portfolio more efficiently and enhance returns on the senior secured loan portfolio.

A notable highlight for the fiscal year:

- Closed a €245 million commitment in the Payment-in-Kind (PIK) Notes issued by a leading global provider of elevator and escalator solutions. The PIK Notes are part of a broader financing package that the equity sponsors expect to put in place to fund the acquisition of the business.

Public Credit

At year end, Public Credit managed assets that totalled $23.1 billion, consisting of $16.1 billion in Balancing Credit and $7.0 billion in Active Public Credit, compared to $8.0 billion at the end of fiscal 2019. The net growth in the portfolio was driven primarily by $13.7 billion in net new investment activity, and $1.5 billion in currency gains. In fiscal 2020, Public Credit launched the China onshore public credit program to build CI's presence and capabilities in China's local currency credit market.

Real Assets Credit

At year end, Real Assets Credit (RAC) assets totalled $8.1 billion, compared to $8.9 billion at the end of fiscal 2019. The decrease in the portfolio was primarily due to $2.3 billion of mark-to-market losses as real estate and energy sectors experienced steep declines in the fourth quarter of fiscal 2020. The valuation losses, together with $0.9 billion of dispositions (including maturities and redemptions), more than offset $1.9 billion in new investment activity and $0.5 billion in foreign exchange gains. In fiscal 2020, the group developed an infrastructure credit strategy and started establishing a team to pursue opportunities in that space.

A notable highlight for the fiscal year:

- Committed €300 million to an Iberian Private Real Assets Credit partnership. This is a separately managed account which will invest in middle market real estate credit opportunities across Spain and Portugal.

Looking ahead

With the ability to provide a complete solution across the credit markets, CI is focused on scaling the portfolio globally and investing in the best risk-adjusted opportunities. Specifically, CI will:

- Proactively manage the portfolio to both withstand and take advantage of market volatility caused by the COVID-19 pandemic;
- Further scale its strategies and develop new programs to fill in the gaps in the credit spectrum;
- Continue to grow its emerging markets exposure with a focus on China, India and Latin America; and
- Focus on technology and data to improve core infrastructure and portfolio management capabilities.

Private Equity

Investment Department

Fiscal 2020 Net Return
$5.2 billion
5.8%

Net Investments
$94.6 billion

Key Focus this Year

- Refined the department's portfolio construction framework to better align with maximizing overall Private Equity department returns
- Built out the new Venture Capital program and established a local presence in San Francisco
- Leveraged higher-quality data and technology to drive more efficient investment decisions

Private Equity (PE) invests in a wide range of private equity assets globally. PE seeks return premiums for investing in less liquid assets and by focusing on long-term value creation.

Summary

PE's assets increased from $87.7 billion at the end of fiscal 2019 to $94.6 billion at the end of fiscal 2020. This growth was primarily driven by new investment activities totalling $17.2 billion and foreign exchange gains of $6.2 billion. This was partially offset by dispositions and distributions of $16.0 billion and valuation losses of $0.3 billion. PE's total exposure including unfunded commitments was $129.8 billion – an increase of $9.6 billion over the fiscal year. PE has 152 direct investments and maintains 152 manager relationships. The department's net assets represent approximately 23.1% of the Fund, managed by 167 professionals located across five offices globally. As shown on page 84, PE's investments are diversified by industry and geography.

The table below summarizes aggregated returns in absolute terms. Rates of return are calculated on an unhedged time-weighted basis, as well as currency-neutralized dollar value-added.

Private Equity

(%)	Fiscal 2020	Fiscal 2019
Returns		
1-year excluding foreign currency impact	**0.2**	14.4
1-year	**6.1**	16.8
1-year net	**5.8**	16.5
1-year return comparator[1]	**(7.2)**	8.6

($ billions)	Fiscal 2020	Fiscal 2019
Contribution to Portfolio Net Value-Added[1,2]		
1-year	**9.6**	3.4
5-year	**13.7**	5.4

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 29 for more details.

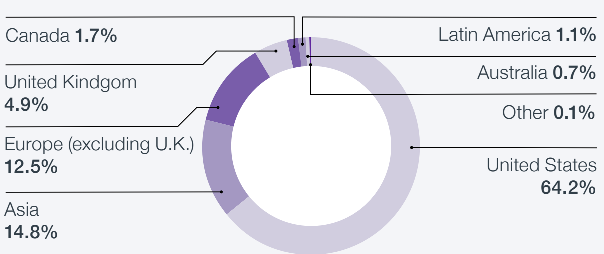
In fiscal 2020, the PE department delivered positive returns largely due to foreign exchange gains. The strong investment gains and income flows recorded in the first three quarters of the year were mostly offset by the valuation write-downs in the fourth quarter as a result of the macroeconomic and business uncertainty introduced by COVID-19. The Information Technology and Consumer Discretionary investments in the active direct portfolio were the most negatively impacted in the last quarter. In addition, PE applied a top-of-house write-down on its fund valuations provided by general partners (GPs) to adjust the lagged GP values and to mitigate the increased valuation risk. Despite the significant write-downs, PE's diversified portfolio continued to outperform the returns of the relevant public equity benchmarks on a five-year basis. Over the past five years, the Private Equity department has generated a net return of 12.3% and net income of $38.0 billion.

During fiscal 2020, PE delivered $5.2 billion in net income and incurred costs of $875 million to support investment activities. Investment management fees of $585 million, representing fees paid to external fund managers, are higher than last year driven by more fund assets under management. Transaction costs of $63 million, reflecting professional and advisory services related to private market acquisitions and dispositions, were lower than last year driven by the type of deals pursued. Operating expenses of $227 million were higher than last year, driven by higher personnel and organizational support costs to manage the growth in the portfolio.

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

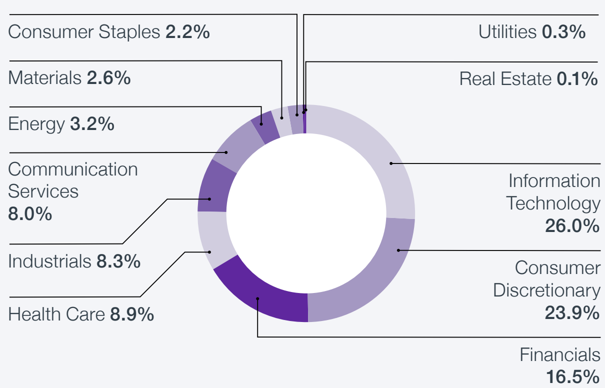
Private Equity – Geographic Diversification

As at March 31, 2020



Private Equity – Sector Diversification

As at March 31, 2020



Net Income for Private Equity

($ millions)	Fiscal 2020	Fiscal 2019	5-Year
Adjusted Investment Income	**6,068**	12,853	41,936
Investment Management Fees	**585**	562	2,607
Transaction Costs	**63**	82	435
Net Investment Income	**5,420**	12,209	38,894
Operating Expenses	**227**	205	882
Net Income	**5,193**	12,004	38,012

Fiscal 2020 activities

In the first three quarters of fiscal 2020, the private equity market continued to experience strong deal activity with buyout valuations at cyclical highs despite growing concerns of a global recession. Against this backdrop, the PE teams exercised underwriting discipline and maintained a consistent focus on quality and diversification with measured investment pacing as PE deployed $17.2 billion in capital during the fiscal year. The COVID-19 pandemic in the fourth quarter resulted in delayed deals, volatility and weakened buyer appetite in the private equity market. In response to the pandemic, PE promptly and thoroughly assessed the financial and operational risk of its direct portfolio holdings and proactively reached out to its fund managers to review their responses.

In fiscal 2020, PE adopted a department-wide investment framework to more efficiently allocate capital across all PE programs. The objectives of this framework include:

- Driving total relationship returns, which considers the benefits a GP brings outside of a fund commitment, including co-investments, knowledge/network sharing and partnership transparency;
- Optimizing the mix of fee-bearing and non-fee-bearing investments; and
- Actively managing exposures to legacy managers and older vintage funds.

PE continues to embrace innovation, disruption and technology. The department played a cornerstone role this year in establishing the San Francisco office, which provides CPP Investments with enhanced access to a network of investment opportunities and to an innovative technology ecosystem. In addition, PE has been leveraging the organization's enhanced data analytics capabilities and exploring opportunities to cultivate private portfolio company data. This added information set will help in making increasingly superior investment decisions and to drive portfolio value creation.

Direct Private Equity

At year end, the Direct Private Equity (DPE) portfolio consisted of 85 direct investments valued at $38.0 billion compared with 80 valued at $32.8 billion the previous year. The growth in the portfolio was primarily driven by $6.4 billion in new investment activity and $2.4 billion in foreign exchange gains. This was partially offset by dispositions totalling $3.4 billion. The group generated a net return of 6.6% and net income of $2.2 billion.

Notable highlights for the fiscal year:

- Participated in the privatization of Inmarsat, a leading global satellite operator, providing data and voice connectivity to end-users worldwide, at an enterprise value of US$6 billion, alongside Apax, Warburg Pincus and Ontario Teachers' Pension Plan. CPP Investments acquired a 25% stake;
- Invested in Merlin Entertainments, the second-largest themed attractions provider globally, alongside Blackstone and KIRKBI, in a transaction valued at £5.9 billion. KIRKBI and the Blackstone/CPP Investments group each acquired a 50% stake; and
- Invested in Waystar, a leading cloud-based provider of revenue cycle technology, alongside the EQT VIII Fund, at a valuation of US$2.7 billion. CPP Investments and EQT acquired a majority stake in Waystar.

Private Equity Asia

In fiscal 2020, the Asia-Pacific private equity market experienced a challenging macro environment, including U.S.-China trade tensions, social unrest in Hong Kong and the outbreak of COVID-19. Private equity investments, exits and fundraising all decreased from the prior fiscal year. Greater China, the largest market in the region, suffered a drop of investment activities after historical highs in fiscal 2019. However, the impact was partially mitigated by solid investment growth in other key country markets such as India, South Korea and Japan. The private equity asset class remained an important source of capital in the region.

The Private Equity Asia (PE Asia) portfolio grew from $13.6 billion to $15.3 billion in carrying value during the fiscal year. The portfolio consists of $9.0 billion (or 59.0%) in funds, $5.8 billion (or 38.1%) in direct investments, and $0.5 billion (or 2.9%) in secondary investments. The majority of PE Asia's investments were based in emerging markets, with $8.0 billion in Greater China, up from $7.1 billion in fiscal 2019, and $1.8 billion in India, in line with fiscal 2019. Growth in the portfolio was primarily driven by $2.4 billion in new invested capital, $0.4 billion in valuation gains, and $0.9 billion in foreign exchange gains. This was partially offset by distributions totalling $2.1 billion. The group currently has relationships with 35 fund managers across 75 funds, with $17.3 billion of total exposure. During the year, it selectively expanded its GP network by adding six new managers, committed $2.5 billion to funds in Asia, and closed 10 direct investments worth $0.7 billion.

Notable highlights for the fiscal year:

- Closed a A$150 million investment in Navitas Ltd., a global leader in the provision of university pathway programs for international students. CPP Investments acquired an 11% stake in Navitas;
- Committed US$500 million to MBK Partners Fund V. This fund will target control buyout investments in Korea, China and Japan with a focus on market leaders in its core sectors of retail, media, industrials and financial services; and
- Committed up to JPY13,800 million to Polaris Capital Fund V. This fund focuses on control buyouts in middle-market cap companies with a focus on corporate carve-outs and succession situations in Japan.

Private Equity Funds

During the year, the Private Equity Funds (Funds) portfolio grew from $32.7 billion to $33.4 billion. The growth in the portfolio was primarily driven by $6.9 billion in new invested capital and $2.3 billion in foreign exchange gains. This was partially offset by distributions totalling $7.8 billion and valuation losses of $0.7 billion. The Funds group currently has relationships with 81 fund managers across 208 funds, with $57.0 billion of total exposure, up 4.0% from fiscal 2019.

The group reviewed 72 relevant, on-strategy opportunities and after prudent judgment, made commitments to 22 funds for a total of $6.9 billion. Of these, 14 represented existing relationships, including two that backed adjacent strategies of a General Partner's (GP) core platform. There were eight new relationships to the program. In addition, the Funds group invested $203 million in the Venture Capital strategy, developing four GP relationships.

The Funds group continued to focus on actively managing its relationships with GPs to generate deals for other investment programs. Over the year, the group's GPs offered CPP Investments 155 direct opportunities, of which 24 had closed as of March 31, 2020. The total dollar amount of closed opportunities represented $5.3 billion of CPP Investments' invested capital, which was invested on a no-fee, no-carry basis.

Secondaries

The Secondaries group assets totalled $7.9 billion, compared to $8.6 billion at the end of fiscal 2019. The decrease in the size of the portfolio was driven by $2.8 billion of distributions. This was partially offset by $1.6 billion in new invested capital and $0.5 billion in foreign exchange gains. Unfunded commitments are $2.9 billion, bringing the total exposure to $10.8 billion. As at March 31, 2020, 64.8% of the total exposure was in North America, 24.4% in Europe, 6.9% in Latin America and 3.9% in Asia.

Secondaries implemented an expanded program where, in conjunction with Funds, it leads the identification and execution of opportunities to proactively manage exposures to older vintages. In this context, Secondaries led the full or partial sale of $2.5 billion of net asset value in Limited Partnership interests in the Funds portfolio across five transactions.

Secondaries moderated the pace of investment during the year, following two very active deployment years and a cautious market outlook. It invested $0.7 billion across six transactions.

Notable highlights for the fiscal year:

- Completed LP secondary transactions totalling $420 million;
- Completed a US$280 million GP-led transaction involving recapitalization of 13 private assets in TPG Growth II; and
- Completed US$180 million Structured Secondary transaction to provide financing to a large U.S. fund-of-funds manager.

Looking ahead

As the economic impact of COVID-19 unfolds, the Private Equity department will focus on navigating the downturn, and at the same time, continue to pursue initiatives in support of CPP Investments' 2025 strategy. Specifically, PE will:

- Ensure the resilience of its portfolio by demonstrating investment discipline and leveraging comparative advantages;
- Strategically deploy capital to support existing portfolio companies and to seek new attractive investment opportunities;
- Assist in CPP Investments' development of advanced data, analytics and technology to drive better investment decision-making and enable value creation and enhanced returns;
- Continue to actively manage the department's mature private equity funds portfolio; and
- Foster a global-operating mindset, demonstrate agility in resourcing, and support knowledge sharing across the organization.

Real Assets

Investment Department

Fiscal 2020 Net Return

-$0.3 billion
-0.2%

Net Investments

$97.6 billion

Key Focus this Year

- Increased focus on investment opportunities in emerging markets
- Leveraged information-sharing capabilities for optimal capital deployment and enhanced investment returns
- Led the Security Selection work stream within the Climate Change Security Selection Framework. Efficiently identified, assessed and priced key climate change risks and opportunities at the individual entity level
- Launched a focused strategy on energy Innovation, Technology and Services, and completed the first three investments

Real Assets (RA) has a globally diversified portfolio of investments that delivers stable and growing income to the Fund. The RA portfolio consists of investments in the real estate, infrastructure, power and renewables and energy and resources sectors.

Summary

The Real Assets (RA) portfolio increased from $94.1 billion at the end of fiscal 2019 to $97.6 billion at the end of fiscal 2020. This growth was primarily driven by new investment activities totalling $15.7 billion and foreign exchange gains of $0.1 billion. This was partially offset by asset dispositions and return of capital of $10.0 billion, distribution income of $0.9 billion, and valuation losses of $1.5 billion.

RA's net assets represent 23.8% of the Fund, managed by 219 professionals located across eight offices globally. The geographic footprint of the department's 179 investments spans five continents.

The table below summarizes aggregated returns in absolute terms. Rates of return are calculated on an unhedged time-weighted basis, as well as currency-neutralized dollar value-added.

Real Assets

(%)	Fiscal 2020	Fiscal 2019
Returns		
1-year excluding foreign currency impact	**0.1**	9.5
1-year	**0.1**	8.0
1-year net	**(0.2)**	7.7
1-year return comparator[1]	**(6.8)**	5.3

($ billions)	Fiscal 2020	Fiscal 2019
Contribution to Portfolio Net Value-Added[1,2]		
1-year	**5.3**	2.1
5-year	**14.0**	8.6

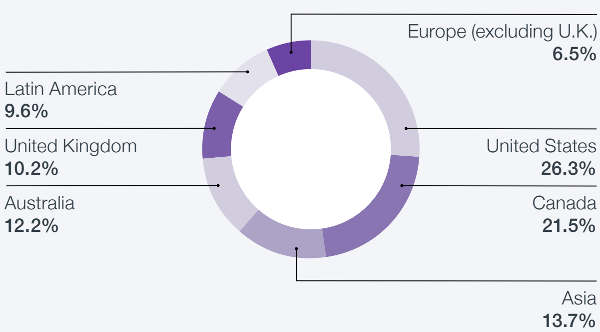
1. Return comparator is the weighted return of return-risk factors representative of the department's investment programs. Dollar value-added is relative to the return comparator.
2. Foreign currency fluctuations have no impact on departmental value-added. See page 29 for more details.

In fiscal 2020, the RA department's four investment programs performed well against their respective objectives. Despite the overall negative net return for the department, largely attributable to the negative market sentiment resulting from COVID-19 and depressed energy markets, there were areas of positive performance. In particular, the Real Estate program had gains due to valuation increases. This reflected trends in industrial and office sectors and the diverse nature of the portfolio.

During fiscal 2020, RA delivered a net loss of $0.3 billion including costs of $622 million to support its investing activities. Investment management fees of $190 million have decreased over last year, as fiscal 2019 included one-time performance-based fees relating to dispositions and valuation gains. Transaction costs of $136 million primarily represent professional and advisory services incurred during due diligence related to investment acquisitions and dispositions. Transaction costs are lower than last year due to the high volume of investing activity that occurred in fiscal 2019 for Energy & Resources. Operating expenses of $296 million are higher than last year driven by the growth of Real Assets' portfolio.

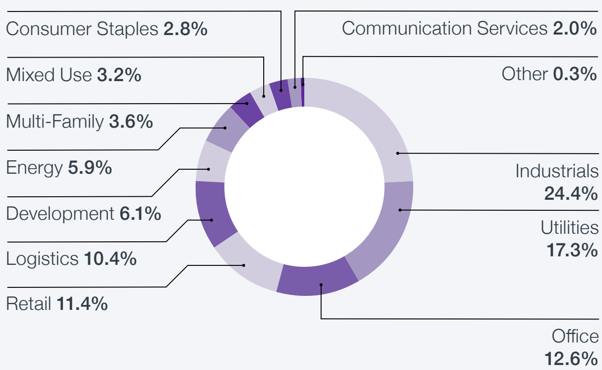
Real Assets – Geographic Diversification

As at March 31, 2020



Real Assets – Sector Diversification

As at March 31, 2020



Net Income (Loss) for Real Assets

($ millions)	Fiscal 2020	Fiscal 2019	5-Year
Adjusted Investment Income	**347**	7,417	26,169
Investment Management Fees	**190**	258	862
Transaction Costs	**136**	159	692
Net Investment Income	**21**	7,000	24,615
Operating Expenses	**296**	277	1,220
Net Income (Loss)	**(275)**	6,723	23,395

Fiscal 2020 activities

Global interest rates continued to remain historically low and global real assets continued their more than decade-long expansion. Amid international trade tensions, the COVID-19 pandemic that led to a market sell-off, steeply declining commodity prices and the transition in energy dynamics, income-seeking investors continued to allocate additional capital into real assets. RA groups still matched the pace of fiscal 2019 capital deployment, despite a competitive landscape that has pushed asset prices upward and put downward pressure on future return expectations. The department accomplished this by continuing to seek situations where strong partnerships and the ability to offer scale, speed and certainty of execution are key differentiators. This allowed access to complex, non-traditional deals with attractive return profiles.

RA remained focused on asset management, including expanding exposures in emerging markets, while managing dispositions when business plans were complete. RA increased its exposure to emerging markets such as India, Greater China and Brazil. The department has also been ready to sell certain assets where the market's view on future returns was misaligned with its own or to take advantage of high valuations. To that end, the RA programs set a new record for the department and repatriated $10.0 billion of capital to the Fund in fiscal 2020, primarily from the Real Estate portfolio.

Energy & Resources

At year end, the Energy & Resources (E&R) portfolio consisted of 15 investments valued at $7.3 billion compared with $8.2 billion at the end of fiscal 2019. Growth in the portfolio was driven primarily by $2.2 billion in new investment activity and $0.4 billion in foreign exchange gains. However, this was more than offset by $2.7 billion in valuation losses as the energy markets experienced steep declines and increased volatility in the fourth quarter of the fiscal year.

The past year was one of expansion, diversification and growth for E&R. The team completed its first three investments in the newly created Innovation, Technology & Services strategy. It also diversified its midstream portfolio into the competitive U.S. market and expanded its investment team through internal transfers and new hires in London, San Francisco and New York. Amidst a broader energy sector that continues to experience intense change, the team sees tremendous opportunity for investors with patience, flexibility and scale. The shift towards a low-carbon economy will continue to drive the energy industry to new heights of innovation and efficiency, and E&R is well positioned to invest around the global energy transition.

Notable highlights for the fiscal year:

- Closed the formation of a US$3.8 billion joint venture with The Williams Companies, Inc. The joint venture includes Williams' 100% owned Ohio Valley Midstream system and 100% of the Utica East Ohio Midstream LLC system. E&R invested US$1.3 billion for a 35% ownership stake in the joint venture with Williams retaining a 65% interest.
- Invested an additional US$273 million in Crestone Peak Resources (Crestone), a 96%-owned CPP Investments portfolio company, to support Crestone's acquisition of oil and gas assets in the Denver-Julesburg Basin in Colorado.
- Made three new Fund commitments as part of the Innovation, Technology and Services strategy. These include McRock Fund II (C$10 million), CVP Energy Tech Fund (US$10 million) and ArcTern Fund II (C$20 million).

Infrastructure

At year end, the Infrastructure portfolio consisted of 22 direct investments valued at $35.1 billion, compared with $33.3 billion at the end of fiscal 2019. The growth in the portfolio was primarily the result of $4.4 billion in new investment activities, and $0.4 billion in valuation increases. This was offset by a $1.4 billion return of capital and dispositions, distribution income of $0.9 billion and $0.6 billion in foreign exchange losses.

The Infrastructure portfolio is diversified globally, with 78.1% in developed markets such as North America, Western Europe and Australia and 21.9% in emerging markets, primarily in Latin America and India. Infrastructure investments represent 36.0% of the RA portfolio. A team of 48 professionals located across six international offices manages the Infrastructure portfolio.

During the year, the Infrastructure group was active across its core geographies and markets and continued to focus on increasing its emerging markets exposure by investing in quality, large-scale core opportunities with like-minded partners.

Notable highlights for the fiscal year:

- Acquired an additional 10.01% equity stake in 407 International Inc., which holds a concession over the 407 Express Toll Route toll road in the Greater Toronto Area, from SNC-Lavalin Group Inc. for C$3.0 billion, with up to an additional C$250 million to be paid over 10 years, conditional on achieving certain financial targets related to the performance of the toll highway. CPP Investments controls a 50.01% stake in 407 International Inc.
- Acquired a 45% interest for C$550 million in PT Lintas Marga Sedaya, the concession holder and operator of the 117-kilometre Cikopo-Palimanan (Cipali) toll road in Indonesia, alongside PT Baskhara Utama Sedaya, a wholly owned subsidiary of PT Astra Tol Nusantara, who will hold 55%. This is CPP Investments' first infrastructure investment in Indonesia.
- Sold our 39% stake in Interparking, a pan-European car-park owner and operator, for net proceeds of approximately C$870 million, and our 40% stake in Solveig Gas HoldCo A/S, a company that held a 25.6% stake in Norwegian natural gas transport network Gassled, for net proceeds of C$197 million.

Portfolio Value Creation

This year, Portfolio Value Creation (PVC) continued to collaborate with investment teams across the organization. Over the course of this year, PVC further strengthened the active asset management approach to holdings in which CPP Investments has material governance rights. PVC worked closely with investment teams to enhance best practices in value creation planning, management and director evaluation and selection, and investment monitoring across the portfolio. PVC expanded its presence to the CPP Investments offices in Hong Kong and San Francisco. The Hong Kong move reflects CPP Investments' strong presence and investment activities in Asia while the San Francisco presence reflects continued strategic focus on digital initiatives.

In addition, PVC worked with investment teams, portfolio management teams, Technology & Data, Investment Analytics and Insights and the Alpha Generation Lab to proactively identify and execute opportunities for driving value creation through:

- Digital transformation; and
- Tools that include the use of advanced data, analytics and emerging technologies.

The group played an integrated role in CPP Investments' response to the COVID-19 pandemic, including leading a targeted portfolio impact assessment that evaluated potential liquidity needs for the Fund's active investments. In addition, PVC works alongside the investment teams to share information and best practices on topics such as financial, operational and employee matters with management teams of investee companies.

Lastly, PVC continued to provide onboarding support and 100-day planning for newly acquired companies to establish robust value-creation plans, long-term governance and controls. PVC continued to collaborate with investment teams and CPP Investments' Legal Department to ensure a rigorous process for selecting portfolio company directors, focusing on required skills and diversity. The group continued to execute a thorough monitoring process across major CPP Investments portfolio companies and targeted support for commercial and operational due diligence of potential investments.

Power & Renewables

At year end, the Power & Renewables (P&R) portfolio consisted of seven direct investments valued at $8.7 billion compared with $5.1 billion at the end of fiscal 2019. The growth in the portfolio was driven primarily by $3.5 billion in new investments, specifically the Pattern Energy acquisition, and nearly $0.1 billion in valuation gains due to strong operational performance.

Fiscal 2020 continued an acceleration of long-term changes in the power market and this trend, coupled with available private capital, continue to create meaningful investment opportunities for the P&R team.

Notable highlights for the fiscal year:

- Acquired Pattern Energy Group Inc. (Pattern Energy) for an enterprise value of approximately US$6.1 billion, including net debt. Following the acquisition, combined Pattern Energy with its affiliated development entity, Pattern Energy Group 2 LP (Pattern Development). Pattern Energy has a portfolio of 28 renewable energy projects in North America and Japan while Pattern Development has a development pipeline of more than 10 GW across North America and Japan.
- Completed construction on Hohe See and Albatros, two German offshore wind assets totalling more than 600 MW. In addition, executed a financing of CPP Investments' stake in the projects via institutional notes that qualify as green bonds under CPP Investments' Green Bond Framework. CPP Investments acquired a 49% stake in these projects in 2018 as part of our joint venture with Enbridge.

Real Estate

At year end, the Real Estate (RE) portfolio totalled $46.5 billion, compared to $47.5 billion at the end of fiscal 2019. The change in portfolio value was primarily the net result of several factors: new investment activity totalling $5.6 billion, $0.8 billion in valuation increases due to strong performance from the industrial and office sector investments, and $0.3 billion in foreign exchange gains. This was offset by $7.8 billion in return of capital from asset sales.

At year end, the RE portfolio consisted of 136 investments with 60 operating partners, managed by a team of 79 CPP Investments professionals across seven offices globally. This portfolio remains diversified across major markets globally. It has 80.4% in developed markets such as the U.S., U.K., Canada and Australia, and 19.6% in emerging markets, including Greater China, India and Brazil. Almost 88% of RE's professionals are located in CPP Investments' international offices.

RE continued to increase its investments in emerging markets. The group executed on the newly established Listed Real Estate (LRE) program to gain exposure to countries and sectors that are absent or under-represented in the current portfolio. The group also entered sectors such as Brazilian multi-family property through traditional joint venture arrangements. RE took advantage of a robust pricing environment for high-quality real estate and sold its stake in several top-tier assets worth $7.8 billion, crystallizing gains of $0.5 billion in fiscal 2020.

RE remains committed to growing its long-standing relationships with many best-in-class operating partners who are a valuable source of deals. More than 64% of the investment activity this year was made with existing partners such as Goodman Group, Longfor Properties, Global Logistic Properties, ESR and Lendlease.

Notable highlights for the fiscal year:

- Formed a new joint venture with Cyrela Brazil Realty for an initial allocation of up to R$1 billion in combined equity to develop a portfolio of residential real estate in São Paulo, Brazil. Four development projects located on premium sites in São Paulo have been secured to seed the joint venture.
- Formed a joint venture with Boston Properties to develop Platform 16, a 1.1 million-square-foot, Class-A urban office campus in San Jose, California. CPP Investments has a 45% ownership in the venture.
- Sold Liberty Living, CPP Investments' wholly owned student accommodation business to The Unite Group plc, the largest manager and developer of purpose-built student accommodation in the U.K. CPP Investments received a portion of the sale consideration in shares equivalent to 20% of the combined group, in addition to net cash proceeds of approximately C$1.3 billion.

Looking ahead

As we look forward, the unfolding economic and social impact of the COVID-19 pandemic is top of mind. In the near future, RA's primary focus will be to:

- Ensure the resilience of RA's portfolio, positioning it to weather the downturn and emerge on the other side of the pandemic in good order; and
- Identify the best opportunities to deploy capital into existing portfolio companies and new investment opportunities, as the full extent of the COVID-19 pandemic becomes clearer.

We will also continue to pursue initiatives that we expect to deliver strategic advantage in the longer term:

- Grow RA's emerging markets exposure, primarily in China, Brazil and India;
- Collaborate with other CPP Investments teams to take advantage of public market opportunities in sectors where we have knowledge advantage; and
- Advance RA's information technology initiatives, actively embracing enterprise-wide initiatives and enhancing them with RA's own dedicated data solutions.

Risk Management

CPP Investments' activities expose us to a broad range of risks. Our Integrated Risk Framework considers all key risks. This includes both investment risks and non-investment risks. It ensures 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 CPP Investments' ability to achieve our statutory objective: to seek 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 (CPP) and the ability of the CPP to meet its financial obligations on any given business day."

Risk environment – top and emerging risks

The environment in which CPP Investments operates is dynamic and the pace of change is rapid. These changes may have an impact on our risk profile, the development of our risk management practices and our ability to achieve our statutory objectives. In our assessment of key risks, we consider how different risks are interconnected and how they are correlated. This past year, we closely monitored the following developments to assess their potential impact on our investments and operations over time:

- **Pandemic risk** ↑ materialized through the COVID-19 pandemic. The scale of the pandemic resulted in severe global, societal and economic impacts, which have contributed to exceptional volatility and significant dislocations in capital markets. These events have financial impacts on our Investment Portfolios and operational impacts for our offices and employees. We activated crisis management and business continuity plans to ensure the safety and wellness of our employees and mitigate impacts to our operations. We also activated our Financial Crisis Management Team to inform decision-making at the Senior Management Team level, enhanced daily and intra-day monitoring of the portfolio and continue to conduct scenario analysis to assess the potential impact on the Fund. We also increased the frequency of information updates to government officials nationwide holding direct responsibilities related to the CPP. The full extent and duration of the impacts is still highly uncertain. Over the short to medium term, while the market dislocation caused by the COVID-19 pandemic may present attractive investment opportunities, CPP Investments may experience disruptions to the ability to complete new investments or successfully exit existing investments. Investments in certain industries, including but not limited to travel, entertainment, retail, real estate and oil & gas, are disproportionately affected and we may realize further losses. We continue to monitor the evolving situation and its impact on the Fund.
- **Geopolitical risk** ↑ remained a top risk throughout fiscal 2020. The COVID-19 pandemic had an impact on geopolitical risks, such as United States-China relations, protests in Hong Kong, and the growth of nationalism. The role of the Organization of the Petroleum Exporting Countries (OPEC) in influencing oil and gas prices is evolving during the global economic slowdown. In the U.K., the political climate changed significantly when it formally exited the European Union in January 2020. Within Canada, increased inter-jurisdictional tension between the Government of Canada and the Province of Alberta, related to multiple economic policies, is a source of political risk. Alberta signalled its intent to assess the merits of withdrawing from the CPP. Even as the likelihood, nature and timing of Alberta leaving the CPP remains uncertain, we are monitoring developments and their potential impacts.

Legend

— no change in risk from prior year
↑ increasing risk from prior year
↓ decreasing risk from prior year

- **Climate change** presents a complex array of physical and non-physical risks and opportunities across our investment activities. This year, we launched a climate change evaluation framework to analyze the risks and opportunities for each major investment we are considering. CPP Investments also performed scenario analysis to determine the potential impact of climate change on our Investment Portfolios. We expanded our carbon footprint reporting to include private holdings. See Climate Change section on page 30 for additional details.
- **Increasing capital inflows into alternative assets** has resulted in higher valuations in private markets prior to the market dislocations in the fourth quarter in relation to COVID-19. This has made it increasingly difficult to source opportunities with attractive risk-adjusted returns. We continue to leverage our inherent comparative advantages – long horizon, certainty of assets and size – to help us mitigate this risk. A further discussion of this topic can be found in the Our Investment Strategy section on page 24.
- **New technologies and business models** are creating growing competitive pressures in the asset management industry, where decision-making is increasingly informed by complex data sets and advanced analytic techniques. Our investments and operations could be impacted if we fail to adapt. This is particularly true in the medium to long term. In fiscal 2020, we began to execute our 2025 strategy. One of the focuses of the strategy is to increase the use of technology and data to empower employees and drive better investment decisions.
- **Cyber security breaches** in both the public and private sectors have illustrated the difficulties organizations face with the rapidly evolving cyber threat environment. While the nature of our exposure to breaches differs from many financial institutions, particularly those that hold client data, we must stay vigilant. Sources of risk include: phishing attacks, malware, leakage of confidential data and cyber fraud. We could be exposed if our partners or service providers experience a cyber breach. A breach could result in investigation and containment costs, legal and regulatory fines, and negative reputation impact. Over the past five years, we have incurred costs to investigate and remediate the cyber incidents we have experienced. To date, none of these incidents have had a significant impact on CPP Investments.

  This year, we conducted a cyber security maturity assessment. It focused on safeguarding the integrity, availability and confidentiality of our assets. We also engaged an external partner to quantify the potential impacts of a cyber incident.
- **Changes in the regulatory environment** require us to stay up-to-date on developments, regularly assess the investment and operational impact to CPP Investments and respond accordingly. For example, we are monitoring the implementation of the Organization for Economic Co-operation and Development's recommendations to address certain tax avoidance strategies (known as the Base Erosion Profit Shifting project), and the global transition away from the London Interbank Borrowing Rates, which are a set of published interest rates widely used as a basis for lending agreements and other financial arrangements. In addition, due to severe economic shocks from COVID-19, many jurisdictions are seeking to add barriers to restrict foreign investors from buying local assets at reduced values. We are assessing their potential risks and impacts to CPP Investments.

Risk management objectives

CPP Investments' risk management objectives are to ensure that we:

1. Understand and clearly articulate the organization's appetite for risk. This includes defining "undue risk of loss" in the context of our objectives, considering both the short and long term;
2. Are appropriately rewarded for risks we undertake 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.

Risk culture

Our risk culture is what helps us ensure that risk-taking is appropriate given our mandate, risk appetite and strategy. Risk culture permeates all aspects of our Integrated Risk Framework. Our risk culture:

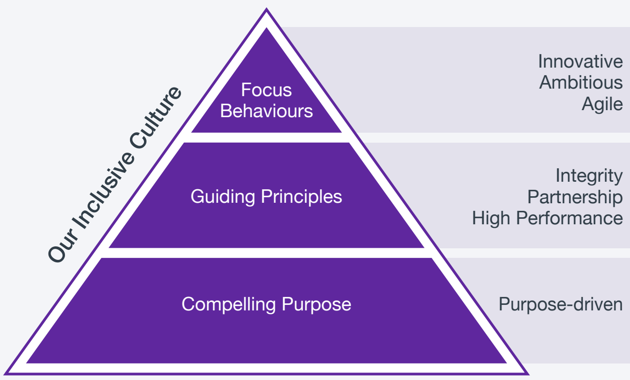
- Starts with the "tone from the top" and applies to all levels in the organization;
- Must align with CPP Investments' strategy; and
- Drives the effectiveness of risk governance.

We believe that formally documented controls and processes 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 Code of Conduct and Guiding Principles provide a strong foundation for our overall organizational culture, including our risk culture. All employees formally acknowledge, at least twice a year, that they have read, understood and complied with the Code. Annually, we hold a *Living our Guiding Principles* day where all employees discuss, in small groups, scenarios that put our Guiding Principles of Integrity, Partnership and High Performance into action (see page 47).

Key elements of our culture are shown in the figure below. For more information on our culture and our whistleblower hotline, see pages 47 and 50, respectively.

Key Elements of Culture



Enhancing our risk management practices

We believe 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 to existing processes this year.

- In late fiscal 2019, we formally established a standing Risk Committee of the Board with a specific focus on providing risk management oversight and advising the Board on related matters. The Committee is chaired by Jo Mark Zurel. This year, we fully operationalized the Risk Committee.
- We made changes to our management committee structure to enhance oversight of key risks. The changes took effect in the first quarter of fiscal 2021. (See the description of the Investment Strategy and Risk Committee on page 37.)
- We developed new measures to monitor and manage leverage risk. We report on these new measures to Management and the Board's Risk Committee. See the "Liquidity and leverage risk" section on page 98 for additional details.
- We enhanced existing processes in order to identify, assess and monitor risks that could cause significant harm to the reputation of CPP Investments.
- We enhanced our crisis management framework by expanding plans to cover a range of operational and financial stress scenarios.

These changes will position us for the future growth of the Fund amidst a changing risk environment.

Risk governance

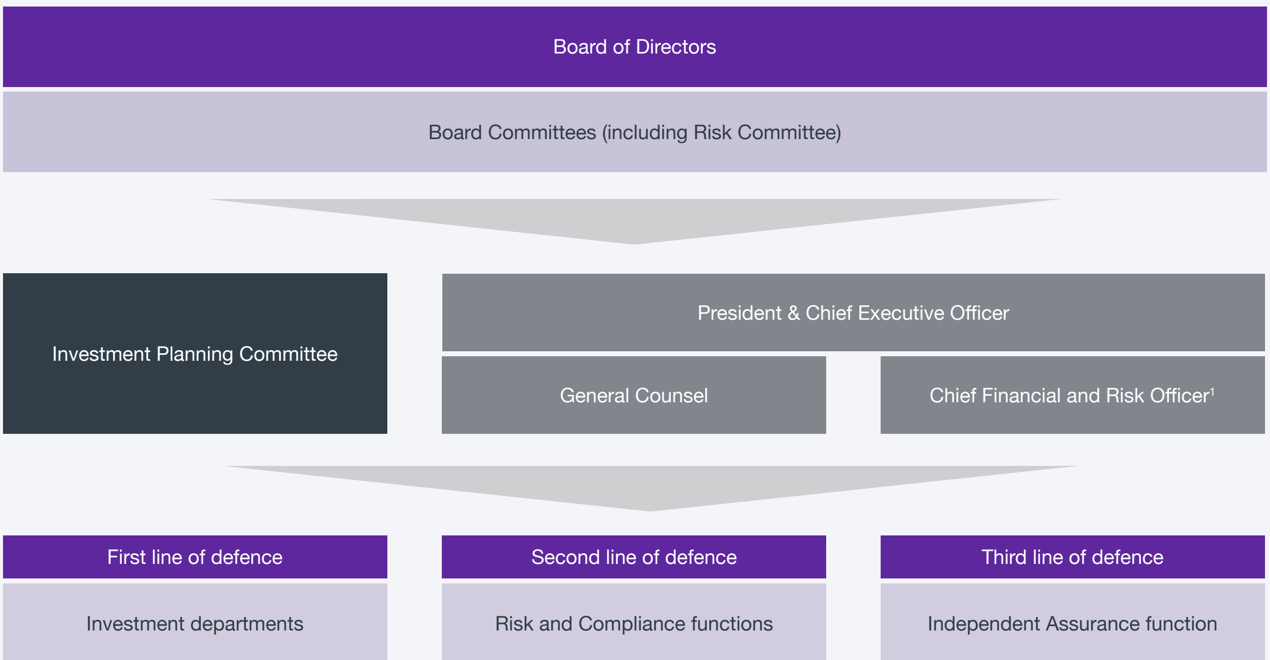
The Board, Management and their respective committees are responsible for risk governance at CPP Investments. The Board of Directors oversees our efforts to act in accordance with CPP Investments' statutory objective to maximize returns without undue risk of loss.

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

- The Risk Committee oversees risk governance and management practices.
- The Investment Committee recommends investment policies to the Board and oversees investment activities and associated 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) oversees 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 CPP Investments follows appropriate governance best practices. It monitors the application of the Code of Conduct and conflict of interest guidelines.

For a more detailed description of these responsibilities, see page 121. The diagram below shows CPP Investments' risk management structure.

Risk Management Structure



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

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

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. The CFRO also makes sure that adequate resources and processes are in place to identify and effectively manage key risks.

As shown on page 94, we follow the three lines of defence model to 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 managing the risks assumed within their areas of responsibility;
- Second line of defence: The CFRO is responsible for risk oversight at CPP Investments. The Risk group is responsible for independently challenging the first line's identification, assessment and management of risks. It also develops, measures and monitors compliance with all approved risk appetites. In addition, the Risk group assesses emerging risks for the organization. Other groups also provide independent oversight, including the Legal and Compliance functions; and
- Third line of defence: The Assurance & Advisory group provides independent assurance over risk governance and internal controls.

Investment Risk Governance

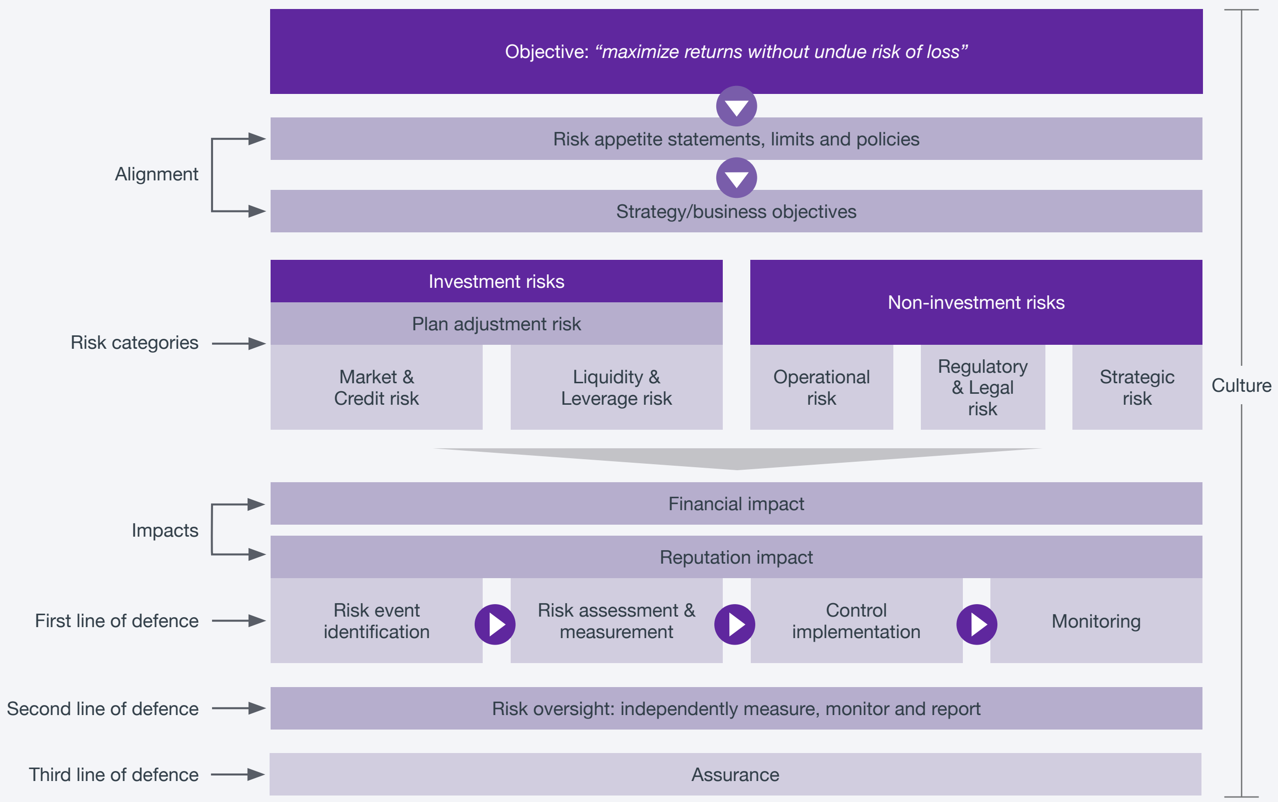
We have committees to oversee our various investment risks and exposures. The Risk Committee of the Board receives regular reporting on our risk measures and stress-testing results. Management's Investment Planning Committee (IPC) receives risk-related information weekly. It reviews the risks in the Investment Portfolios at least monthly through commentaries prepared by the Total Portfolio Management department and the Risk group. In fiscal 2021, the IPC will be replaced with an Investment Strategy & Risk Committee along with certain subcommittees designed to enhance and better integrate the governance of investment strategy and risk across CPP Investments.

See page 37 for more details about the IPC.

Additional information related to our investment risk exposures and our risk measurement and management processes is included in the section called How Management is accountable for risk-taking and performance on page 37. There is also further information in Note 8 to the Financial Statements on page 162.

The diagram below shows CPP Investments' Integrated Risk Framework.

Integrated Risk Framework



Risk categories and management strategies

Plan adjustment risk: This is the risk of increases in the Minimum Contribution Rates applicable to CPP contributors due solely to adverse investment experiences. It is an overarching risk to market, credit, liquidity and leverage risks. Each of these risk categories is further described in the following sections. The Minimum Contribution Rates are the minimum rates at which employees and employers in Canada must contribute in order to sustain the base CPP and the additional CPP payments over the next 75 years. The rates are calculated at least every three years in the Actuarial Reports on the CPP published by the Office of the Chief Actuary.

We manage the plan adjustment risk by designing Investment Portfolios for the base CPP and additional CPP that target appropriate levels of market risk for each portfolio. We then seek to maximize returns at those target risk levels. We also set limits on liquidity risk to ensure we can always rebalance our portfolios back to target risk levels and fulfil our payment obligations. These concepts are further discussed in the following sections.

Market and credit risk: This risk category captures investment losses arising from the following:

- Fluctuations in market prices and rates. This includes equity prices, interest rates, currency exchange rates and credit spreads.
- Loss in value due to factors driving the risk of permanent impairment. This includes losses due to defaults and credit rating migrations. It also includes counterparty exposure where CPP Investments assumes indirect exposure to counterparty defaults via "over-the-counter" derivative transactions.

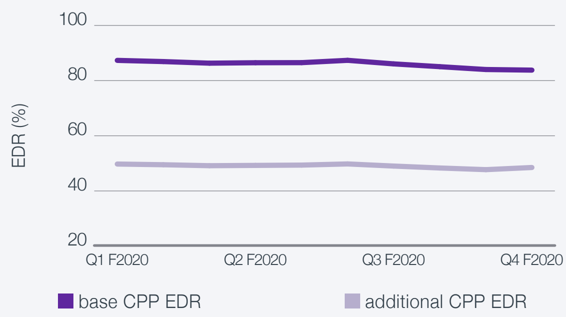
CPP Investments targets a level of market risk for each of the base CPP and the additional CPP that provides long-term expected returns exceeding the minimum rates of return required to sustain each part of the CPP (as implied in the Chief Actuary's latest Actuarial Report). At the same time, CPP Investments balances the trade-off between potential losses and expected returns. The higher the risk target, the higher the long-term expected return and the lower the risk of plan adjustments (i.e., adjustments to contribution rates); however, there would also be a higher potential for short-term investment losses.

CPP Investments mitigates the risk of market and credit losses by investing across a wide spectrum of asset classes and investment strategies. This enables us to earn returns on a diversified set of factor exposures and active management activities over the long term.

Market risk targets are sometimes expressed in terms of equity equivalent content (i.e., the equity/debt risk equivalence ratio or EDR). We also express our appetite for market and credit risks in terms of the probability of plan adjustments and acceptable reported losses over short- and longer-term time horizons. See Note 8.2 to the Financial Statements on page 163 for additional details on these measures.

The chart below shows our EDR for the base CPP and additional CPP Investment Portfolios over the past year. The ratios remained stable throughout the year as we always seek to rebalance the portfolios back to the target equity equivalent content that has been established, subject to managing high transaction costs that would result from rebalancing very small movements.

Market and Credit Risk



We measure potential losses in our Investment Portfolios against our appetite for acceptable reported losses over short and longer time horizons. Given our targeted level of market risk, the one-year potential loss as at March 31, 2020 for the base CPP was estimated to be $69.4 billion, representing an increase of $2.6 billion compared to the prior year. This was mainly due to the increase in Fund value offset by the significant decline in global equity markets during the fourth quarter. The one-year potential loss was estimated to be $252 million for the additional CPP. The table on page 97 provides an attribution of the total one-year potential loss estimate for both the base CPP and additional CPP to each investment department.

Contribution to One-Year Potential Loss by Investment Departments

	base CPP		additional CPP	
	($ millions)	(%)	($ millions)	(%)
Total Portfolio Management	24,219	30%	127	40%
Capital Markets and Factor Investing	1,422	2%	5	1%
Active Equities	3,406	4%	11	4%
Credit Investments	4,989	6%	17	5%
Private Equity	26,062	32%	87	27%
Real Assets	21,978	27%	74	23%
Total One-Year Potential Loss[1]	**$69,377**		**$252**	

1. Potential Loss measures are not additive across departments, as the diversity of their activities has the effect of reducing total market risk.

The largest contributor to one-year potential loss is Private Equity due to the riskier nature of the underlying businesses and the amount of leverage used within the capital structure of these businesses. Total Portfolio Management is also a large contributor given its large public equity portfolio.

As part of our ongoing monitoring, we perform scenario analysis to quantify the impact of potential stress events, including how severe market or geopolitical events could affect CPP Investments' portfolios. The monitoring of key stress scenarios, which are run on a quarterly basis, includes:

1. A repeat of the Global Financial Crisis of 2008 – We estimate that if an event like the Global Financial Crisis were to reoccur, the reported value of the Investment Portfolios would decline by approximately $49.4 billion or 12%. Under this scenario, our reported loss is expected to be within our stated appetite for shorter term losses.
2. Hypothetical Severe Case – This scenario is an aggregation of the more severe historical market stress events. This scenario also removes the currency gains that have occurred during past market stress periods where some of our losses were partially offset by the depreciation of the Canadian dollar against the United States dollar. Realization of this more extreme scenario would result in losses of approximately $84.3 billion or 21%. This potential loss would exceed our standard estimate of losses that are expected to occur every one in 20 years based on our market risk target.
3. COVID-19 Pandemic – We have developed a series of scenarios in an attempt to assess the potential economic and financial impacts on our Investment Portfolios arising from COVID-19. This includes the impacts of lower CPP contributions due to increasing unemployment in Canada on our liquidity, as well as impacts on investment losses. Initial results indicate potential severe-case losses similar in magnitude to our historical market-stress scenarios. However, these estimates are highly sensitive to the assumptions we make regarding the length and severity of the pandemic. The actual impacts could differ materially from this estimate. We will continue to refine the views and assumptions underlying the assessment as the situation unfolds.

CPP Investments also performs sensitivity analysis on specific components of market risk including equity risk, interest rate risk, spread risk and currency risk – see Note 9 to the Financial Statements on page 164. In addition, CPP Investments monitors standalone measures for credit risk including counterparty exposures and potential losses due to defaults and credit rating migration – see Note 10 on page 166.

Liquidity and leverage risk: Liquidity risk is the risk of failing to obtain the funds needed to meet our payment obligations as they become due, to fund investment programs, or to rebalance our portfolio back to our target levels of market risk and leverage during periods of stress, all without realizing unacceptable losses. Leverage risk is a related concept. It is the risk of the build-up of excessive on- and off-balance sheet leverage (i.e., borrowing). Excessive leverage may accelerate the worsening of market and liquidity risk factors during periods of stress.

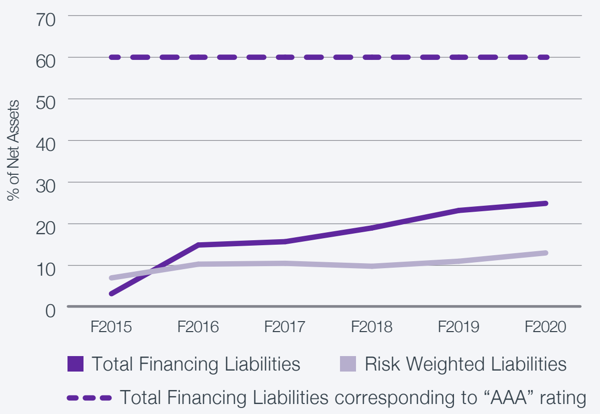
Leverage is the amount of borrowed funds (on-balance sheet) and synthetic financing (off-balance sheet) used to increase the amount of physical and synthetic assets we are invested in. On-balance sheet leverage includes the issuance of medium- and long-term debt, commercial paper, and secured borrowing where CPP Investments pledges collateral. Synthetic financing includes derivatives, primarily swaps and futures across various asset classes.

CPP Investments targets the level of recourse leverage used at a given level of market risk (i.e., equity equivalent content) to further diversify the Investment Portfolios. Recourse leverage represents borrowed funds that are direct legal obligations of CPP Investments. While we recognize that there are multiple ways to define leverage, CPP Investments monitors leverage risk against the following two metrics. Together, these capture different aspects of leverage across the Investment Portfolios.

- **Total Financing Liabilities** is a notional-based measure. Notional amounts represent the contractual amounts to which a rate or price is applied for the purposes of computing the cash flows to be exchanged. The Total Financing Liabilities measure represents all financing activities that are undertaken to obtain leverage using both on-balance sheet and off-balance sheet items. This measure captures all forms of leverage that enable CPP Investments to increase the amount of physical and synthetic assets we are invested in. This measure represents Management's view of leverage and deviates from the definition under International Financial Reporting Standards (IFRS). This measure captures all leverage elements that result in increased portfolio exposure such that it can be used as an input to portfolio construction.
- **Risk Weighted Liabilities** is a measure that represents the risk of the underlying leverage products, including derivatives, used by the Fund. It is determined by assigning risk weights to all forms of recourse leverage across the Fund and aggregating the resulting risk-weighted notional amounts across asset classes with similar characteristics.

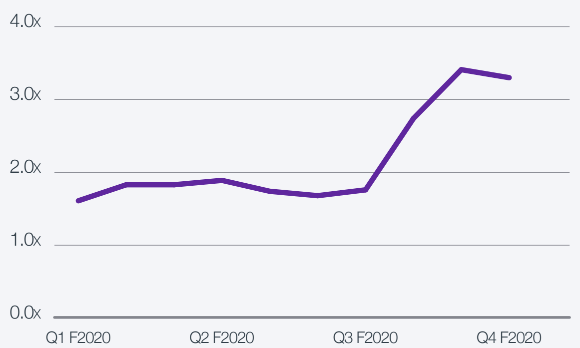
A historical five-year trend for both measures is shown in the chart at the top. The increase in Total Financing Liabilities can be attributed to the increased use of synthetic equity financing and secured debt. The additional funds raised are used to increase diversification of the portfolio at a target level of market risk. Compared to Total Financing Liabilities, the Risk Weighted Liabilities remain relatively steady over time as derivative positions increased in proportion to net assets. The chart also shows the level of Total Financing Liabilities we need to stay within in order to maintain a "AAA" credit rating. See Note 11.2 to the Financial Statements on page 168 for additional details on leverage risk.

Total Financing Liabilities and Risk-Weighted Liabilities



Finally, we must always have enough liquidity to meet our payment obligations as they become due, fund investment programs and rebalance the Investment Portfolios by buying and selling securities to maintain the target market risk and leverage levels; hence we establish liquidity limits to do so. Our payment obligations include the payments to the CPP, unsecured debt repayments, and collateral and margin requirements. CPP Investments manages liquidity risk through its ability to raise funds through various sources by issuing commercial paper and term debt, and by transacting in securities sold under repurchase agreements. CPP Investments also maintains unsecured credit facilities to meet potential liquidity requirements. In addition, CPP Investments maintains sufficient liquid assets, including developed market government bonds and money markets, which can be easily converted to meet liquidity requirements. We measure and monitor our liquidity coverage at various time horizons (e.g., 10 days, 6 months). Despite the market movements related to COVID-19 during the fourth quarter, we continue to maintain a strong liquidity position. The following table shows our 10-Day Liquidity Coverage Ratio over the past year.

10-Day Liquidity Coverage Ratio



See Note 11.1 to the Financial Statements on page 167 for additional details on liquidity risk.

In targeting a level of recourse leverage and setting limits on liquidity, CPP Investments seeks to maintain leverage and liquidity ratios that are consistent with an issuer credit rating of "AAA".

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:

- Flawed or misused investment models;
- Human capital management;
- Technology and data;
- Information integrity and cybersecurity;
- Business interruptions;
- Process management and execution;
- Service providers; and
- Integrity of valuations and financial reporting.

The impacts 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. CPP Investments 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 & Data department maintain formal protocols for:

- Implementing new investment products and technologies;
- Managing data, models and user-developed applications;
- Ensuring information security;
- Tracking and reporting on operational, regulatory and legal incidents; and
- Establishing continuity plans for potential business interruptions.

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

Regulatory and legal risk: This is the risk of loss due to changes in, or failing to comply with, applicable laws, regulations, rules, contractual obligations, CPP Investments' Code of Conduct or other internal policies, including those defined in the *Canada Pension Plan Investment Board Act*. Failure to comply could result in fines, regulatory sanctions and/or harm to our reputation. It also includes internal and external fraud.

Our compliance program is designed to promote adherence to regulatory obligations worldwide. It helps ensure awareness of the laws and regulations that affect CPP Investments 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. CPP Investments regularly seeks input from external legal counsel to keep us informed on emerging issues.

Non-compliance with tax laws is a particular type of risk under this category. As with any other risk, we aim to mitigate tax risk while considering our investment objectives. CPP Investments 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 contributors and beneficiaries do not pay tax twice on income earned by CPP Investments, we employ judicious and prudent investment structures. These are designed to maximize after-tax investment returns. Our Tax group plays a key role in evolving CPP Investments' tax strategy. This group supports decision-making, oversees tax risk management and evaluates overall tax practices. We review key tax risks both as part of due diligence for individual transactions and at the total Fund level. CPP Investments' CFRO is responsible for the organization's tax strategy. Day-to-day management of tax risk is the responsibility of the Head of Corporate Finance and Tax. Periodic updates are also provided to the Audit Committee. For more information about CPP Investments' tax strategy, please visit our website at www.cppinvestments.com.

Strategic risk: This is the risk that CPP Investments 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 objectives.

Several important processes have been established to control and mitigate strategic risks.

- The Board and Management review key elements of our strategy throughout the year, at least annually, including through implementation updates, outlining progress, key milestones and any updates to the strategic plan;
- The Board and Management review our business plan annually, and each department carries out detailed business planning that considers our strategy and longer-term objectives;
- Through our governance framework, we provide specific investment guidance for each investment program. This ensures alignment with CPP Investments' overall strategy and comparative advantages;
- We complete quarterly reviews of the portfolios and associated investment risks in the context of capital market and emerging economic conditions; and
- Both Management and the Board review quarterly reporting and discuss progress, challenges and risks related to achieving the approved business plan.

Financial and reputation impacts to CPP Investments

The investment and non-investment risks listed above can have both financial and reputation impacts on CPP Investments.

Financial: Financial impacts can take many forms, including investment losses, unplanned operational expenses and regulatory fines. The higher we set our risk target, the higher the long-term expected returns but also the greater shorter-term volatility and potential for reported losses. Please refer to Our Total Portfolio Investment Framework on page 35 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 CPP Investments' portfolio responsibly for current and future generations.

Reputation: In managing our reputation, we seek to avoid the loss of credibility due to internal or external factors. Many types of events have the potential to negatively shape perceptions of our organization and impact our reputation among a diverse group of stakeholders, including contributors and beneficiaries. Our business practices, or those of our business partners or the companies in which we invest, may harm our reputation. Consequences include diminished brand efficacy in our markets and weakened ability to execute our strategy. It would also affect our status as investor, partner and employer of choice.

The responsibility to protect our reputation extends to every employee, Management and the Board of Directors – it is embedded in our organizational culture. This ensures that reputation impacts are considered across the organization, allowing for an integrated approach to anticipating and managing potential issues. We continue to build our reputation and brand proactively with key stakeholders globally to support our business objectives and mitigate risk. The Senior Managing Director & Global Head of Public Affairs and Communications oversees CPP Investments' corporate reputation and brand management activities.

We conduct reputation impact assessments as part of the investment decision-making process. This year, we continued to enhance our process to monitor and manage areas of our Investment Portfolios that may pose outsized impacts to the reputation of CPP Investments. This ongoing work to extend existing reputation management activities allows us to uncover and address issues that could significantly impede efforts aimed at projecting an admired corporate image by altering the perceptions stakeholders hold about the organization's most important attributes. Such assessments also help ensure consistency across the various dimensions of risk across the organization at any point in time and through time.

Our Issues Management Executive Committee also addresses significant issues as they arise.

Financial Policies and Controls

CEO/CFRO Certification

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. However, because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements on a timely basis.

Management assessed the effectiveness of CPP Investments' internal control over financial reporting as of March 31, 2020, based on the criteria set forth in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Management is also responsible for the design of disclosure controls and procedures that provide reasonable assurance that all material information is gathered and reported on a timely basis.

As of March 31, 2020, under the supervision of the CEO and CFRO, we completed an evaluation of internal control over financial reporting and disclosure controls and procedures and concluded that they were properly designed and operated effectively throughout the year. CPP Investments 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.

In response to the COVID-19 pandemic, effective March 31, 2020, CPP Investments transitioned to remote working for global employees. The move was carefully managed with the support of finance, human resources, compliance and operations and, as at March 31, 2020, we have concluded that there was no impact on the effectiveness of internal control over financial reporting as a result of this change. We will continue to monitor the impact that this working arrangement has on our control environment.

Accounting policies and critical accounting estimates

Significant accounting policies

The Financial Statements are prepared in accordance with International Financial Reporting Standards (IFRS), the requirements of the *Canada Pension Plan Investment Board Act* and regulations of CPP Investments. The preparation of the Financial Statements requires the selection of appropriate accounting policies. Processes have been established to ensure accounting policies and methodologies are applied consistently and any changes are well-controlled.

Future changes in accounting policies

Developments and changes in accounting standards from the International Accounting Standards Board (IASB) are actively monitored. The impact of adopting new standards issued by the IASB is continuously assessed, as is any impact to the presentation of the Financial Statements, including evaluating alternative presentation choices upon transition, where applicable.

There are no issued IFRS standards, changes in existing standards or new interpretations with effective dates on or after April 1, 2020 that are expected to have a material impact on the Financial Statements.

Fair value measurement of financial instruments

Management's most critical accounting estimate is 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 selling an asset or paying to transfer a liability. The fair value of investments and investment liabilities is categorized in a hierarchical manner according to the level of reliance on unobservable inputs in determining their fair value measurement.

It includes:

- 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).

The Fund's net assets classified by the fair value hierarchy are described in Note 3 of the Financial Statements on page 147.

The investment departments' percentage contribution to each hierarchy level is outlined as follows:

	Fiscal 2020			Fiscal 2019		
	Level 1	**Level 2**	**Level 3**	Level 1	Level 2	Level 3
Public Market Strategies	**95%**	**85%**	**4%**	97%	86%	3%
Credit Investments	**1%**	**13%**	**13%**	0%	12%	14%
Private Equity	**1%**	**2%**	**41%**	1%	2%	40%
Real Assets	**3%**	**0%**	**42%**	2%	0%	43%
Total	**100%**	**100%**	**100%**	100%	100%	100%

Public Market Strategies consist of Total Portfolio Management, Capital Markets and Factor Investing and Active Equities, all of which invest mainly in Level 1 and Level 2 assets. The majority of our Level 3 assets consist of private equity, private debt and real asset investments where fair values are determined using unobservable multiples of earnings before interest, taxes, depreciation and amortization, or discount rates. Our valuation methodologies for investments and investment liabilities are summarized in Note 2 to the Financial Statements on page 144.

Robust valuation processes have been developed to ensure the fair value of our investments is reasonably presented in the Financial Statements. These processes include objective procedures and targeted use of external appraisers and valuation experts. CPP Investments' Finance team includes accredited professionals who prepare or approve fair values independently from investment teams. In addition, for most of the direct investments, independent third-party appraisals and external valuations are sought 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 CPP Investments' fund investments in private equity, credit and real assets, net asset values (NAVs) are obtained directly from investment managers and represent fair value. CPP Investments performs certain procedures to validate reliance on the NAVs provided by the Investment Managers.

The COVID-19 pandemic has disrupted global economic systems and the duration and severity of resulting financial consequences remain uncertain at the time of writing. CPP Investments used extensive sources of available information to provide its best estimate of the impact the pandemic has had on the valuations of investments and investment liabilities at the end of the fiscal year. These estimates are sensitive to key assumptions and drivers that may change materially depending on the pandemic's outcome.

Related-party transactions

CPP Investments regularly enters into transactions with related parties, such as subsidiaries, joint ventures and partners. Related-party transactions with subsidiaries that provide investment-related support and administrative services to support the Fund are eliminated upon inclusion of the subsidiaries' results within CPP Investments reported results. (See Note 17 on page 174 of the Financial Statements.)

Commitments and contingencies

CPP Investments and its investment holding subsidiaries have entered into commitments related to the funding of investments. At the end of our fiscal year, these commitments remain off-balance sheet, with the unfunded commitments for CPP Investments totalling $1,940 million in fiscal 2020, compared to $1,779 million in the prior year. Unfunded commitments for investment holding subsidiaries totalling $53,453 million in fiscal 2020, compared to $45,629 million one year earlier. The increase compared to last year was due to new investments in the year primarily in Private Equity and Real Assets. (See Note 16 of the Financial Statements on page 174.)

In the normal course of business, CPP Investments and its investment holding subsidiaries also enter into various guarantee contracts. These contracts ensure that subsidiaries are supported in the event of a default based on the terms of the respective loan or other agreements. At the end of fiscal 2020, the maximum amount payable in relation to these guarantees was approximately $263 million by CPP Investments directly, compared to $359 million in the prior year, and $4,832 million by the investment holding subsidiaries, compared to $4,078 million one year earlier. The combined increase of $658 million was primarily due to new guarantees relating to private investments during the fiscal year. (See Note 18 of the Financial Statements on page 174.)

Key performance and non-IFRS measures

The disclosure of certain non-International Financial Reporting Standards (IFRS) measures, as described below, is intended to provide readers with a better understanding of Management's perspective on the Fund's performance. These measures enhance the comparability of the financial performance for the fiscal year ended March 31, 2020 with the results from previous years. Non-IFRS measures do not have a standardized meaning under IFRS and may not be comparable to similar measures disclosed by other institutions.

In alignment with the Fund's long-term investment approach, Management discloses five- and 10-year performance measures that extend beyond the year-over-year comparison in the Financial Statements and Notes. The Management's Discussion and Analysis discloses select financial results both on a dollar and percentage basis. Financial measures reported as percentages are calculated relative to average asset balances.

Financial Statement Definition	Management's Discussion and Analysis (MD&A) Definition	IFRS value $M	MD&A value $M
Investment liabilities on the Consolidated Balance Sheet that are related to borrowings include: • *Debt financing liabilities*, which consists of commercial paper payable and term debt; • *Securities sold under repurchase agreements and cash collateral received on securities lent*, which consists of secured borrowings under repurchase agreements and the *cash collateral payable on securities lending transactions*; and • *Short-term secured debt*, which consists of cash advances from prime brokers that are fully collateralized by securities.	As disclosed in the Risk Management section of the MD&A, the *Total Financing Liabilities* measure includes all financing activities that are undertaken to obtain leverage using both on-balance sheet and off-balance sheet items. On-balance sheet leverage includes the issuance of medium- and long-term debt, commercial paper and secured borrowing where CPP Investments pledges collateral. Off-balance sheet financing includes derivatives, which consist primarily of swaps and futures across various asset classes.	$92,172	$102,155
Borrowing costs is reported in the *Consolidated Statement of Comprehensive Income*. *Borrowing costs* is composed of expenses from debt financing liabilities, securities sold under repurchase agreements, prime brokerage and other securities borrowing transactions, as well as securities lending transactions where cash is received. Gains and losses associated with certain interest rate derivatives used as part of financing activities are also included in *borrowing costs*.	*Financing costs* represents the costs associated with the leverage measurement defined in *Total Financing Liabilities*, as described above. *Financing costs* include borrowing costs, as well as the leverage-generating elements of additional derivative transactions.	$1,523	$2,429
Net currency exposures reported in Note 9.4 of the Financial Statements is calculated based on currency in which the investments are denominated. Monetary items on the balance sheet are revaluated based on reporting date rate and investment-related activities (for example: sales, purchases) are converted based on transaction date rate.	*Currency diversification* and *currency return*, disclosed in the Total Fund Performance section of the MD&A, are calculated based on the underlying currency denomination that a particular asset or security is exposed to. For example, an American Depository Receipt (ADR) equity security from Mexico is traded in U.S. dollars. While the investment is denominated in U.S. dollars, the underlying currency is Mexican pesos and that is the basis for calculating measures of *currency diversification* and *currency return*.	$347,617	$348,297
As reported in Note 6 of the Financial Statements, *investment management fees* include payments to external managers who invest and manage capital committed by CPP Investments, whether directly or through funds. They also include performance fees paid when CPP Investments earns a return above a pre-determined hurdle. *Transaction costs* are incremental costs that are directly attributable to the acquisition or disposal of an investment. These costs comprise a variety of non-recurring expenses, including due diligence consulting services, legal and tax advisory fees required to support the acquisition and disposition of private market assets, and, in the case of public markets, commissions paid when trading securities. Under IFRS, *investment management fees* and *transaction costs* reflect costs incurred directly by CPP Investments and exclude those same costs incurred by investment holding subsidiaries.	*Investment management fees* and *transaction costs* disclosed in the Managing Costs section of the MD&A and further referenced in the discussion of the performance of each investment department, reflect the combination of costs directly incurred by CPP Investments and costs incurred indirectly through its investment holding subsidiaries. See Note 6 of the Financial Statements for further details.	$847	$2,198
Investment income, as reported on the *Consolidated Statement of Comprehensive Income*, is the total investment income before any investment-related expense incurred by CPP Investments. It also includes changes in fair value of investment holding subsidiaries, inclusive of investment management fees and transaction costs of these subsidiaries.	*Adjusted investment income* as disclosed in the Managing Costs and the Performance of the Investment Departments sections of the MD&A is investment income, as reported in the *Consolidated Statement of Comprehensive Income* excluding: • Investment management fees and transactions costs incurred by investment holding subsidiaries, and • The difference between financing costs and borrowing costs, as defined in this table.	$15,721	$17,978

Compensation Discussion and Analysis

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 compensation for employees of CPP Investments.

The underlying principle of CPP Investments' compensation framework is to deliver our 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 Canada Pension Plan (CPP) contributors and beneficiaries over the very long term.

Fiscal 2020 performance highlights

A key underpinning of our compensation program is the performance of the total Fund[1] and each of our departments. In the fourth quarter of the fiscal year, the COVID-19 pandemic resulted in reduced economic activity, exceptional volatility in financial markets and widespread impact on people around the world. We have continued to execute our long-term strategy despite these extraordinary circumstances.

Over the past year, the total Fund generated a positive return. The one-year total Fund net return was 3.1%, while the five-year annualized net return was 7.7%. For fiscal 2020, we outperformed the aggregated Reference Portfolios, reflecting in part the performance of our active investment programs in the fiscal year and the depreciation of the Canadian dollar relative to other global currencies. We delivered positive dollar value-added (DVA) for the total Fund of $23.5 billion in fiscal 2020, and cumulative five-year net DVA of $38.7 billion.

Compensation program

We believe that a focus on investment performance in our compensation program is important. It supports a strong alignment between CPP Investments employees and the interests of more than 20 million CPP contributors and beneficiaries.

We implemented the current compensation program five years ago. It has a deliberate focus on our investment performance, balanced with a continued concentration on dollar value-added, over a long performance horizon – a five-year 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 our CEO, Senior Management and employees deliver on long-term strategic business objectives.

The incentive plan is designed to measure 20 quarters with the most recent quarter demonstrating desired strengths in the design, multi-year build and ongoing management of the total Fund. The total Fund stood up exceptionally well to the challenges the organization faced in fiscal 2020. In the past five years, the total Fund has grown more than $123.3 billion, including nearly $40 billion in dollar value-added. The absolute return performance of 7.7% during that same period exceeds the expectations set by the Office of the Chief Actuary to help sustain the Canada Pension Plan.

We are confident that our compensation program continues to support our business strategy to enforce the principle of pay for performance and to align employees with the long-term interests of CPP contributors and beneficiaries. This year, several investment departments contributed positively to total Fund returns despite the severe impact of the COVID-19 pandemic in the fourth quarter, while the sell-off in global equity markets during this same period resulted in negative performance among other investment departments. While we achieved a positive absolute return and outperformed the Reference Portfolios for the fiscal year, we fell short of our absolute return target. As a result, we saw a decrease in the overall multiplier used to drive incentive compensation. Our Named Executive Officers' (NEOs) compensation is as follows: Mark Machin received relatively consistent compensation; it is slightly lower for Alain Carrier, SMD & Head of International; and flat for Ed Cass, SMD & Global Head of Real Assets. Given the progress made in Risk governance and oversight, compensation is moderately higher for Neil Beaumont, and significantly lower for Suyi Kim, SMD & Head of Asia Pacific to reflect time on a leave. The final NEO, Kelly Shen, SMD & Chief Technology & Data Officer, joined us part way through last year and has been awarded higher compensation given the significant strides in Technology & Data this year.

1. For the purpose of the incentive compensation plan, total Fund reflects the combined long-term Investment Portfolios of the base CPP and additional CPP. This excludes our cash for benefits portfolios, which hold incoming cash receipts from the CPP and cash amounts set aside for CPP benefits payments. This practice is consistent with prior years.

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 CPP Investments employees and to our stakeholders. The Board approves all compensation benchmarks and multiplier levels. 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. It may also award 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.

CPP Investments is electing to freeze salaries for its Senior Management Team this fiscal year given the current global environment. This approach for senior executive compensation is consistent with the Board of Directors' decision, taken at the start of April, to not draw on previously approved year-over-year compensation increases for Directors during present circumstances.

Fiscal 2020 CEO pay decisions

Over the past five years, CPP Investments' total Fund net return of 7.7% and dollar value-added of $38.7 billion have been strong and have resulted in a total Fund multiplier of 1.64. The Board assessed Mr. Machin against his corporate goals and deemed that all of these were substantially achieved, resulting in a multiplier of 1.44. The Board determined a multiplier of 1.65 against his individual objectives for fiscal 2020. The weighted average of these three factors resulted in an overall incentive multiplier for Mr. Machin of 1.58.

Ultimately, the Board awarded Mr. Machin a total direct compensation of $5,385,000 for fiscal 2020, consisting of salary, an in-year award, and deferred awards. Mr. Machin also received a pension and standard 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 2020. These included reviewing the Incentive Compensation Plan to ensure it adequately reflects alignment to the strategic business plan. The HRCC concluded that the existing compensation design will drive appropriate focus over the next several years, with two recommended changes. The first change, which will be implemented in fiscal 2021, is an increase from 30% to 50% to the overall weighting of Officers' compensation that is based on total Fund performance. See page 109 for more details. The second change, which went into effect in fiscal 2020, is that the absolute performance component of the total Fund multiplier is no longer static and instead reflects the annual business plan targets. Please refer to page 106 for specific HRCC activities undertaken in fiscal 2020.

The financial dimensions of this global pandemic are undeniable and severe. Our talent is vital at all times, and especially during periods of stress. Our people are critical to help navigate the total Fund through difficult times soundly and securely. This is where skill comes to bear to help deliver disproportionate value. The HRCC is satisfied that the compensation paid for fiscal 2020 is appropriate, especially taking into account how the design and management of our Investment Portfolios played a role in delivering outperformance relative to our Reference Portfolios, particularly in the fourth quarter of fiscal 2020. We are confident that our decisions regarding department and individual performance compensation factors reflect our assessment of the Senior Management Team's performance, relative to the pre-established objectives for fiscal 2020. They are also appropriately aligned with the interests of CPP contributors and beneficiaries.

S.D. Chrominska

Sylvia Chrominska
Chair, Human Resources and Compensation Committee

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 2020 were:

Sylvia Chrominska – Chair from January 1, 2020
Karen Sheriff – ceased to be Chair December 31, 2019
Tahira Hassan – ceased to be a member December 31, 2019
Kathleen Taylor
Mark Evans – appointed June 21, 2019
Chuck Magro – appointed January 1, 2020
Heather Munroe-Blum (ex officio)

The HRCC held eight meetings during fiscal 2020. The Chairperson of the Board of Directors is an ex officio HRCC member and attended all meetings in that capacity. The following people also attended portions of the meetings at the HRCC's request: the CEO, the Senior Managing Director & Chief Talent Officer; the Senior Managing Director & General Counsel; Managing Director, Head of Total Rewards; and the Managing Director, Associate Corporate Secretary. Annual activities for the HRCC (including those performed in fiscal 2020) are:

Evaluation of the CEO:

- Reviewed and recommended for Board approval the CEO's performance objectives and performance evaluation process; and
- Reviewed the CEO's significant outside commitments.

Evaluation of 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 Officers' compensation and the compensation framework in the Annual Report; and
- Reviewed and recommended for Board approval the benchmark and incentive compensation curve for the total Fund.

Evaluation of 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 employee pension plan documents; and
- Reviewed material changes to employee benefit plans and Human Resources policies.

Review of Committee Terms of Reference:

- Reviewed and recommended for Board approval the HRCC Terms of Reference and reviewed performance against the 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 $239,717 for its services to the HRCC in fiscal 2020 and $197,740 in fiscal 2019.

You can find out more about the HRCC's mandate in the Terms of Reference section posted on the CPP Investments 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, 2020 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 & Chief Technology & Data Officer (CTDO) – Kelly Shen
- SMD & Head of Asia Pacific – Suyi Kim
- SMD & Global Head of Real Assets – Edwin Cass

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 in order to manage a global active portfolio effectively. 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 kind globally, we require people with significant experience in investment management, investment research, portfolio design, risk 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 CPP Investments' 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 invest in the best interests of 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 total Fund's performance over time;
- **Long-Term Horizon Measurement** – CPP Investments 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	CPP Investments 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 compensation program takes into account the environment in which we operate, our mission and the strategy we have chosen to execute. We are an organization that is meant to endure for a very long time. As a result, a large element of Management's current focus is on:

- Attracting and retaining the best talent;
- Supporting a global organization;
- Delivering strong performance;
- Improving the effectiveness 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 in the best interests of more than 20 million contributors and beneficiaries, by ensuring risk is considered appropriately. Further, we believe that what gets accomplished is important, but how it is accomplished is equally important. We have grounded our compensation program in our Guiding Principles and we adhere to the following best practices in designing our compensation structure:

Focus on Total Fund[1] Performance – The total incentive opportunity of every employee is partly tied to 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 linkage between compensation outcomes and the interests of CPP beneficiaries and contributors.

- **Align Performance Horizon with the Long-term Nature of our Investment Mandate** – the five-year 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.

Aligned with Our Investment Objectives	• Maximize return to the total Fund within agreed risk parameters • Supports CPP Investments' Guiding Principles
Market Competitive	• Enables CPP Investments 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

In addition to researching best practices in incentive design, CPP Investments 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, San Francisco, São Paulo and Sydney. Accordingly, we review competitive pay information for Canadian pension funds and broader investment management organizations and financial institutions in Canada, as well as compensation in the other major markets in which we operate, such as the 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). These reviews are relative to a significant market sample and data from proprietary consultant surveys. 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 Board (Ontario Teachers'), British Columbia Investment Management Corporation (BCI), Alberta Investment Management Corporation (AIMCo), Ontario Municipal Employees Retirement System (OMERS), Healthcare of Ontario Pension Plan (HOOPP), OPSEU Pension Trust (OP Trust).
- **Canadian publicly traded investment asset managers:** CI Investments, AGF Management, Fiera Capital, Mackenzie Investments, RBC Global Asset Management, among others.
- **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.

1. For the purpose of the incentive compensation plan, total Fund reflects the combined long-term Investment Portfolios of the base CPP and additional CPP. This excludes our cash for benefits portfolios, which hold incoming cash receipts from the CPP and cash amounts set aside for CPP benefits payments. This practice 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 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 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. We call this the In-Year Award. For senior employees, a portion is deferred over three years to align with the long-term focus of the Fund. We call this the Deferred Award. It vests and pays out over three years following the fiscal year for which it is awarded.

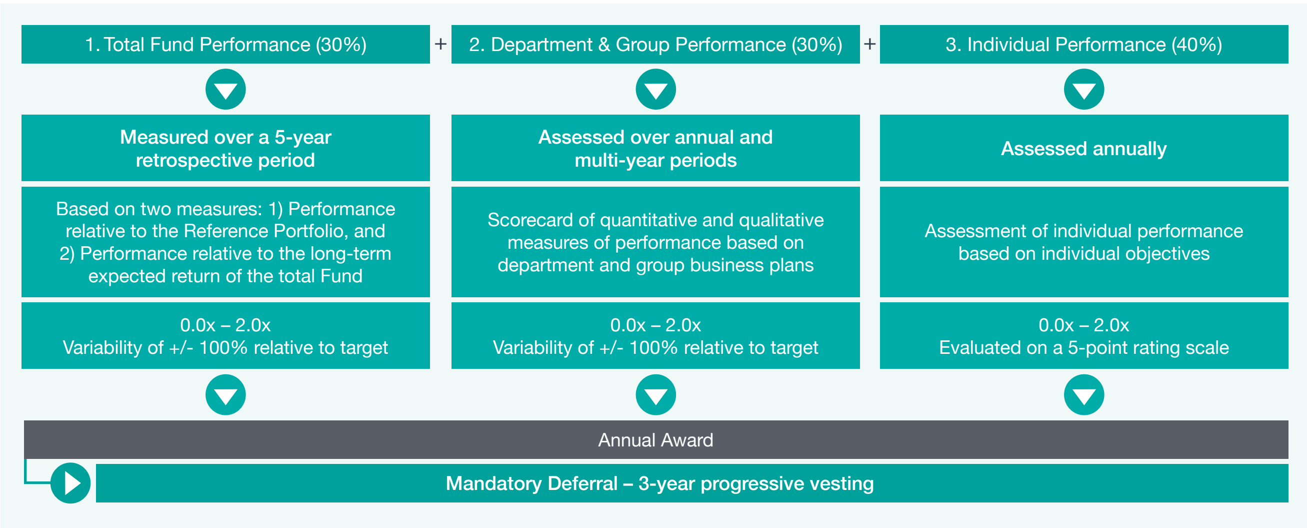
At the end of the fiscal year, the annual award is adjusted by a Performance Multiplier. The Performance Multiplier is based on a performance assessment of three factors:

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. In fiscal 2020, these weightings were 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 predetermined objectives. This structure applied to all employees across the organization in fiscal 2020 regardless of department, group, seniority or geographic location.

For fiscal 2021, the weighting of the total Fund performance multiplier for Officers' compensation will increase from 30% to 50%. The remaining 50% weighting will be a blend of the Officer's department performance and their individual performance. This change further aligns Officers' compensation with the performance of the total Fund.

The following chart illustrates the incentive plan in fiscal 2020:



Here is more information on our three performance factors:

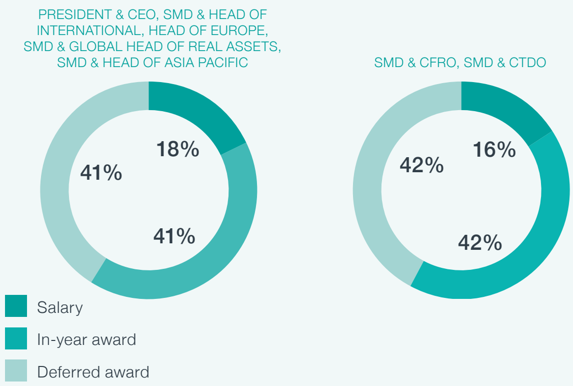
1. **Total Fund performance** – This performance factor includes equally weighted measures of both dollar value-added and total Fund return, each measured over a five-year trailing period. For the purpose of the incentive compensation plan, total Fund reflects the combined long-term Investment Portfolios 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 one 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 the Integrated Risk Framework. In addition, we assess 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.

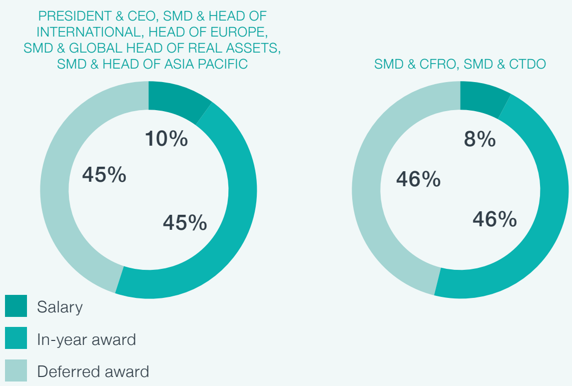
Pay mix

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 2020 for the 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 Fund, or in both the Fund and up to a maximum of 50% in the Fund's portfolio of private investments. The deferred amounts fluctuate in value over the three-year deferral period with the returns of the total Fund and, if elected, the returns of the portfolio of private investments. The VDIP provides another way to align employee interests with total Fund performance.

Supplemental Restricted Fund Units (SRFU)

SRFUs are notional investments that fluctuate in value with 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 CPP Investments. 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 geographic location 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 total Fund. An FRU grant pays out an amount equal to the total Fund return on a notional investment in the Fund. Specific plan terms govern FRUs and they are contingent on positive cumulative returns. The grant value is derived using a valuation 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. The grants issued to the CEO in fiscal years 2019 and 2020 have 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; or
- The incentive award was granted in error; or
- An employee is guilty of misconduct.

Pension

CPP Investments 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 to the CPP, and CPP Investments 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. Only CPP Investments contributes to the voluntary program. Both programs operate as defined contribution pension plans.

Under the Mandatory Provident Fund Schemes Ordinance, employees contribute 5% of annual eligible earnings and CPP Investments contributes 5% to the monthly maximum allowed. For the voluntary MPF, CPP Investments contributes 10% of eligible earnings less the employer mandatory MPF contributions. The voluntary MPF program has a graded vesting schedule where contributions fully vest once an employee reaches 10 years of continuous service.

All of the remuneration employees receive is eligible earnings for the purposes of the mandatory MPF. The eligible earnings for the purposes of the voluntary MPF are base salary, plus housing allowance and health savings allowance.

United Kingdom

All United Kingdom-based employees are eligible to participate in our Group Self Invested Personal Pension (GSIPP) which operates as a defined contribution pension plan. Eligible earnings 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 3% of eligible earnings. CPP Investments contributes between 7% and 10% of eligible earnings depending on the role.

Employees based in other global CPP Investments locations are eligible to participate in local pension plans that vary based on local regulations and market practices.

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, dental and vision benefits, time-off policies, a health and wellness reimbursement and an Employee-Family Assistance Program. Perquisites are limited to paid parking for the Senior Management Team members based in Toronto.

Fiscal 2020 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 2020.

Annual non-financial objectives

Management establishes the non-financial organizational objectives in the CPP Investments business plan each fiscal year. The Board of Directors approves these goals. You will find the non-financial organizational objectives of fiscal 2020 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 2020.

Table 1: Fiscal 2020 Non-Financial Objectives

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.

Total Fund[1] performance

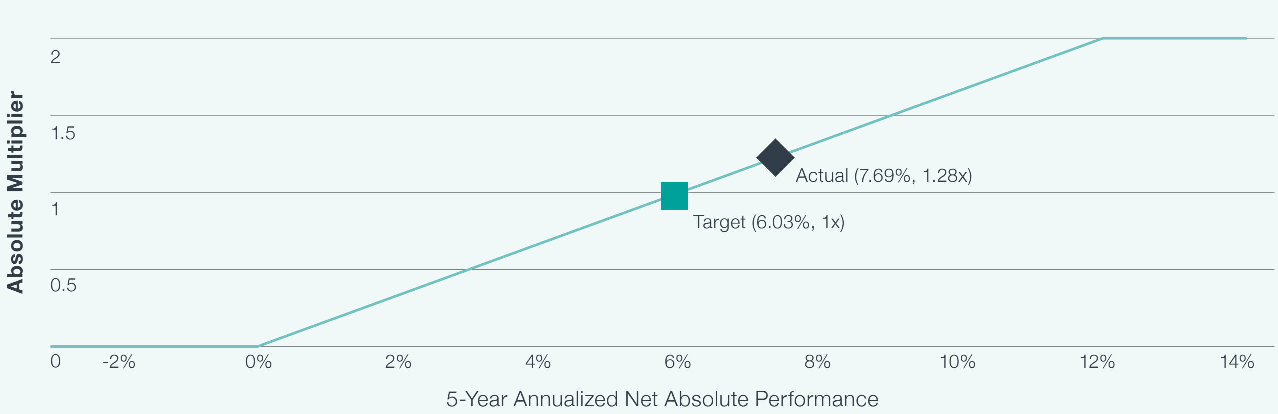
We measure total Fund performance over a five-year period using two equally weighted criteria:

1. **Absolute performance** – Absolute return of the total Fund; and
2. **Relative performance** – Value-added relative return of the total Fund compared to the aggregated Reference Portfolios.

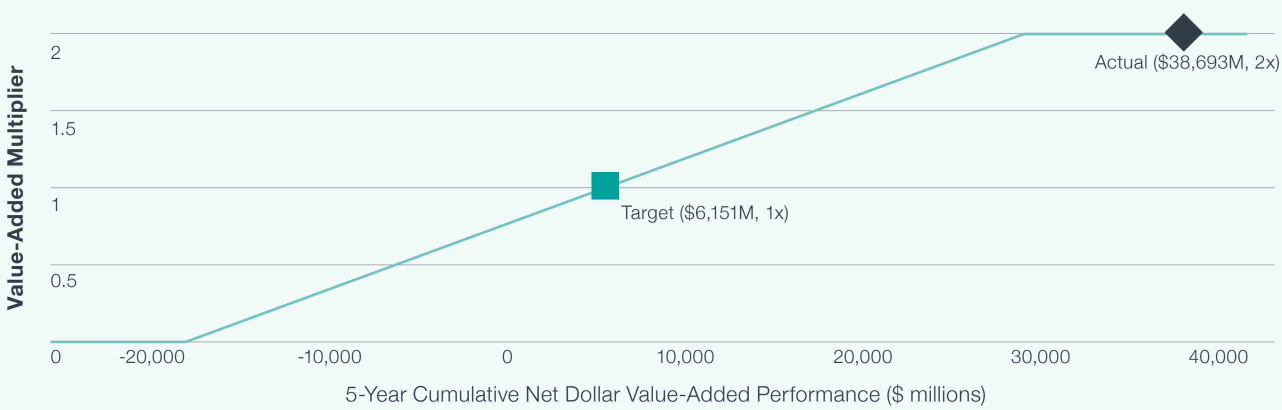
For compensation payout purposes, we measure total Fund performance over a five-year period relative to each of these two criteria and map it to a multiplier. For the absolute performance component, a target return will result in a target multiplier of 1x. For the relative performance component, a five-year cumulative target dollar value-added (DVA) of $6.15 billion must be reached to achieve a relative performance multiplier of 1x. The Board reviews DVA targets annually.

The graphs below map the fiscal 2020 target and actual total 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 CPP and additional CPP. This excludes cash for benefits, which hold incoming cash receipts from the CPP and cash amounts set aside for CPP benefits payments. This practice is consistent with prior years.

In Table 2 below, total Fund performance is measured over the five fiscal years beginning April 1, 2016 and ending March 31, 2020. The absolute and relative performance of the total Fund in fiscal 2020 resulted in an equally weighted total Fund multiplier of 1.64.

Table 2: Total Fund Performance, Fiscal 2016 to 2020 and Cumulative Results

	Absolute Performance				Relative Performance				
Fiscal year	Total Fund Gross Return ($ billion)	Total Fund Net Return ($ billion)	Total Fund Net Return %	Total Fund Absolute Multiplier	Reference Portfolio Return ($ billion)	Total Fund Gross Value-added ($ billion)	Total Fund Net Value-added ($ billion)	Total Fund Value-added Multiplier	Total Fund Multiplier
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		
2020	**13.3**	**12.1**	**3.09%**		**(11.4)**	**24.8**	**23.5**		
Cumulative $ / Annualized % – 5 year	**128.7**	**123.3**	**7.69%**	**1.28**	**84.7**	**44.0**	**38.7**	**2.00**	**1.64**
Cumulative $ / Annualized % – 10 year	**243.0**	**235.0**	**10.00%**		**188.8**	**54.2**	**46.3**		

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 2020 for each investment department below.

Fiscal 2020 Investment Department Performance

	Fiscal 2020 performance
Total Portfolio Management	Met target performance
Capital Markets and Factor Investing	Met target performance
Active Equities	Exceeded target performance
Credit Investments	Exceeded target performance
Private Equity	Exceeded target performance
Real Assets	Met target performance

A more detailed description of the total Fund and investment department performance is found on page 52 in the Management's Discussion and Analysis section.

Strategy
Management's Discussion and Analysis
Compensation Discussion and Analysis
Governance
Consolidated Financial Statements and Notes

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 that begins on page 120. The total compensation expense for key management personnel for fiscal 2020 is $45 million, down 14% from $52 million for fiscal 2019. This decrease was principally a result of lower multipliers and fewer key management personnel.

See Note 14.1 of the Financial Statements for more information.

Compensation of the CEO

The CEO participates in the same incentive compensation plan as all employees at CPP Investments. 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 2020 included achievements against the following goals:

1. Achieve positive returns and strong DVA, net of expenses.
   - Delivered total Fund net return of 3.1% and $23.5 billion in net DVA.
2. Achieve the 2020 strategy and make progress on the CPP Investments 2025 strategy.
   - Drove technology and data prioritization as part of the CPP Investments 2025 strategy, in partnership with the Chief Technology & Data Officer (CTDO).
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 integrated new leadership team members, including the new CTDO.
   - Undertook detailed succession planning.
   - Took deliberate measures to ensure our talent pipeline continues to embody 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 46% and across investment departments, from 35% in fiscal year 2019 to 37% in fiscal 2020.
4. Achieve peer-recognized practice leadership in investment support functions.
   - Established a new enterprise Technology & Data strategy that will use advanced technology and data to improve performance.
   - Implemented the new Integrated Risk Framework and ensured its adoption by all departments.
5. Continue to develop CPP Investments' global culture of high performance, partnership and integrity.
   - Maintained our pristine reputation as a trusted institution.
   - Drove the themes of Ambition, Agility, Innovation and Inclusion. Championed the creation of a cross-department team to further define and champion our culture evolution.

The Board of Directors awarded Mr. Machin a total incentive award of $3,960,000 for fiscal 2020. 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 CPP Investments to continue working in the best interests of CPP's contributors and beneficiaries.

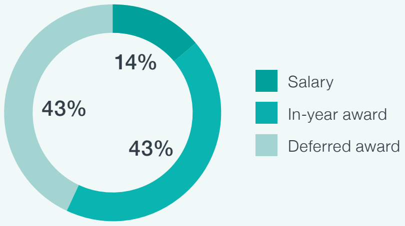
The table below shows a summary of the CEO Total Direct Compensation for fiscal 2020.

Table 3: Fiscal 2020 CEO Total Direct Compensation

	Fiscal 2020 Total	
	Target Annual	Actual Annual
Base salary (A)[1]	**625,000**	**625,000**
Total Fund	750,000	1,230,000
Department/Group	750,000	1,080,000
Individual	1,000,000	1,650,000
Total Incentive Award (B)	**2,500,000**	**3,960,000**
In-year Award	1,250,000	1,980,000
Deferred Award	1,250,000	1,980,000
Other Deferred Award (C)[2]	**800,000**	**800,000**
Total Direct Compensation (A) + (B) + (C)	**3,925,000**	**5,385,000**
Fiscal 2020 Total Direct Compensation	**3,925,000**	**5,385,000**

1. The CEO's base salary was reviewed by the Board. The CEO's base salary will remain unchanged for fiscal 2021.
2. Mr. Machin received a FRU award of C$800,000 in fiscal 2020. The underlying notional investment of the fiscal 2020 award is C$5.33 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 2020 for each Named Executive Officer (NEO).

Table 4: Summary Fiscal 2020 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	**445,875**	712,954	1,582,410	**2,295,365**	1,147,682	1,147,682	**2,741,240**
Alain Carrier SMD & Head of International, Head of Europe	GBP	**436,000**	858,048	1,695,168	**2,553,216**	1,276,608	1,276,608	**2,989,216**
Kelly Shen SMD & CTDO	CAD	**615,000**	983,385	2,160,649	**3,144,034**	1,572,017	1,572,017	**3,759,034**
Suyi Kim[1] SMD & Head of Asia Pacific	HKD	**3,187,988**	5,489,716	10,845,536	**16,335,251**	8,167,626	8,167,626	**19,523,239**
Edwin Cass SMD & Global Head of Real Assets	CAD	**500,000**	984,000	2,002,000	**2,986,000**	1,493,000	1,493,000	**3,486,000**

1. Ms. Kim's compensation has been prorated to reflect time on an approved leave.

The total compensation awarded to the Named Executive Officers is $24.2 million, down compared to $24.7 million in fiscal 2019.

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	Base Salary ($) A	In-year Award ($) B	Deferred Award[1] ($) C	Other Deferred Award[2] D	Pension Value ($) E	All Other Compensation[5] ($) F	Total Compensation (with Deferred Award) ($) A+B+C+D+E+F
Mark Machin[2,3,6,8]	**2020**	**CAD**	**625,000**	**1,980,000**	**1,980,000**	**800,000**	**436,035**	**62,520**	**5,883,555**
President & CEO	2019		625,000	2,100,063	2,100,063	440,000	436,380	54,900	5,756,406
	2018		625,000	1,971,825	1,971,825		450,921	211,593	5,231,164
Neil Beaumont[4,9,10]	**2020**	**CAD**	**445,875**	**1,147,682**	**1,147,682**		**46,510**	**52,999**	**2,840,749**
SMD & CFRO	2019		435,000	1,119,019	1,119,019		45,233	83,471	2,801,742
	2018		285,384	728,761	728,761	1,400,000	12,929	112,196	3,268,031
Alain Carrier[4,7]	**2020**	**GBP**	**436,000**	**1,276,608**	**1,276,608**		**57,469**	**14,957**	**3,061,642**
SMD & Head of International,	2019		436,000	1,367,340	1,367,340		57,469	13,549	3,241,698
Head of Europe	2018		436,000	1,348,513	1,348,513		56,429	15,628	3,205,083
Kelly Shen[5,11,13]	**2020**	**CAD**	**615,000**	**1,572,017**	**1,572,017**		**69,317**	**152,754**	**3,981,105**
SMD & CTDO	2019		241,644	590,597	590,597	2,200,000	10,904	75,416	3,709,158
	2018								
Suyi Kim[4,5,12]	**2020**	**HKD**	**3,187,988**	**8,167,626**	**8,167,626**		**413,741**	**1,200,850**	**21,137,831**
SMD & Head of Asia Pacific	2019		4,151,380	11,346,386	10,699,945		461,481	1,478,837	28,138,030
	2018		4,284,900	10,202,804	6,801,869		385,816	221,453	21,896,842
Edwin Cass[4,5,14]	**2020**	**CAD**	**500,000**	**1,493,000**	**1,493,000**		**52,976**	**483,820**	**4,022,796**
SMD & Global Head	2019		479,479	1,547,808	1,547,808		49,525	291,462	3,916,083
of Real Assets	2018		458,499	1,441,024	1,441,024		48,710	5,274	3,394,530

1. 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.
2. Other Deferred Award refers to one-time, long-term awards. For Mr. Machin this includes Fund Return Unit (FRU) awards.
3. Mr. Machin received a fiscal 2017 SRFU award of C$625,000 upon his appointment as President & CEO. This award vested progressively as 33%, 33%, and 34% from fiscal 2017 to fiscal 2019.
4. NEO elected to defer all or part of their fiscal 2020 In-year award into the Voluntary Deferred Incentive Plan (VDIP).
5. All other compensation includes the premium or value of life insurance, disability benefits, health, dental and vision benefits, discretionary employment arrangements, health and wellness reimbursement as well as comprehensive health assessment conducted at a private medical clinic. Perquisites are limited to paid parking for officers based in Canada. Ms. Kim received a housing allowance in Hong Kong. Mr. Cass received a temporary allowance for the duration of his international assignment. These figures include all relocation and assignment costs as applicable. Ms. Shen received a special allowance to support her commuting arrangement. This will cease two years after her start date.
6. Upon his appointment as President & CEO, Mr. Machin received a FRU award of C$500,000. Based on a valuation, the underlying notional investment of this award is C$2.70 million and vests over 7 years. He received another FRU award of C$440,000 in fiscal 2019 and C$800,000 in fiscal 2020. The underlying notional investment value of the fiscal 2019 award is C$2.93 million and fiscal 2020 award is C$5.33 million. Both awards vest over 5 years.
7. Upon promotion to SMD, Head of International on June 21, 2016, Mr. Carrier received an SRFU award of GBP 1 million. This award vested 50% in fiscal 2017, and 40% in fiscal 2018 and 10% in fiscal 2019.
8. Mr. Machin's other compensation and pension values during his time in Hong Kong are converted using an exchange rate in effect on March 31, 2020 (CAD:HKD 1:5.45), on March 31, 2019 (CAD:HKD 1:5.88) and on March 31, 2018 (CAD:HKD 1:6.08), as applicable.
9. Mr. Beaumont's fiscal 2018 compensation was prorated based on start date of July 24, 2017.
10. Mr. Beaumont received a fiscal 2018 SRFU grant of C$1.40 million as part of his employment agreement. This award vests 60% in fiscal 2018, 20% in fiscal 2019 and 20% in fiscal 2020.
11. Ms. Shen's fiscal 2019 compensation was prorated based on start date of November 5, 2018.
12. Ms. Kim's other compensation is converted using the exchange rate in effect on March 31, 2020 (USD:HKD 1:7.75), March 31, 2019 (USD:HKD 1:7.85), and on March 31, 2018 (USD:HKD 1:7.85), as applicable.
13. Ms. Shen received a fiscal 2019 SRFU grant of C$2.20 million as part of her employment agreement. This award vests 33% in fiscal 2019, 33% in fiscal 2020 and 34% in fiscal 2021.
14. Mr. Cass' fiscal 2019 compensation has been updated to reflect a correction.

Compensation and estimated future payouts

NEOs must defer a portion of the annual incentive award. The deferred portion vests and pays out in equal instalments 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: Annual Deferred Awards

Name	Currency	Type of Award	Year of Award	Award Value	Payments in current year 2020	Current Value of Unvested Awards[1]
Mark Machin[2,3,4,5]	CAD	Deferred Award	**2020**	**1,980,000**		**1,980,000**
President & CEO		Deferred Award	2019	2,100,063	721,652	1,443,303
		Deferred Award	2018	1,971,825	738,229	738,229
		Deferred Award	2017	1,927,886	820,081	
		FRU Grant	**2020**	**800,000**		**165,323**
		FRU Grant	2019	440,000		361,194
		FRU Grant	2017	500,000		1,084,037
Neil Beaumont[6]	CAD	Deferred Award	**2020**	**1,147,682**		**1,147,682**
SMD & CFRO		Deferred Award	2019	1,119,018	384,532	769,064
		Deferred Award	2018	728,762	272,840	272,840
		SRFU Award	2018	1,400,000	350,841	
Alain Carrier	GBP	Deferred Award	**2020**	**1,276,608**		**1,276,608**
SMD & Head of International,		Deferred Award	2019	1,367,340	469,864	939,727
Head of Europe		Deferred Award	2018	1,348,513	504,868	504,868
		Deferred Award	2017	1,106,744	462,251	
Kelly Shen	CAD	Deferred Award	**2020**	**1,572,017**		**1,572,017**
SMD & CTDO		Deferred Award	2019	590,597	202,949	405,898
		SRFU Award	2019	2,200,000	815,418	840,128
Suyi Kim	HKD	Deferred Award	**2020**	**8,167,626**		**8,167,626**
SMD & Head of Asia Pacific		Deferred Award	2019	10,699,945	3,676,858	7,353,716
		Deferred Award	2018	6,801,869	2,546,542	2,546,542
		Deferred Award	2017	6,207,149	2,592,526	
Edwin Cass[7]	CAD	Deferred Award	**2020**	**1,493,000**		**1,493,000**
SMD & Global Head of Real Assets		Deferred Award	2019	1,547,808	531,878	1,063,757
		Deferred Award	2018	1,441,025	539,503	539,503
		Deferred Award	2017	1,338,347	558,984	

1. Current estimated value of unvested awards is based on a total Fund return of 0% for future years. For Deferred Awards and SRFUs, it equals the award value at grant date times the cumulative net total Fund rate of return, and applicable FX rates at time of award. 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, 2020 (CAD:HKD 1:5.45).
3. 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.
4. Upon his appointment to President & CEO, Mr. Machin received a FRU award of C$500,000. Based on a valuation, the underlying notional investment of this award is C$2.70 million.
5. Mr. Machin received a FRU award of C$440,000 in fiscal 2019 and a FRU award of C$800,000 in fiscal 2020. Based on a valuation, the underlying notional investment of the fiscal 2019 award is C$2.93 million and fiscal 2020 is C$5.33 million.
6. Per his employment agreement, Mr. Beaumont received a fiscal 2018 SRFU grant of C$1.40 million, which vests 60% in fiscal 2018, 20% in fiscal 2019 and the final 20% in fiscal 2020.
7. Mr. Cass' fiscal 2019 compensation has been updated to reflect a correction.

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 CPP Investments contributes annually. The President & CEO can choose from a range of options on how the available funds are invested. This is similar to the registered pension plan and is 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 a pension.

The table below shows the contributions and investment earnings for the named executive officers under all plans. The total unfunded liability for the Canadian-based named executive officers, as at March 31, 2020, is $667,776 (2019 – $581,381).

Table 7: Pension Plan Contributions

Name	Plan Type	Currency	Accumulated Value at Start of Year ($)	Compensatory ($) Employer Contributions ($)	Compensatory ($) Investments Earnings ($)	Non-compensatory ($)[1]	at End of Year ($)
Mark Machin[2,3]	Registered	CAD	101,485	13,615		7,344	122,445
President and CEO	Supplementary		128,285	57,145	(10,833)		174,598
	Retirement Compensation Arrangement		576,879	365,000		(307,223)	634,656
	Mandatory[3]	HKD	174,859	1,500		(12,583)	163,776
	Voluntary[3]		1,795,873	0		(128,084)	1,667,789
Neil Beaumont	Registered	CAD	55,251	13,773	0	6,069	75,093
SMD & CFRO	Supplementary		34,430	32,737	(5,426)	0	61,741
Alain Carrier[4]	GSIPP	GBP	761,911			3,750	765,661
SMD & Head of International, Head of Europe	Cash-In-Lieu[4]			57,469	see note 4		57,469
Kelly Shen	Registered	CAD	22,852	13,833		8,589	45,274
SMD & CTDO	Supplementary		0	55,483	(8,271)		47,212
Suyi Kim	Mandatory	HKD	428,979	18,000		(8,918)	438,061
SMD & Head of Asia Pacific	Voluntary		3,510,512	395,741		(230,470)	3,675,783
Edwin Cass	Registered	CAD	425,068	14,039		(24,124)	414,983
SMD & Global Head Real Assets	Supplementary		361,803	38,937	(16,514)		384,226

1. Represents employee contributions and investment earnings in the registered pension plans.
2. Mr. Machin's Retirement Compensation Arrangement 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 assumed the role of CEO, which has an employee and employer mandatory contribution of 5% towards relevant income capped at HKD 30,000 of monthly earnings.
4. Mr. Carrier receives employer pension contributions as cash-in-lieu less statutory deductions and the employer portion of National Insurance contributions due to reaching the U.K. lifetime pension allowance.

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 and any vested awards. 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 according to 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; and
- Deferred Awards that would otherwise have vested in that period to a maximum of eighteen 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 Ed Cass specifically, in the event of resignation Mr. Cass will receive a prorated payment of the Deferred Award that would have vested at the end of the fiscal year of resignation. This provision is in consideration of Mr. Cass' post-employment obligations. 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 age of 55 and 10 years of service at CPP Investments.

Upon retirement, employees continue to receive the ongoing deferral payments owed to them under the Incentive Plan (unless they have opted out), 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, 2020, 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	8	5,208,333	5,176,100
Neil Beaumont SMD & CFRO	CAD	2	1,365,492	2,325,400
Alain Carrier SMD & Head of International, Head of Europe	GBP	12	1,962,000	2,903,100
Kelly Shen SMD & CTDO	CAD	1	1,748,906	2,062,800
Suyi Kim SMD & Head of Asia Pacific	HKD	12	17,256,489	19,272,800
Edwin Cass SMD & Global Head of Real Assets	CAD	12	2,250,000	3,300,000

1. Excludes incentive compensation payouts included in Table 5: Summary Total Compensation. Termination and retirement payments are estimated as of March 31, 2020. Actual payments are prorated based on time worked in the performance period.
2. Excludes the value of 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 vesting period.
4. The unvested awards assume a net return of 0% on the total Fund for future years.

Governance Practices of the Board of Directors

Letter from the Chair of the Governance Committee

We believe sound governance practices are integral to CPP Investments' successful long-term performance. They help to ensure compliance with the law and with the ethical standards that we expect of everyone at CPP Investments. 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 works to ensure the Board's effectiveness by reviewing criteria and qualifications for Directors, planning for Board succession and overseeing Director orientation and ongoing development programs. The Committee also oversees processes related to the annual Board evaluations as described under A Commitment to Accountability on page 124. We monitor the application of the Code of Conduct and related policies across CPP Investments. In addition, we recommend Proxy Voting Principles and Guidelines, which provide the public companies of which we own shares guidance on how CPP Investments is likely to vote on matters put to shareholders, for Board approval.

My colleagues on the Committee for fiscal 2020 were: Tahira Hassan, Chuck Magro, John Montalbano (from January 2020), Heather Munroe-Blum (in an ex officio capacity) and Karen Sheriff.

Fiscal 2020 report on activities

One of the primary responsibilities of the Governance Committee is to lead the Board in assessing and planning for Board composition and succession, ensuring an appropriate balance of renewal and continuity. This fiscal year, we undertook an in-depth search for an international director candidate to replace Jackson Tai, who retired from the Board on March 31, 2019, and made a recommendation to CPP Investments' stewards for an individual to fill this current Board vacancy. The Committee also recommended each of John Montalbano, Mary Phibbs, Katie Taylor and me for reappointment.

All appointment and reappointment recommendations, including those made by us in fiscal 2020, are based upon our stringent Director Appointment and Reappointment Process described on page 122. This includes taking into account the Board composition matrix set out on page 123 and the results of our established Board and peer evaluation process, among other factors.

The Committee undertook the biennial review of Directors' compensation, recommending changes effective April 1, 2020. Our objective was to ensure that the compensation framework positions CPP Investments to recruit and retain directors in the context of an increasingly competitive global talent market, while respecting the organization's public purpose. However, recognizing the economic impacts of the COVID-19 pandemic, Directors subsequently unanimously elected to not implement certain of the changes until such time as deemed appropriate by the Board.

In fiscal 2020, we focused on enhancing Board reporting on conduct and culture matters, as a natural extension of the Committee's work last year to oversee a review of organizational conduct and culture. This is intended to address continuing measurement and evaluation of CPP Investments' culture against our Guiding Principles of Integrity, Partnership and High Performance, as well as against best practices and emerging trends, in a holistic manner.

The Governance Committee oversaw several Directors assuming new roles as committee chairs this fiscal year, and the resulting refresh of Committee membership. The Committee continued its focus on ensuring the orientation and ongoing education programs for Directors and committee chairs support them in becoming and remaining knowledgeable to perform their duties most effectively.

Looking ahead to next year, in addition to our continuing activities, we will turn to the next round of Board renewal, undertaking searches to replace two of our longstanding Directors whose terms expire in fiscal 2021, Karen Sheriff and Jo Mark Zurel.

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. Additional governance information is available on our website.

Mandate, duties and objectives of the Board of Directors

The Board of Directors is responsible for the stewardship of CPP Investments.

Among other duties, the Directors:

- Appoint the President & CEO and annually review his or her performance;
- Determine the organization's strategic direction in collaboration with Management;
- Review and approve investment policies, standards and procedures;
- Review and approve the Integrated Risk Framework and Risk Appetite Statements;
- Approve the guidelines for investment transaction approvals and for retaining external investment managers;
- Review the Investment Portfolios and the results of investment decisions;
- Review and approve the annual business plan and budget;
- Oversee succession planning for Senior Management;
- Set compensation policies and approve Senior Management compensation;
- Appoint CPP Investments' external auditor;
- Establish and monitor compliance with a Code of Conduct for Directors and employees;
- Establish procedures to identify and resolve conflicts of interest;
- Establish other policies relating to such matters as authorities, procurement, anti-bribery and corruption, privacy, and travel and expenses;
- Review and approve material disclosures such as quarterly and annual financial statements and the annual report; and
- Assess the performance of the Board itself, including an annual Chairperson and Director peer review.

Directors must act honestly and in good faith with a view to the best interests of CPP Investments. They must exercise the care, diligence and skill that a reasonably prudent person would apply in comparable circumstances. In carrying out their duties, they must employ any particular expertise or skill they possess.

One of the Board's most important responsibilities is to preserve a governance model in which CPP Investments operates at arm's length from governments, with an investment-only mandate.

The CPP Investments governance structure balances that independence with accountability by making investment professionals accountable to an independent Board of Directors, which operates at arm's length from governments. The Board ensures that CPP Investments' investment-only mandate is undertaken without regard to political, social or economic development considerations or any other non-investment objectives.

CPP Investments' 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; or
- 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 five standing committees that met during fiscal 2020: Investment, Audit, Risk, Human Resources and Compensation, and Governance. Membership is shown in the Board Attendance chart on page 126.

The Investment Committee oversees CPP Investments' 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 *Canada Pension Plan Investment Board Act* (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 involves overseeing the external and internal audit functions, including appointing 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, and oversees financial aspects of the employee pension plans.

The Audit Committee advises the Board in connection with the statutorily mandated special examination, which reviews CPP Investments' records, systems and practices. The organization's external auditors, as recommended by the Audit Committee, typically conduct this review every six years, with the final report provided to CPP Investments' 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. Copies of all special examination reports are available on CPP Investments' 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, as well as with the Chief Financial and Risk Officer (CFRO).

The Risk Committee provides a focus on risk governance and overseeing risk management. It reviews and recommends the Integrated Risk Framework and Risk Appetite Statements and monitors CPP Investments' risk profile against its risk appetite. It also reviews key existing and emerging risks to which CPP Investments is exposed. In addition, the Committee reviews and recommends material risk management policies and exceptions to those policies. The Risk Committee regularly meets separately with the CFRO. For more details about CPP Investments' risk governance practices, see page 94.

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 human resources policies, employee benefits and the employee pension plans. The role of the HRCC is further outlined in the Compensation Discussion and Analysis section, beginning on page 104.

The Governance Committee ensures that CPP Investments follows appropriate governance best practices. The Governance Committee oversees conduct and culture matters, 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 and reappointments. The Governance Committee recommends Director compensation, oversees the design of orientation and ongoing education programs for Directors and recommends the Proxy Voting Principles and Guidelines for Board approval.

At every regularly scheduled meeting, the Board of Directors and all committees have 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 Audit Committee and Risk Committee meet with the CFRO. In addition, the Board meets alone with each of 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. 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. Appointments of Officers, as well as their annual and incentive-based compensation also require Board approval.

Board expectations of Management

The Board expects Management to comply with all policies approved by the Board and with the CPPIB Act and regulations, 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 CPP Investments invests. The Board assesses and 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 CPP Investments' reputation.

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 2020, the Board welcomed one new Director colleague and focused on Board and Director development and cohesion in light of the significant change on the Board over the last several years.

Mark Evans' appointment as Douglas Mahaffy's replacement occurred early in the fiscal year, and the Board has recommended an international Director to replace Jackson Tai, who retired from the Board effective March 31, 2019.

Also this fiscal year, each of Ashleigh Everett, John Montalbano and Mary Phibbs was recommended for reappointment for a second three-year term on the Board, and Katie Taylor was reappointed for a third term.

The Board continues to work closely with the federal-provincial Nominating Committee to ensure there is a prudent rhythm of Director turnover. Managed carefully, renewal contributes to the Board's effectiveness as it carries out its duties.

Board appointment and reappointment process

The Director appointment and reappointment process is designed to ensure that the Board has Directors who provide effective oversight to help CPP Investments to achieve its objectives, including having a sufficient number with proven financial ability or relevant work experience as required by the CPPIB Act. CPP Investments 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 CPP Investments 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 CPP Investments' 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, CPP Investments 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 CPP Investments' 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 search firms to ensure that the widest possible network of candidates is considered for appointment. An analysis of competencies and diversity, as described under the Board Diversity section on page 127, is used to establish the selection criteria for a particular Board vacancy. The Governance Committee (or an ad hoc Director search committee) then uses these criteria to assess candidates.

In assessing potential Director reappointments, the Governance Committee considers the results of the annual evaluations of the relevant Director and his or her performance on the Board. It also considers table stakes, Board competencies, applications in response to the Notice of Appointment opportunity, and the overall diversity of the Board.

Once finalized, qualified candidates for appointments and reappointments are provided to the Nominating Committee for Appointments to CPP Investments' Board of Directors. The Nominating Committee is constituted by the federal Minister of Finance. It considers recommended candidates and submits them to the federal Finance Minister. Following consultation with the participating provincial finance ministers, the federal Minister of Finance recommends Directors to the federal Governor in Council for appointment.

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 CPP Investments' activities. Details of the competencies analysis and diversity of the Board, as at March 31, 2020, are set out in the following table.

Board composition matrix

	Experience and Expertise	Sylvia Chrominska	Mark Evans	Ashleigh Everett	Tahira Hassan	Chuck Magro	John Montalbano	Heather Munroe-Blum	Mary Phibbs	Karen Sheriff	Kathleen Taylor	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
	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
Diversity	Age[1]	68	62	63	66	50	55	69	62	62	62	56
	Years on Board[1]	1	0	3	5	1	3	9	2	7	6	7
	Gender	X		X	X			X	X	X	X	
	Non-Gender[2]				X			X				

1. As of March 31, 2020.
2. Directors who self-identify in categories such as LGBT+, Indigenous, a visible minority, disabled, or of an ethnic or cultural group, are noted in this category.

Biographies of the CPP Investments Board of Directors are on pages 129 to 130. 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 which includes several comprehensive, full-day sessions. These involve discussion of the background, history and mandate of CPP Investments 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 in specific areas.

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 CPP Investments. Management provides ongoing presentations focused on our business and emerging global issues. Special development sessions outside of regular Board meetings feature both internal and external speakers. In fiscal 2020, the topics for these sessions included CPP Investments' Investment Beliefs, Balancing Portfolio management, cyber risk and information security, financial crisis preparedness and disruption trends.

A key education component for Board members is to develop an in-depth understanding of the various regions in which CPP Investments operates and invests. In recent years, the Board has visited a CPP Investments International Office in conjunction with one of its scheduled meetings to gain additional perspective on the challenges and implications of deploying capital on a global basis. In June 2019, the Board held a special meeting in Toronto focused on the role of CPP Investments' global corporate office, as distinct from regular Board business typically conducted in Toronto. This allowed the Board to enhance its understanding of the activities of the Toronto office, which executes most of the organization's key operating functions in support of our global mandate. It also provided Directors with an opportunity to engage with Toronto employees broadly, who represent 75% of CPP Investments' global employee base.

Directors are also encouraged to participate in relevant external programs. Given CPP Investments' scale and breadth of activities, the Board will continue to support Directors' participation in external education programs as a means of further enhancing their knowledge and skill sets.

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 considers 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 CPP Investments Directors and the reappointment of the Chairperson when his or her term expires.

Directors' outside activities

To ensure independence among Directors, the Board of Directors monitors interlocking relationships, in line with leading governance practices. This includes Board and committee interlocks. CPP Investments currently has one Board interlock: both Heather Munroe-Blum and Kathleen Taylor serve on the board of Royal Bank of Canada. The CPP Investments 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 CPP Investments.

Directors' compensation

The Governance Committee of the Board is responsible for making recommendations with respect to Directors' compensation in accordance with the requirements under the CPPIB Act. Section 10 of the Act sets out that directors are to receive such remuneration and benefits having regard to the remuneration and benefits received by persons having similar responsibilities and engaged in similar activities. 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.

In fiscal 2020, the Committee reviewed Directors' compensation with the assistance of an external advisor. The Committee's objective was to consider appropriate changes to Directors' compensation that would ensure CPP Investments remains competitive in the talent market for recruiting and retaining outstanding directors in order to meet its statutory objectives. In recognition of the growth of the Fund and the increasing complexity of CPP Investments' global activities, the Board approved increases in annual retainers for Directors as well as the Chairperson. The Committee approved an increase in the annual allowance for Directors residing outside Canada to reflect the significant additional complexities and overall travel time associated with residing outside of Canada and serving as a CPP Investments Director.

These changes will compensate Directors competitively for their CPP Investments responsibilities, while still taking into account the organization's public mandate, consistent with the Directors' Compensation Philosophy outlined on page 125.

Recognizing the significance of COVID-19 and its impact on Canadians, Directors unanimously elected to not implement these recent changes to the applicable by-law, which was passed prior to the pandemic. In effect, compensation levels prior to these amendments will continue until such time the Board deems it appropriate for these changes, otherwise applicable as of April 1, 2020, to come into force.

	Fiscal 2020 ($)		Fiscal 2021[3] ($)
Annual Retainers			
Chairperson[1]	245,000		255,000
Director	70,000		80,000
Committee Chair, additional retainer	25,000		25,000
Meeting Fees			
In-person meeting fee	2,000		2,000
Telephone meeting fee[2]	1,000		1,000
Travel and Other Allowances		**Travel and Other Allowances (aggregate)**	
One-way travel time per meeting greater than 1 up to 3.5 hours	500	More than 200 km	1,000
One-way travel time per meeting greater than 3.5 up to 6.5 hours	1,500	Crossing an international border	1,000
One-way travel time per meeting greater than 6.5 hours	2,500		
Annual allowance for Directors residing outside Canada	20,000		40,000

1. In the case of the Board Chairperson, compensation will continue to be a flat annual fee, 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.
2. When meeting is intended to be done by telephone and generally covers one or two topics.
3. The fiscal 2021 column sets out changes to Directors' compensation that were passed with effect as of April 1, 2020, but were subsequently determined not to be implemented until such time as the Board deems it appropriate, other than the changes to the travel allowances, which have become effective April 1, 2020.

CPP Investments 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 CPP Investments. 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 CPP Investments' commercial activities and public purpose promotes the selection of individuals who will reinforce the organization's unique culture.

CPP Investments Directors' compensation principles

I. Pay Neutrality

Compensation alone should not attract or detract desirable candidates.

- In reviewing the compensation of CPP Investments 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 CPP Investments Board.

II. Public Purpose

Canadian governments established CPP Investments 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 CPP Investments Directorship, and the expertise and experience required are comparable to private sector directorships, the total pay opportunity for CPP Investments 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 CPP Investments 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

CPP Investments 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 CPP Investments 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 CPP Investments' 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 fiscal 2020.

Board attendance

There were six regularly scheduled Board meetings in fiscal 2020. In addition, there were four regularly scheduled Audit Committee meetings, five 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 table below shows the number of meetings that each Director attended in fiscal 2020 relative to the number of meetings he or she could have attended.

	Board[1]	Investment[2]	Audit[3]	Governance[4]	HRCC[5]	Risk[6]
Heather Munroe-Blum[7]	7 / 7	12 / 12	4 / 4	7 / 7	6 / 6	6 / 6
Sylvia Chrominska[8]	7 / 7	12 / 12	–	–	6 / 6	6 / 6
Mark Evans[9]	5 / 6	8 / 8	–	–	4 / 4	4 / 4
Ashleigh Everett	7 / 7	12 / 12	–	7 / 7	–	
Tahira Hassan[10]	6 / 7	11 / 12	–	6 / 7	5 / 5	1 / 1
Chuck Magro[11]	7 / 7	12 / 12	4 / 4	7 / 7	2 / 2	–
John Montalbano[12]	7 / 7	12 / 12	4 / 4	1 / 1	1 / 1	6 / 6
Mary Phibbs[13]	7 / 7	12 / 12	4 / 4	–	–	6 / 6
Karen Sheriff[14]	7 / 7	11 / 12	–	7 / 7	6 / 6	–
Kathleen Taylor[15]	7 / 7	12 / 12	4 / 4	–	6 / 6	1 /1
Jo Mark Zurel[16]	7 / 7	12 / 12	3 / 3	–	–	6 / 6

1. Six in-person meetings and one teleconference meeting.
2. Six in-person meetings and six teleconference meetings.
3. Four in-person meetings.
4. Six in-person meetings and one teleconference meeting.
5. Five in-person meetings and one teleconference meeting.
6. Four in-person meetings and two teleconference meetings.
7. Ex officio member of the Audit Committee, Governance Committee, HRCC and Risk Committee.
8. Appointed Chair of the HRCC effective January 1, 2020.
9. Became a Director effective May 9, 2019. Appointed to the HRCC, Risk Committee and Investment Committee effective June 21, 2019.
10. Appointed to the Risk Committee effective January 1, 2020. Ceased to be a member of the HRCC effective January 1, 2020.
11. Appointed to the HRCC effective January 1, 2020.
12. Appointed to the Governance Committee effective January 1, 2020. Attended HRCC by invitation.
13. Ex officio member of the Risk Committee.
14. Ceased to be Chair of the HRCC effective January 1, 2020.
15. Attended Risk Committee by invitation.
16. Ex officio member of the Audit Committee.

During fiscal 2020, the following ad hoc committees of the Board continued to meet:

- The ad hoc Director candidate search committee, formed in fiscal 2019, met several times during fiscal 2020 to consider potential candidates and recommend a preferred candidate to the Governance Committee and the Board. Membership of the committee consisted of Ashleigh Everett (Chair), John Montalbano, Heather Munroe-Blum, Mary Phibbs and Karen Sheriff.
- The ad hoc committee to oversee Management's preparation and implementation of receipt of additional CPP contributions, formed in fiscal 2018, continued to meet throughout fiscal 2020. Membership consisted of Heather Munroe-Blum, John Montalbano (Chair), Karen Sheriff and Jo Mark Zurel.

Directors' compensation for fiscal 2020

Based on the fee schedule in effect for fiscal 2020 and their attendance, individual compensation for each Director for fiscal 2020 was as follows:

Director	Annual Retainer ($)	Board and Committee Meeting Fees ($)	Public Meeting Fees ($)	Travel Fees ($)	Total ($)
Heather Munroe-Blum, Chairperson of the Board, Chair of the Investment Committee	245,000	22,000	–	4,500	271,500
Sylvia Chrominska, Chair of the HRCC[1]	76,250	56,000	–	3,500	135,750
Mark Evans[2]	80,565	39,000	–	5,500	125,065
Ashleigh Everett, Chair of the Governance Committee	95,000	54,000	–	3,000	152,000
Tahira Hassan[3]	70,000	49,000	–	–	119,000
Chuck Magro[4]	70,000	55,000	–	9,000	134,000
John Montalbano[5]	70,000	70,000	–	10,500	150,500
Mary Phibbs, Chair of the Audit Committee	115,000	65,000	–	17,500	197,500
Karen Sheriff, Chair of the HRCC[6]	88,750	68,000	–	–	156,750
Kathleen Taylor	70,000	53,000	–	–	123,000
Jo Mark Zurel, Chair of the Risk Committee	95,000	50,000	–	2,500	147,500

1. Appointed Chair of the HRCC effective January 1, 2020.
2. Became a Director effective May 9, 2019. Appointed to the HRCC, Risk Committee and Investment Committee effective June 21, 2019.
3. Appointed to the Risk Committee effective January 1, 2020. Ceased to be a member of the HRCC effective January 1, 2020.
4. Appointed to the HRCC effective January 1, 2020.
5. Appointed to the Governance Committee effective January 1, 2020.
6. Ceased to be Chair of the HRCC effective January 1, 2020.

Diversity

Board diversity

CPP Investments believes that diversity, including gender diversity, is crucial to 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 longstanding belief that CPP Investments is best served by a Board with a wide array of skills, backgrounds, perspectives and ideas. For purposes of Board composition, diverse representation considerations include, but are not limited to, professional experience and expertise, age, gender, ethnicity, geographic background, disability status, sexual orientation and other intrinsic personally defining dimensions.

The Board Diversity Policy applies to both the nomination of new candidates to serve as Directors as well as recommendations for existing Directors to be reappointed to the Board. It provides that when assessing Board composition or identifying suitable candidates for appointment or reappointment, the Board or any search committee it establishes, will have due regard to the benefits of ensuring diversity among the Directors. In particular, in furtherance of Board diversity it includes the objective of gender parity among Directors so that at least 40% are women and at least 40% are men. Currently, 58% of the usual complement of 12 CPP Investments Directors are women, including Heather Munroe-Blum who is the Chairperson, and 42% are men. The Board Diversity Policy does not include targets for the representation on the Board of other traditionally under-represented groups given the small size of the Board and the importance of considering a variety of factors for Director appointments and reappointments.

Any search firm engaged to assist the Board with the identification of candidates for nomination to the Board is directed to the Board Diversity Policy and expected to comply with it. In addition, regular review of the Board Diversity Policy and the Board's adherence to it is undertaken as part of the annual work of the Governance Committee.

Diversity of the Senior Management Team

The importance we place on diversity and inclusion in relation to our talent practices, outlined in Purpose and People Drive Performance on page 47, applies equally at the executive level. The Board regularly considers diversity in pipeline discussions for senior leadership positions and implements development plans for top-performing diverse senior talent. The Board considers gender and non-gender diversity dimensions when appointing CPP Investments' Officers.

The Senior Management Team is currently 36% female. CPP Investments is committed to ensuring that at least 30% of senior management positions are held by women. We have not established other specific diversity representation targets due to the small size of this group and our belief that efforts are best focused on furthering the strong talent pipeline at CPP Investments and considering a broad pool of candidates for senior leadership positions.

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 CPP Investments. It requires and expects Management to support the Board in setting the tone for a strong governance culture.

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 CPP Investments 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 or any party with whom we do business.

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 CPP Investments' 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 CPP Investments' objectives or mandate.

These policies also cover the personal trading of CPP Investments employees and Directors. They establish strict pre-clearance procedures and restrictions on personal trading in prescribed circumstances.

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. CPP Investments 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. Sheila Block, a distinguished Canadian litigation lawyer, currently holds this position.

Board of Directors[1]

Committee membership:
Investment Committee (Chair), ex officio member of the Audit, Governance, Human Resources and Compensation, and Risk Committees

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.

Director of the Royal Bank of Canada and Chairperson of the Gairdner Foundation. Co-founder and Co-Chair 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), the Trilateral Commission, and Chair of the McGill University Health Centre Interdisciplinary Initiative in Infection and Immunity (MI4). 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. Served for over a decade as Principal and Vice Chancellor (President), McGill University; Former Vice-President (Research and International Relations), University of Toronto. 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.

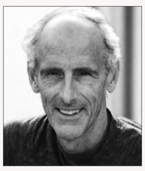
Building on a distinguished career of clinical, scientific and policy contributions, qualifications include more than 25 years of senior administrative leadership concentrated in higher education, public policy and research and development; extensive board experience as a director on executive, human resources and compensation, governance, investment, finance and risk committees in the corporate and not-for-profit sectors.

Committee membership:
Investment Committee, Human Resources and Compensation Committee (appointed Chair effective January 1, 2020), 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 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 more than 30 years of banking experience, including executive positions in human resources and Corporate Credit Risk, as well as extensive board experience.



Committee membership:
Investment Committee, Human Resources and Compensation Committee, Risk Committee

WILLIAM 'MARK' EVANS
Venture Capital, London, United Kingdom
Director since May 2019.

Works with several early stage technology companies, including Animal Dynamics, DisplayLink, Five.AI, Headspace, MyTomorrows, Oak North, Oxford Nano Imaging (ONI), PaySend and The Hut Group. Joined Benchmark Capital's Entrepreneur in Residence program in Silicon Valley (1999) and became a General Partner at Benchmark Europe/Balderton Capital from 2002 through 2015. Co-founded TrustBridge Partners in China (2006) and Kindred Capital in Europe (2016). Former member (until 1999) of the Management Committee at Goldman Sachs. Holds a Master's Degree in Economics from the University of Oxford and a BA in Economics from Queen's University.

Qualifications include 35 years' experience working in Europe, Asia and the U.S.

1. The biographies provided include all Directors who served on the Board in fiscal 2020.

Committee membership:
Investment Committee,
Governance Committee
(Chair)

ASHLEIGH EVERETT

Corporate Executive, Corporate Director, Winnipeg, Manitoba
Director since February 2017.

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). Former member of the Premiers Enterprise Team for the Province of Manitoba. 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. Masters of Business Administration, Ivey School of Management, University of Western Ontario.

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,
Risk Committee

TAHIRA HASSAN

Corporate Director, Toronto, Ontario
Director since February 2015.

Non-executive Director of Brambles Limited. Director of Ontario Shores Centre for Mental Health Sciences. 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. 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. Certified Management Accountant of Canada, Fellow of the Chartered Institute of Management Accountants in the United Kingdom and Chartered Global Management Accountant.

Qualifications include more than 40 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,
Human Resources and
Compensation Committee

CHUCK MAGRO

Corporate Executive, Heritage Point, Alberta
Director since July 2018.

Serves on the boards of the Business Council of Canada, Business Council of Alberta. Vice Chairman of the International Fertilizer Industry Association, Past Chair & current board member of The Fertilizer Institute. Former Chair of Canpotex and on the boards of the Nutrients for Life Foundation and International Plant Nutrition Institute. President and Chief Executive Officer of Nutrien Ltd.

Qualifications include 25 years of international business experience primarily in North and South America, Australia, Europe and Asia, as well as board experience.

1. At time of appointment.

Committee membership:
Investment Committee,
Audit Committee,
Risk Committee,
Governance Committee

JOHN MONTALBANO

Corporate Director, Vancouver, British Columbia
Director since February 2017.

Serves as Director on a number of corporate boards, including Aritzia Inc., Canalyst Financial Modeling Corporation and Eupraxia Pharmaceuticals Inc. Current member of the Asia Pacific Foundation Board, serves as Chair of The St. Paul's Hospital Foundation and Chair of The Vancouver Police Foundation. Former Vice Chairman of RBC Wealth Management. Served as Chief Executive Officer of RBC Global Asset Management from 2008 to 2015. Previously President of Phillips and Hager & North Investment Management. Chartered Financial Analyst designation. Leslie Wong Fellow of the UBC Portfolio Management 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 (Chair),
Risk Committee
(ex officio member)

MARY PHIBBS

Corporate Director, London, United Kingdom
Director since May 2017.

Chairperson of Virgin Money Unit Trust Managers Limited, non-executive Director of Morgan Stanley International Limited, Morgan Stanley & Co International plc and Morgan Stanley Bank International Limited. Previously a non-executive 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. Held senior positions at Standard Chartered Bank plc, ANZ Banking Group, National Australia Bank, Commonwealth Bank of Australia, Allied Irish Banks plc, and PricewaterhouseCoopers, among others. 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

KAREN SHERIFF

Corporate Executive, Halifax, Nova Scotia[1]
Director since October 2012.

Director of BCE Inc/Bell Canada. Past director of Bell Aliant Inc., Bell Aliant Regional Communications Inc., Bell Aliant Preferred Equity Inc., Aliant Inc., Teknion Corporation and WestJet Airlines Ltd. Chair of the Board of Trustees of the Gardiner Museum of Ceramic Arts from 2006 to 2016. Former 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. 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.

1. At time of appointment.

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 since 2014 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 University of Toronto (2019), McGill University (2017), 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. More recently, a senior partner in a private equity firm. 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
(ex officio member),
Risk Committee (Chair)

JO MARK ZUREL
Chartered Professional Accountant, Corporate Director, St. John's, Newfoundland and Labrador
Director since November 2012.

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. Former Director of Newfoundland Power Inc., and Fronteer Gold Inc. 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 Investments) 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 or in the Notes to which the accounting policies relate. The financial information presented throughout the Annual Report is consistent with the Consolidated Financial Statements.

CPP Investments 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 Investments; 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 101 of Management's Discussion and Analysis in the 2020 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, conflict of interest procedures and other policies, as well as management authorities and procedures that guide decision-making. The controls also include the establishment of an organizational 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 Investments' 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 Investments' 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 Investments' financial reporting and the adequacy of internal control systems.

Mark G. Machin
President & Chief Executive Officer

Neil Beaumont
Senior Managing Director & Chief Financial and Risk Officer

Toronto, Ontario
May 18, 2020

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 Investments held during the year were in accordance with the CPPIB Act and CPP Investments' investment policies, standards and procedures. Accordingly, the Investment Certificate follows.

The investments of CPP Investments, held during the year ended March 31, 2020, were in accordance with the CPPIB Act and CPP Investments' investment policies, standards and procedures.

Mary Phibbs
Chair of the Audit Committee on behalf of the Board of Directors

Toronto, Ontario
May 15, 2020

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 Investments"), which comprise the consolidated balance sheet as at March 31, 2020, 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 Investments as at March 31, 2020, 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 Investments 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 Investments' 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 Investments or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing CPP Investments' 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 Investments' 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 Investments' 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 Investments 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 Investments 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 Investments 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 18, 2020

Consolidated Financial Statements and Notes

Consolidated Balance Sheet

(CAD millions)	As at March 31, 2020	As at March 31, 2019[1]
Assets		
Investments (Note 2)	$ 535,464	$ 495,449
Pending trades receivable	6,944	4,467
Premises and equipment	474	387
Other assets	262	244
Total assets	543,144	500,547
Liabilities		
Investment liabilities (Note 2)	127,062	104,219
Pending trades payable	5,702	3,703
Accounts payable and accrued liabilities	792	645
Total liabilities	133,556	108,567
Net assets	$ 409,588	$ 391,980
Net assets, represented by:		
Share capital	$ –	$ –
Accumulated net income from operations	259,721	247,624
Accumulated net transfers from the Canada Pension Plan	149,867	144,356
Net assets	$ 409,588	$ 391,980

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.

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, 2020	March 31, 2019[1]
Investment income (Note 5)	$ 15,721	$ 35,095
Investment-related expenses (Note 6)	(2,370)	(1,882)
Net investment income	**13,351**	33,213
Operating expenses (Note 14)	**1,254**	1,203
Net income from operations and comprehensive income	**$ 12,097**	$ 32,010

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.

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, 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
As at April 1, 2019	**10**	**$**	**–**	**$**	**144,356**	**$**	**247,624**	**$**	**391,980**
Total net income for the year			**–**		**–**		**12,097**		**12,097**
Canada Pension Plan transfers:									
Transfers from the Canada Pension Plan			**–**		**44,521**		**–**		**44,521**
Transfers to the Canada Pension Plan			**–**		**(39,010)**		**–**		**(39,010)**
Balance at March 31, 2020	**10**	**$**	**–**	**$**	**149,867**	**$**	**259,721**	**$**	**409,588**

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, 2020	March 31, 2019[3]
Cash flows from operating activities		
Net income from operations	$ 12,097	$ 32,010
Adjustments for non-cash items:		
Amortization of premises and equipment	50	20
Losses on debt financing liabilities (Note 12)	2,857	950
Adjustments for net changes in operating assets and liabilities:		
(Increase) in investments	(25,123)	(66,580)
(Increase) in pending trades receivable	(2,477)	(1,854)
Decrease (increase) in other assets	88	(86)
Increase in investment-related liabilities	15,309	24,770
Increase in pending trades payable	1,999	1,610
Increase (decrease) in accounts payable and accrued liabilities	42	(44)
Net cash flows provided by (used in) operating activities	4,842	(9,204)
Cash flows from financing activities		
Transfers from the Canada Pension Plan	44,521	38,581
Transfers to the Canada Pension Plan	(39,010)	(34,745)
Proceeds from debt financing liabilities (Note 12)	29,507	36,784
Repayments of debt financing liabilities (Note 12)	(24,830)	(30,929)
Net cash flows provided by financing activities	10,188	9,691
Cash flows from investing activities		
Acquisitions of premises and equipment	(32)	(59)
Net cash flows (used in) investing activities	(32)	(59)
Net increase in cash and cash equivalents	14,998	428
Effect of exchange rate changes on cash and cash equivalents	45	(18)
Cash and cash equivalents at the beginning of the year	8,706	8,296
Cash and cash equivalents at the end of the year	23,749	8,706
Cash and cash equivalents at the end of the year are comprised of:		
Cash held for operating purposes[1]	194	88
Cash and cash equivalents held for investment purposes[2]	23,555	8,618
Total	$ 23,749	$ 8,706

1. Presented as a component of other assets on the Consolidated Balance Sheet.
2. Presented as a component of investments on the Consolidated Balance Sheet and money market securities on the Consolidated Schedule of Investment Portfolio.
3. 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.

Consolidated Schedule of Investment Portfolio

The schedule below provides information on investments and investment liabilities held by Canada Pension Plan Investment Board and its investment holding subsidiaries on a combined basis. The nature of these investments and investment liabilities is further described in Note 2.

(CAD millions)	As at March 31, 2020	As at March 31, 2019[2]
Equities		
Public equities	$ 118,241	$ 141,189
Private equities	105,381	96,659
Total equities	223,622	237,848
Fixed income		
Bonds	103,658	85,604
Other debt	27,214	27,325
Money market securities	24,908	9,829
Total fixed income	155,780	122,758
Absolute return strategies	27,922	25,512
Real assets		
Real estate	43,718	45,846
Infrastructure	34,679	33,131
Power and renewables	8,711	5,075
Energy and resources	7,281	8,002
Total real assets	94,389	92,054
Investment receivables		
Securities purchased under reverse repurchase agreements and cash collateral pledged on securities borrowed	18,658	12,532
Derivative assets	9,730	3,192
Other	6,212	2,029
Total investment receivables	34,600	17,753
Total investments[1]	$ 536,313	$ 495,925
Investment liabilities		
Securities sold under repurchase agreements and cash collateral received on securities lent	(52,347)	(39,491)
Debt financing liabilities	(38,395)	(30,861)
Securities sold short	(20,776)	(29,027)
Derivative liabilities	(10,023)	(2,330)
Short-term secured debt	(1,430)	(1,358)
Other	(4,104)	(1,155)
Total investment liabilities[1]	(127,075)	(104,222)
Pending trades receivable[1]	7,025	4,692
Pending trades payable[1]	(6,619)	(4,401)
Net investments	$ 409,644	$ 391,994

1. Consists of all the financial assets and liabilities held by both Canada Pension Plan Investment Board and its investment holding subsidiaries. In contrast, the Consolidated Balance Sheet presents all financial assets and liabilities held by investment holding subsidiaries as investments. This results in a difference of $849 million (March 31, 2019 – $476 million), $13 million (March 31, 2019 – $3 million), $81 million (March 31, 2019 – $225 million) and $917 million (March 31, 2019 – $698 million) as compared to investments, investment liabilities, pending trades receivable and pending trades payable, respectively, as presented in the Consolidated Balance Sheet. Refer to Note 1.2, and 3.1 and 3.2 for further details.
2. 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 Investments) was established in December 1997 pursuant to the *Canada Pension Plan Investment Board Act* (CPPIB Act). CPP Investments 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 Investments is $100 divided into 10 shares with a par value of $10 each.

CPP Investments 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 Sections 108.1 and 108.3 of the CPP Act in the best interests of CPP beneficiaries and contributors. CPP Investments received its first funds for investing purposes from the CPP in March 1999. CPP Investments' assets are to be invested in accordance with the CPPIB Act, the regulations and CPP Investments' 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 are paid on CPP contributions made after 2018. The CPP Act now defines two separate parts of the CPP. The "base CPP" refers to the benefits and contributions established before 2019. The "additional CPP" refers to the additional benefits and additional contributions that began on January 1, 2019. The assets attributable to the CPP's additional CPP account are accounted for separately from those of the base CPP account. Note 19 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 Investments 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 Investments are owned by Her Majesty the Queen in right of Canada. Further, all of CPP Investments' wholly owned subsidiaries are exempt from Part I tax.

The Consolidated Financial Statements provide information on the net assets managed by CPP Investments and do not include the liabilities and other assets of the CPP.

CPP Investments' 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 15, 2020.

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 affected assets or liabilities in the future.

COVID-19, the novel coronavirus, has created global economic disruption and uncertainty. Despite the uncertainty as to the outcome and ultimate effects of the pandemic, CPP Investments has used extensive sources of available information in providing its best estimate of the impact that the COVID-19 pandemic has had on the valuations of its investments and investment liabilities as of the date of these financial statements. However, these estimates are sensitive to key assumptions and drivers that are subject to material changes. Please see Note 3.6 for sensitivity analysis and Note 8.2.1 for a discussion of market stress scenarios. We are monitoring developments relating to the global spread of COVID-19 and continuing to assess the ongoing impact on CPP Investments.

1.1 Basis of presentation

These Consolidated Financial Statements present the financial position and the financial performance of CPP Investments in accordance with International Financial Reporting Standards (IFRS).

CPP Investments 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 Investments, 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 Investments meets the definition of an investment entity as defined in IFRS 10.

Statement of compliance

The Consolidated Financial Statements of CPP Investments have been prepared in accordance with IFRS as issued by the International Accounting Standards Board and the requirements of the CPPIB Act and the accompanying regulations.

1.2 Subsidiaries

CPP Investments reports the results of its operations in accordance with IFRS 10. As a consequence, the Consolidated Financial Statements represent the results of operations of CPP Investments 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 Investments.

Subsidiaries that are managed by CPP Investments 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, investment liabilities and pending trades 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 Investments 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 CPP Investments. Financial assets classified at FVTPL include investments in equities, fixed income, absolute return strategies, real assets, derivatives, securities purchased under reverse repurchase agreements and cash collateral pledged on securities borrowed. Financial assets carried at amortized cost include pending trades receivable and other assets.

Financial liabilities

Financial liabilities are either classified at FVTPL or at amortized cost. A financial liability is classified 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, cash collateral received on securities lent, short-term secured debt and other investment liabilities. Financial liabilities at amortized cost include pending trades payable and accounts payable and accrued liabilities.

Recognition

CPP Investments 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 Investments has transferred the financial asset and substantially all the risks and rewards of the asset, or (c) in cases where CPP Investments has neither retained nor transferred substantially all risks and rewards of the asset, it no longer retains control over the asset.

CPP Investments 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 Investments' functional and presentation currency is the Canadian dollar, which is the currency of the primary economic environment in which it operates. CPP Investments' 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, and 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.*

1.6. Current year adoption and future changes in accounting policies

Developments and changes in accounting standards from the International Accounting Standards Board (IASB) are actively monitored. There were no adoptions of issued IFRS standards, changes in existing standards or new interpretations during the year ended March 31, 2020 that had a material impact on the Consolidated Financial Statements. There are no issued IFRS standards, changes in existing standards or new interpretations with effective dates on or after April 1, 2020 that are expected to have a material impact on the Consolidated Financial Statements.

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 Investments 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 Investments manages the following types of investments and investment liabilities and determines fair value as described below.

2.1 Equities

Public equities

Public equity investments 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 equity investments 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, 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 indexes. 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

Real estate investments are generally made through direct private investments, or through ownership of real estate funds. Private real estate investments are managed by investment partners primarily through co-ownership arrangements.

Fair value for private real estate investments is determined using accepted industry valuation methods such as discounted cash flows. Significant inputs include projected cash flows, net operating income, discount and terminal capitalization rates. Fair value is also determined using net asset value provided by the investment partner.

Fair value for real estate funds is generally based on the net asset value reported by the external managers of the funds.

Infrastructure, power and renewables and energy and resources

Infrastructure, power and renewables and energy and resources 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. The purchased securities under these agreements 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 Investments 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 under these agreements 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 is included in interest income within investment income. Interest incurred on repurchase agreements is included in borrowing costs within investment-related expenses.

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 Investments borrows securities from or lends securities to third parties.

Borrowed securities are not recognized on the Consolidated Balance Sheet. Lent securities remain on the Consolidated Balance Sheet as CPP Investments 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 Investments in securities borrowing agreements remain on the Consolidated Balance Sheet. Costs relating to securities borrowing and lending are included in borrowing costs within investment-related expenses.

2.7 Securities sold short

Securities sold short represent securities that are sold, but not owned, by CPP Investments. CPP Investments 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 carried 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. Interest expense and associated costs on debt financing liabilities are included in borrowing costs within investment-related expenses.

2.9 Short-term secured debt

Short-term secured debt consists of cash advances from prime brokers that are fully collateralized by securities. The securities collateral pledged to the counterparty remains on the Consolidated Balance Sheet. Short-term secured debt is carried at the amounts at which the funding was initially transferred, which together with accrued interest, approximates fair value due to the short-term nature of the debt and variable interest rate. Interest expense on short-term secured debt is included in borrowing costs within investment-related expenses.

2.10 Derivative assets and liabilities

A derivative is a financial contract, the value of which is derived from the value of underlying assets, indexes, interest rates, currency exchange rates or other market-based factors. Derivatives are transacted through regulated exchanges, centrally cleared 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 that make maximum use of inputs observed from markets 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 Investments uses the types of derivatives 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, variance swaps and dividend 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. Dividend swaps are contracts where one party pays the other future dividend flows of a single stock or index in exchange for pre-defined fixed amounts at sequential intervals or at termination.

Interest rate-related swaps include bond swaps, interest rate swaps and cross-currency 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 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 Investments 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.

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 value 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.

Investments and investment liabilities owned by investment holding subsidiaries are indirectly held by CPP Investments. The fair value of each investment holding subsidiary is determined based on the fair value of the underlying investments held, net of any investment liabilities and pending trades together with its accumulated net income from operations less dividends paid. Further detail on investment holding subsidiaries is provided in Note 3.2.

ACCOUNTING POLICY

The fair value of CPP Investments' 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 while maximizing the use of inputs observed from markets. The resulting values are particularly judgmental. Refer to Note 3.5 for the valuation techniques used to determine the fair value of Level 3 investments.

3.1 Fair value hierarchy of investments and investment liabilities held directly by CPP Investments

	As at March 31, 2020			
(CAD millions)	Level 1	Level 2	Level 3	Total
Investments				
Equities				
Public equities[1]	$ 100,769	$ 3,891	$ 33	$ 104,693
Private equities	–	–	5,702	5,702
Total equities	100,769	3,891	5,735	110,395
Fixed income				
Bonds	60,295	40,829	–	101,124
Other debt	–	1,325	2,552	3,877
Money market securities	–	24,282	–	24,282
Total fixed income	60,295	66,436	2,552	129,283
Absolute return strategies	–	14,735	1,534	16,269
Real assets				
Real estate	–	–	14,469	14,469
Infrastructure	–	–	7,622	7,622
Power and renewables	–	–	1,114	1,114
Energy and resources	–	–	1,770	1,770
Total real assets	–	–	24,975	24,975
Investment receivables				
Securities purchased under reverse repurchase agreements and cash collateral pledged on securities borrowed	–	18,658	–	18,658
Derivative assets	–	9,730	–	9,730
Other[2]	–	5,925	–	5,925
Total investment receivables	–	34,313	–	34,313
Investments in investment holding subsidiaries (Note 3.2)	–	–	220,229	220,229
Total investments	$ 161,064	$ 119,375	$ 255,025	$ 535,464
Investment liabilities				
Securities sold under repurchase agreements and cash collateral received on securities lent	–	(52,347)	–	(52,347)
Debt financing liabilities	(32,639)	(5,756)	–	(38,395)
Securities sold short	(20,776)	–	–	(20,776)
Derivative liabilities	(353)	(9,670)	–	(10,023)
Short-term secured debt	–	(1,430)	–	(1,430)
Other[2]	–	(4,091)	–	(4,091)
Total investment liabilities	(53,768)	(73,294)	–	(127,062)
Pending trades receivable[3]	–	6,944	–	6,944
Pending trades payable[3]	–	(5,702)	–	(5,702)
Net investments	$ 107,296	$ 47,323	$ 255,025	$ 409,644

(CAD millions)	As at March 31, 2019[4] Level 1	Level 2	Level 3	Total
Investments				
Equities				
Public equities[1]	$ 125,084	$ 5,304	$ 63	$ 130,451
Private equities	–	–	6,194	6,194
Total equities	125,084	5,304	6,257	136,645
Fixed income				
Bonds	49,912	33,378	–	83,290
Other debt	–	1,461	2,159	3,620
Money market securities	–	9,004	–	9,004
Total fixed income	49,912	43,843	2,159	95,914
Absolute return strategies	–	14,635	447	15,082
Real assets				
Real estate	–	–	15,217	15,217
Infrastructure	–	–	12,534	12,534
Power and renewables	–	–	1,215	1,215
Energy and resources	–	–	1,888	1,888
Total real assets	–	–	30,854	30,854
Investment receivables				
Securities purchased under reverse repurchase agreements and cash collateral pledged on securities borrowed	–	12,532	–	12,532
Derivative assets	2	3,188	–	3,190
Other[2]	–	1,659	2	1,661
Total investment receivables	2	17,379	2	17,383
Investments in investment holding subsidiaries (Note 3.2)	–	–	199,571	199,571
Total investments	$ 174,998	$ 81,161	$ 239,290	$ 495,449
Investment liabilities				
Securities sold under repurchase agreements and cash collateral received on securities lent	–	(39,491)	–	(39,491)
Debt financing liabilities	(26,538)	(4,323)	–	(30,861)
Securities sold short	(29,027)	–	–	(29,027)
Derivative liabilities	(48)	(2,282)	–	(2,330)
Short-term secured debt	–	(1,358)	–	(1,358)
Other[2]	–	(1,152)	–	(1,152)
Total investment liabilities	(55,613)	(48,606)	–	(104,219)
Pending trades receivable[3]	–	4,467	–	4,467
Pending trades payable[3]	–	(3,703)	–	(3,703)
Net investments	$ 119,385	$ 33,319	$ 239,290	$ 391,994

1. Includes investments in funds.
2. Included in other investment receivables and other investment liabilities is cash pledged as collateral of $3,855 million (March 31, 2019 – $407 million) and cash held as collateral of $3,709 million (March 31, 2019 – $898 million) on over-the-counter derivative transactions, respectively.
3. Pending trades receivable and payable are measured at amortized cost, which approximates fair value.
4. Certain comparatives have been reclassified to conform to the current year's presentation.

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3.2 Supplemental information on fair value hierarchy relating to investment holding subsidiaries

The following table presents the fair value hierarchy of the underlying investments and investment liabilities held by investment holding subsidiaries. For further details on the nature and purpose of investment holding subsidiaries, refer to Note 1.2.

	As at March 31, 2020			
(CAD millions)	Level 1	Level 2	Level 3	Total
Investments				
Equities				
Public equities[1]	$ 5,496	$ 7,956	$ 96	$ 13,548
Private equities	–	–	99,679	99,679
Total equities	5,496	7,956	99,775	113,227
Fixed income				
Bonds	–	2,534	–	2,534
Other debt	–	3,533	19,804	23,337
Money market securities	–	626	–	626
Total fixed income	–	6,693	19,804	26,497
Absolute return strategies	–	9,973	1,680	11,653
Real assets				
Real estate	–	–	29,249	29,249
Infrastructure	–	–	27,057	27,057
Power and renewables	–	–	7,597	7,597
Energy and resources	–	–	5,511	5,511
Total real assets	–	–	69,414	69,414
Investment receivables				
Derivative assets	–	–	–	–
Other	–	287	–	287
Total investment receivables	–	287	–	287
Total investments held by investment holding subsidiaries	$ 5,496	$ 24,909	$ 190,673	$ 221,078
Investment liabilities				
Other	–	(13)	–	(13)
Total investment liabilities held by investment holding subsidiaries	–	(13)	–	(13)
Pending trades receivable[2]	–	81	–	81
Pending trades payable[2]	–	(917)	–	(917)
Investments in investment holding subsidiaries	$ 5,496	$ 24,060	$ 190,673	$ 220,229

(CAD millions)	As at March 31, 2019 Level 1	Level 2	Level 3	Total
Investments				
Equities				
Public equities[1]	$ 4,128	$ 6,465	$ 145	$ 10,738
Private equities	–	–	90,465	90,465
Total equities	4,128	6,465	90,610	101,203
Fixed income				
Bonds	–	2,314	–	2,314
Other debt	–	3,754	19,951	23,705
Money market securities	–	825	–	825
Total fixed income	–	6,893	19,951	26,844
Absolute return strategies	–	8,953	1,477	10,430
Real assets				
Real estate	–	–	30,629	30,629
Infrastructure	–	–	20,597	20,597
Power and renewables	–	–	3,860	3,860
Energy and resources	–	–	6,114	6,114
Total real assets	–	–	61,200	61,200
Investment receivables				
Derivative assets	–	1	1	2
Other	–	303	65	368
Total investment receivables	–	304	66	370
Total investments held by investment holding subsidiaries	$ 4,128	$ 22,615	$ 173,304	$ 200,047
Investment liabilities				
Other	–	(3)	–	(3)
Total investment liabilities held by investment holding subsidiaries	–	(3)	–	(3)
Pending trades receivable[2]	–	225	–	225
Pending trades payable[2]	–	(698)	–	(698)
Investments in investment holding subsidiaries	$ 4,128	$ 22,139	$ 173,304	$ 199,571

1. Includes investments in funds.
2. Pending trades receivable and payable are measured at amortized cost, which is a reasonable approximation of fair value.

3.3 Transfers between Level 1 and Level 2

During the year ended March 31, 2020, there were $2 million of transfers from Level 1 to Level 2 (March 31, 2019 – $11 million) and no transfers from Level 2 to Level 1 (March 31, 2019 – $178 million) for investments held directly by CPP Investments. 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 period values.

3.4 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, 2020							
(CAD millions)	Fair value as at April 1, 2019	Gain (loss) included in investment income	Purchases	Sales[1]	Transfers into Level 3	Transfers out of Level 3	Fair value as at March 31, 2020	Change in unrealized gains (losses) on investments still held at March 31, 2020[2]
Investments								
Equities								
Public equities	$ 63	$ (28)	$ –	$ (2)	$ –	$ –	$ 33	$ (27)
Private equities	6,194	(912)	730	(319)	9	–	5,702	(918)
Total equities	6,257	(940)	730	(321)	9	–	5,735	(945)
Fixed income								
Other debt	2,159	(61)	983	(529)	–	–	2,552	(27)
Absolute return strategies	447	57	68	(120)	1,082	–	1,534	98
Real assets								
Real estate	15,217	531	890	(2,169)	–	–	14,469	392
Infrastructure	12,534	(388)	–	(4,524)	–	–	7,622	(7)
Power and renewables	1,215	(101)	–	–	–	–	1,114	(101)
Energy and resources	1,888	(118)	–	–	–	–	1,770	(118)
Total real assets	30,854	(76)	890	(6,693)	–	–	24,975	166
Investment receivables								
Derivative assets	–	–	–	–	–	–	–	–
Other	2	(2)	–	–	–	–	–	–
Total investment receivables	2	(2)	–	–	–	–	–	–
Investments in investment holding subsidiaries[3]	199,571	(2,784)	24,854	(1,412)	–	–	220,229	(2,784)
Total	$ 239,290	$ (3,806)	$ 27,525	$ (9,075)	$ 1,091	$ –	$ 255,025	$ (3,492)

(CAD millions)	For the year ended March 31, 2019[4] Fair value as at April 1, 2018	Gain (loss) included in investment income	Purchases	Sales[1]	Transfers into Level 3	Transfers out of Level 3	Fair value as at March 31, 2019	Change in unrealized gains (losses) on investments still held at March 31, 2019[2]
Investments								
Equities								
Public equities	$ 81	$ (16)	$ –	$ (2)	$ –	$ –	$ 63	$ (12)
Private equities	4,152	718	1,362	(27)	1	(12)	6,194	673
Total equities	4,233	702	1,362	(29)	1	(12)	6,257	661
Fixed income								
Other debt	408	115	2,062	(153)	95	(368)	2,159	8
Absolute return strategies	184	(15)	550	(272)	–	–	447	(26)
Real assets								
Real estate	14,222	692	1,101	(798)	–	–	15,217	509
Infrastructure	9,938	2,033	647	(84)	–	–	12,534	2,043
Power and renewables	–	155	1,286	(226)	–	–	1,215	156
Energy and resources	1,447	286	160	(5)	–	–	1,888	287
Total real assets	25,607	3,166	3,194	(1,113)	–	–	30,854	2,995
Investment receivables								
Other	–	2	–	–	–	–	2	2
Total investment receivables	–	2	–	–	–	–	2	2
Investments in investment holding subsidiaries[3]	166,812	1,995	31,344	(580)	–	–	199,571	1,995
Total	$ 197,244	$ 5,965	$ 38,512	$ (2,147)	$ 96	$ (380)	$ 239,290	$ 5,635

1. Includes return of capital.
2. Included in investment income.
3. Purchases relating to investment holding subsidiaries represent capital contributions or net loan funding provided to these subsidiaries. Sales relating to investment holding subsidiaries represent return of capital from these subsidiaries.
4. Certain comparatives have been reclassified to conform to the current year's presentation.

Transfers into and out of Level 3 were primarily due to changes in the availability of market observable inputs used to determine fair value. Transfers into and out of Level 3 are deemed to have occurred at the end of period values. The entire 'change in unrealized gains (losses) on investments still held' column in the above reconciliation includes or excludes the investments transferred into and out of Level 3, respectively.

3.5 Level 3 – Significant unobservable inputs

The table below presents the fair value of investments directly held by CPP Investments, valuation techniques used to determine their fair values, and the ranges and weighted averages of unobservable inputs.

Investment holding subsidiaries are also classified as Level 3 in the fair value hierarchy. The fair value is largely driven by Level 3 investments, for which the valuation techniques, ranges and weighted averages of unobservable inputs are included below. However, certain investments held by the investment holding subsidiaries are based on quoted prices in active markets (Level 1) or valued using observable inputs (Level 2). These amount to $5,496 million (March 31, 2019 – $4,128 million) and $24,060 million (March 31, 2019 – $22,139 million), respectively. Refer to Note 3.2 for further details on Level 1 and Level 2 investments relating to investment holding subsidiaries. As each investment holding subsidiary is largely composed of Level 3 investments, the entire subsidiary is classified as Level 3.

	As at March 31, 2020						
	Fair value of investments held by:						
(CAD millions)	CPP Investments	Investment holding subsidiaries	Primary valuation techniques used[1,2]	Significant unobservable inputs	Range of input values[3]	Weighted average[3]
Public equities						
Direct	$ –	$ 7,643	Quoted market price	–	–	–
Fund investments	33	5,905	Net asset value provided by investment manager	–	–	–
Private equities						
Direct	5,623	37,730	Earnings multiples of comparable companies	EBITDA multiple	6.2X-21.2X	13.4X
			Discounted cash flow	Discount rate	8.6%-13.6%	11.8%
	–	12,540	Net asset value provided by investment manager	–	–	–
Fund investments	79	49,409	Net asset value provided by investment manager	–	–	–
Bonds						
Direct	–	2,534	Quoted market prices or discounted cash flows using observable inputs	–	–	–
Other debt						
Direct private debt	210	17,359	Discounted cash flow	Discount rate	5.6%-64.9%	12.5%
	–	1,475	Net asset value provided by investment manager	–	–	–
Asset-backed securities	2,311	203	Comparable pricing	Price	49.5%-101.1%	89.6%
Fund investments	31	4,300	Net asset value provided by investment manager	–	–	–
Money market securities						
Direct	–	626	Cost with accrued interest	–	–	–
Absolute return strategies						
Fund investments	1,534	11,653	Net asset value provided by investment manager	–	–	–
Real estate						
Direct	12,791	5,799	Discounted cash flow	Discount rate	5.0%-14.3%	6.7%
				Terminal capitalization rate	3.3%-10.8%	5.5%
	1,559	20,738	Net asset value provided by investment partner	–	–	–
Fund investments	119	2,712	Net asset value provided by investment manager	–	–	–
Infrastructure						
Direct	7,622	27,027	Discounted cash flow	Discount rate	7.1%-13.8%	8.6%
Fund investments	–	30	Net asset value provided by investment manager	–	–	–
Power and renewables						
Direct	1,114	7,597	Discounted cash flow	Discount rate	7.6%-14.7%	10.3%
Energy and resources						
Direct	1,770	5,511	Discounted cash flow	Discount rate	9.0%-15.0%	11.6%
Investment receivables						
Other	–	287	Cost with accrued interest	–	–	–
Investment liabilities						
Other	–	(13)	Cost with accrued interest	–	–	–
Pending trades net receivable/(payable)	–	(836)	Amortized cost	–	–	–
Total	$ 34,796	$ 220,229				

(CAD millions)	Fair value of investments held by: CPP Investments	Investment holding subsidiaries	Primary valuation techniques used[1,2]	Significant unobservable inputs	Range of input values[3]	Weighted average[3]
	As at March 31, 2019[4]					
Public equities						
Direct	$ 63	$ 5,653	Quoted market price	–	–	–
Fund investments	–	5,085	Net asset value provided by investment manager	–	–	–
Private equities						
Direct	6,030	32,076	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	Net asset value provided by investment manager	–	–	–
Fund investments	164	49,049	Net asset value provided by investment manager	–	–	–
Bonds						
Direct	–	2,314	Quoted market prices or discounted cash flows using observable inputs	–	–	–
Other debt						
Direct private debt	154	17,901	Discounted cash flow	Discount rate	4.5%-29.4%	9.5%
	–	2,191	Net asset value provided by investment manager	–	–	–
Asset-backed securities	1,972	38	Comparable pricing	Price	97.7%-103.7%	99.5%
Fund investments	33	3,575	Net asset value provided by investment manager	–	–	–
Money market securities						
Direct	–	825	Cost with accrued interest	–	–	–
Absolute return strategies						
Fund investments	447	10,430	Net asset value provided by investment manager	–	–	–
Real estate						
Direct	12,585	5,277	Discounted cash flow	Discount rate	5.0%-14.3%	6.7%
				Terminal capitalization rate	3.7%-10.5%	5.5%
	2,422	22,931	Net asset value provided by investment partner	–	–	–
Fund investments	210	2,421	Net asset value provided by investment manager	–	–	–
Infrastructure						
Direct	12,534	20,546	Discounted cash flow	Discount rate	7.0%-11.9%	8.7%
Fund investments	–	51	Net asset value provided by investment manager	–	–	–
Power and renewables						
Direct	1,215	3,860	Discounted cash flow	Discount rate	7.9%-14.4%	10.4%
Energy and resources						
Direct	1,888	6,114	Discounted cash flow	Discount rate	9.0%-15.0%	11.0%
Investment receivables						
Derivative assets	–	2	Option model	Market volatility	30.0%	30.0%
Other	2	368	Discounted cash flow	Discount rate	9.2%-10.4%	10.1%
Investment liabilities						
Other	–	(3)	Cost with accrued interest	–	–	–
Pending trades net receivable/(payable)	–	(473)	Amortized cost	–	–	–
Total	$ 39,719	$ 199,571				

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.

3.6 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 values of the investments classified within Level 3 of the fair value hierarchy in Note 3.1 and 3.2 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 $11,100 million (March 31, 2019 – $7,900 million) or increase of $10,600 million (March 31, 2019 – $5,600 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 Investments. While CPP Investments has used all available information in providing its best estimate of the magnitude of the potential impact on Level 3 investments from the COVID-19 pandemic, the ranges noted above are based on alternate assumptions that are subject to material change.

4. Derivatives

At a Glance

CPP Investments 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 in Note 4.1 and 4.2. 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, indexes, 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 Integrated Risk Framework described in Note 8.

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 guarantee their performance.

The fair value of derivative contracts held by CPP Investments and its investment holding subsidiaries is as follows:

(CAD millions)	As at March 31, 2020 Positive fair value	As at March 31, 2020 Negative fair value	As at March 31, 2019 Positive fair value	As at March 31, 2019 Negative fair value
Equity contracts				
Futures	$ –	$ –	$ –	$ –
Swaps	7,032	(8,237)	2,164	(1,596)
Options:				
Exchange-traded – written	–	(2)	–	–
Over-the-counter – purchased	20	–	1	–
Over-the-counter – written	–	(197)	–	(41)
Warrants	–	–	1	–
Total equity contracts	7,052	(8,436)	2,166	(1,637)
Foreign exchange contracts				
Forwards	1,146	(853)	88	(135)
Options:				
Over-the-counter – purchased	66	–	1	–
Over-the-counter – written	–	(61)	–	(12)
Total foreign exchange contracts	1,212	(914)	89	(147)
Interest rate contracts				
Futures	–	–	–	–
Forwards	–	–	–	–
Swaps	1,412	(85)	692	(206)
Options:				
Exchange-traded – purchased	–	–	2	–
Exchange-traded – written	–	–	–	(1)
Over-the-counter – purchased	–	–	1	–
Over-the-counter – written	–	(110)	–	(46)
Total interest rate contracts	1,412	(195)	695	(253)
Credit contracts				
Purchased credit default swaps	19	(19)	7	(229)
Written credit default swaps	21	(21)	235	(8)
Options:				
Over-the-counter – purchased	14	–	–	–
Over-the-counter – written	–	(87)	–	(9)
Total credit contracts	54	(127)	242	(246)
Commodity contracts				
Futures	–	–	–	–
Options:				
Exchange-traded – written	–	(351)	–	(47)
Total commodity contracts	–	(351)	–	(47)
Total[1]	$ 9,730	$ (10,023)	$ 3,192	$ (2,330)

1. Includes nil (March 31, 2019 – $2 million) relating to interest rate derivatives transacted by investment holding subsidiaries.

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 held by CPP Investments and its investment holding subsidiaries are as follows:

	Terms to maturity					
	As at March 31, 2020					As at March 31, 2019
(CAD millions)	Within 1 year	1 to 5 years	6 to 10 years	Over 10 years	Total	Total
Equity contracts						
Futures	$ 5,332	$ 109	$ –	$ –	$ 5,441	$ 6,386
Swaps	104,913	2,171	2	–	107,086	108,367
Options:						
Exchange-traded – written	49	–	–	–	49	–
Over-the-counter – purchased	1,621	56	–	–	1,677	1
Over-the-counter – written	3,726	11	–	–	3,737	1,918
Warrants	1	10	24	–	35	26
Total equity contracts	115,642	2,357	26	–	118,025	116,698
Foreign exchange contracts						
Forwards	40,758	701	–	–	41,459	16,969
Options:						
Over-the-counter – purchased	3,504	792	–	–	4,296	375
Over-the-counter – written	7,082	55	–	–	7,137	4,282
Total foreign exchange contracts	51,344	1,548	–	–	52,892	21,626
Interest rate contracts						
Futures	7,831	415	–	–	8,246	4,110
Forwards	9,653	–	–	–	9,653	2,707
Swaps	20,798	42,060	20,219	22,908	105,985	93,429
Options:						
Exchange-traded – purchased	–	–	–	–	–	26,719
Exchange-traded – written	–	–	–	–	–	26,719
Over-the-counter – purchased	–	–	–	–	–	675
Over-the-counter – written	6,533	–	–	–	6,533	4,809
Total interest rate contracts	44,815	42,475	20,219	22,908	130,417	159,168
Credit contracts						
Purchased credit default swaps	906	29,197	1,808	13	31,924	13,772
Written credit default swaps	1,156	30,906	13,482	14	45,558	15,337
Options:						
Over-the-counter – purchased	1,423	–	–	–	1,423	–
Over-the-counter – written	7,473	–	–	–	7,473	4,676
Total credit contracts	10,958	60,103	15,290	27	86,378	33,785
Commodity contracts						
Futures	6,555	–	–	–	6,555	3,408
Options:						
Exchange-traded – written	2,209	–	–	–	2,209	1,847
Total commodity contracts	8,764	–	–	–	8,764	5,255
Total[1]	$ 231,523	$ 106,483	$ 35,535	$ 22,935	$ 396,476	$ 336,532

1. Includes $14 million (March 31, 2019 – $79 million) relating to interest rate derivatives and $10 million (March 31, 2019 – nil) relating to warrants transacted by investment holding subsidiaries.

5. Investment income

At a Glance

Components of investment income are included 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 Investments, is presented as unrealized gains or losses under IFRS 10 in Note 5.1. Further details are provided in Note 5.2.

Investment-related expenses borne by the investment holding subsidiaries are a reduction in the net asset values of the investment holding subsidiaries and thus are a component of the unrealized gains on investment holding subsidiaries under IFRS 10 in Note 5.1. Further details are provided in Note 6.2.

ACCOUNTING POLICY

Income from investments includes realized gains and losses from investments, unrealized gains and losses on investments, dividend income and interest income. Realized and unrealized gains and losses on investments include foreign currency gains or losses arising from investments denominated in foreign currencies. Dividend income is recognized on the ex-dividend date, which is when CPP Investments' right to receive the dividend has been established. Interest income is recognized as earned.

5.1 Investment income by nature

(CAD millions)	For the years ended March 31, 2020	March 31, 2019[2]
Interest, dividends, and other investment income	$ 13,476	$ 22,091
Realized gains on private equities and real assets	705	49
Unrealized (losses) gains on private equities and real assets	(1,846)	3,651
Unrealized (losses) gains on investment holding subsidiaries (Note 5.2)	(2,784)	1,995
Realized and unrealized gains on public and other investments[1]	6,170	7,309
Total investment income	**$ 15,721**	$ 35,095

1. Consists of investment income from public equities, fixed income, absolute return strategies, derivatives and other.
2. Certain comparatives have been reclassified to conform to the current year's presentation.

5.2 Supplemental information on investment income

The change in unrealized gains generated from investment holding subsidiaries is a composite of the following:

(CAD millions)	For the years ended March 31, 2020	March 31, 2019[2]
Interest, dividends, and other investment income	$ 4,742	$ 4,308
Realized gains on private equities and real assets	7,346	6,400
Unrealized (losses) gains on private equities and real assets	(2,889)	7,469
Realized and unrealized (losses) gains on public and other investments[1]	(3,297)	1,060
Dividends paid to CPP Investments	(7,335)	(15,946)
Investment-related expenses (Note 6.2)	(1,351)	(1,296)
Unrealized gains on investment holding subsidiaries	**$ (2,784)**	$ 1,995

1. Consists of investment income from public equities, fixed income, absolute return strategies, derivatives and other.
2. Certain comparatives have been reclassified to conform to the current year's presentation.

6. Investment-related expenses

At a Glance

The combined borrowing costs, investment management fees and transaction costs of CPP Investments and its investment holding subsidiaries are $1,523 million, $1,808 million and $390 million, respectively, for the year ended March 31, 2020 (March 31, 2019 – $1,163 million, $1,586 million and $429 million, respectively).

ACCOUNTING POLICY

Investment-related expenses includes borrowing costs, investment management fees and transaction costs.

Borrowing costs include interest and other costs that are incurred when borrowing funds or securities. Borrowing costs are composed of expenses from debt financing liabilities, securities sold under repurchase agreements, prime brokerage and other securities borrowing transactions as well as securities lending transactions where cash is received. Gains and losses associated with certain interest rate derivatives used as part of financing activities are also included in borrowing costs. Borrowing costs are recognized as incurred.

Investment management fees include payments to external managers who invest and manage capital committed by CPP Investments, whether directly or through funds. They also include performance fees paid when CPP Investments earns a return above a pre-determined hurdle. Investment management fees are expensed as incurred.

Transaction costs are incremental costs that are directly attributable to the acquisition or disposal of an investment. These costs comprise a variety of non-recurring expenses, including due diligence on potential investments, 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. Transaction costs are expensed as incurred.

6.1 Investment-related expenses of CPP Investments

Investment-related expenses borne by CPP Investments consist of the following:

	For the years ended	
(CAD millions)	**March 31, 2020**	March 31, 2019
Borrowing costs	**$ 1,523**	$ 1,163
Investment management fees	**603**	446
Transaction costs	**244**	273
Total	**$ 2,370**	$ 1,882

6.2 Supplemental information on investment-related expenses

Investment-related expenses borne by CPP Investments' investment holding subsidiaries consist of the following:

	For the years ended	
(CAD millions)	**March 31, 2020**	March 31, 2019
Investment management fees	**$ 1,205**	$ 1,140
Transaction costs	**146**	156
Total	**$ 1,351**	$ 1,296

7. Segment information

7.1 Investment segments

CPP Investments' purpose is to manage amounts transferred to it under Sections 108.1 and 108.3 of the CPP Act in the best interests of CPP beneficiaries and contributors. This requires investing its assets with a view to achieving a maximum rate of return without undue risk of loss. Investments are managed by six departments as described below.

- **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 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 makes co-investments to invest in public market securities. Capital Markets and Factor Investing is also responsible for managing CPP Investments' 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.

7.1.1 Net income from operations by investment segment

The table below illustrates the investment income generated and the associated investment-related expenses and operating expenses incurred by each investment department to support their activities.

	For the year ended March 31, 2020							
(CAD millions)	Total Portfolio Management	Capital Markets and Factor Investing	Active Equities	Credit Investments	Private Equity	Real Assets	Adjustment[3]	Total
Investment income (loss)	$ 10,395	$ (1,910)	$ 3,916	$ (838)	$ 6,068	$ 347	$ (2,257)	$ 15,721
Borrowing costs[1]	(2,429)	–	–	–	–	–	906	(1,523)
Investment management fees[2]	–	(1,010)	(6)	(17)	(585)	(190)	1,205	(603)
Transaction costs[2]	(53)	(45)	(56)	(37)	(63)	(136)	146	(244)
Net investment income (loss)	7,913	(2,965)	3,854	(892)	5,420	21	–	13,351
Operating expenses	(200)	(205)	(179)	(147)	(227)	(296)	–	(1,254)
Net income (loss) from operations	$ 7,713	$ (3,170)	$ 3,675	$ (1,039)	$ 5,193	$ (275)	$ –	$ 12,097

	For the year ended March 31, 2019[4]							
(CAD millions)	Total Portfolio Management	Capital Markets and Factor Investing	Active Equities	Credit Investments	Private Equity	Real Assets	Adjustment[3]	Total
Investment income	$ 12,261	$ 114	$ 1,306	$ 3,161	$ 12,853	$ 7,417	$ (2,017)	$ 35,095
Borrowing costs[1]	(1,884)	–	–	–	–	–	721	(1,163)
Investment management fees[2]	–	(730)	(12)	(24)	(562)	(258)	1,140	(446)
Transaction costs[2]	(42)	(39)	(59)	(48)	(82)	(159)	156	(273)
Net investment income (loss)	10,335	(655)	1,235	3,089	12,209	7,000	–	33,213
Operating expenses	(253)	(182)	(173)	(113)	(205)	(277)	–	(1,203)
Net income (loss) from operations	$ 10,082	$ (837)	$ 1,062	$ 2,976	$ 12,004	$ 6,723	$ –	$ 32,010

1. Costs of $2,429 million (March 31, 2019 – $1,884 million) attributable to Total Portfolio Management represent borrowing costs as described in Note 6 of $1,523 million (March 31, 2019 – $1,163 million), as well as the leverage-generating elements of additional derivative transactions of $906 million (March 31, 2019 – $721 million). Together these amounts reflect the financing costs described in Note 11.2, which is a measure used by Management to monitor the total costs associated with all sources of leverage to CPP Investments.
2. Includes investment management fees and transaction costs borne by CPP Investments and its investment holding subsidiaries in relation to the respective departments.
3. Consists of costs on the leverage-generating elements of additional derivative transactions, and investment management fees and transaction costs borne by investment holding subsidiaries, all of which are reclassified into investment income.
4. Certain comparatives have been reclassified to conform to the current year's presentation.

7.1.2 Net assets (liabilities) by investment segment

(CAD millions)	Net assets (liabilities) Total Portfolio Management[1]	Capital Markets and Factor Investing	Active Equities	Credit Investments	Private Equity	Real Assets	Total
As at:							
March 31, 2020	**$ 179,681**	**$ (2,686)**	**$ 430**	**$ 39,965**	**$ 94,557**	**$ 97,641**	**$ 409,588**
March 31, 2019	172,599	(31)	1,047	36,579	87,696	94,090	391,980

1. Net assets attributable to Total Portfolio Management include net corporate liabilities of $56 million (March 31, 2019 – net corporate liabilities of $14 million).

7.2 Geographic information

Net investments are presented in the table below based on the region to which they have primary economic exposure:

(CAD millions)	Net investments[1] Canada	U.S.	Asia	Europe (excluding U.K.)	U.K.	Other	Total
As at:							
March 31, 2020	**$ 63,858**	**$ 144,259**	**$ 102,855**	**$ 42,723**	**$ 20,698**	**$ 35,251**	**$ 409,644**
March 31, 2019	60,897	131,196	90,060	53,959	22,078	33,804	391,994

1. Includes debt financing liabilities of $3,629 million, $23,990 million, $9,890 million, and $886 million (March 31, 2019 – $3,828 million, $20,803 million, $6,230 million, and nil), based on the currencies of the issuances, in Canada, the U.S., Europe (excluding the U.K.) and the U.K., respectively.

8. Risk management

At a Glance

The base CPP Investment Portfolio and additional CPP Investment Portfolio (collectively the Investment Portfolios) are exposed to a variety of financial risks which are managed through the Integrated Risk Framework. The underlying risk categories, exposures, and the related risk management techniques are described in the following Notes:

- Note 9 – Market risk
- Note 10 – Credit risk
- Note 11 – Liquidity and leverage risk

Any references to the investment activities and risk exposures of CPP Investments also include those of its unconsolidated investment holding subsidiaries.

In the fourth quarter of the fiscal year, the COVID-19 pandemic resulted in reduced economic activity, exceptional volatility in financial markets and a widespread impact on people around the world. Despite the significant market movements, CPP Investments remains within all risk limits established by its Board of Directors, including limits related to market, credit, liquidity and leverage risks.

8.1 Introduction

CPP Investments uses the Integrated Risk Framework, which establishes accountability of the Board of Directors, the various committees, including the Risk Committee, and the investment departments to manage investment-related risks. CPP Investments manages and mitigates investment risks through the Risk Policy, which is 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 in accordance with the mandate of CPP Investments.

Upper and lower absolute risk limits and the absolute risk operating range are included within the Risk Policy, and these govern the amount of total investment risk that CPP Investments can take in the Investment Portfolios. CPP Investments monitors potential investment losses in the Investment Portfolios daily and reports to the Board of Directors on at least a quarterly basis. The target equity content for each of the base CPP Investment Portfolio and additional CPP Investment Portfolio is assessed using an equity/debt risk equivalence ratio, which is the proportion of equity versus debt in a simple two-asset reference portfolio that would give the same market and credit risk as that of the applicable Investment Portfolio. Each Investment Portfolio's ratio must be within the Board of Directors' approved absolute risk limits.

8.1.1 Independent risk oversight

The Risk group within CPP Investments reports to the Chief Financial and Risk Officer. The function is responsible for assessing, monitoring and ensuring management of the Investment Portfolios is consistent with the risk appetites and limits established. This oversight is exercised through independent control and support functions.

Investment departments are accountable for managing risk within prescribed limits.

8.1.2 Investment risk measures

A suite of measures is 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, CPP Investments 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.

8.1.3 Stress scenario analysis

To complement the suite of potential loss measures used to monitor the Investment Portfolios, CPP Investments further examines the potential impact of exceptional but plausible adverse market events. Scenario analysis considers the effect of various market stress events, including potential geopolitical or adverse economic events, using a bottom-up approach that considers the effect of parameter shocks across the entire portfolio. Generally, the forecasted timeline considered is one year in order to appropriately include the effect of the public market shocks on private asset valuations. These assessments are reported to both Senior Management and the Board of Directors.

8.1.4 Model validation

The model validation function within the Risk group validates strategically important portfolio construction and risk management models as well as valuation methodologies within main investment systems.

8.2 Total portfolio risk

A suite of risk measures is used within CPP Investments to monitor and assess the risk profile of the base CPP Investment Portfolio and the additional CPP Investment Portfolio. Regular risk reports are provided to Senior Management and the Board of Directors to support the governance of the various dimensions of investment risks to which the Investment Portfolios are exposed. As at April 1, 2019, a series of additional investment risk limits came into effect to align with the new risk appetite statements developed as part of the enhancement to the Integrated Risk Framework. While CPP Investments has changed the articulation of its risk appetites, which sets the upper and lower limits for risk taking, the target level of market risk of the Investment Portfolios has not changed materially.

Central to the new investment risk limits is the concept of plan adjustment risk which is the percentage probability of a 0.25% increase in the Minimum Contribution Rate applicable to CPP contributors, over a 20-year horizon, due solely to adverse investment experience. It is an overarching measure that is impacted by market, credit, liquidity and leverage risk. Additional investment risk governance measures include:

- Potential investment losses: The reported loss of the Investment Portfolios over a one- and five-year horizon is not expected to exceed the established limit of fund value for that horizon 19 times out of 20. It is based on the value-at-risk measure at a 95% confidence level.
- Liquidity and leverage risk measures, which are further described in Note 11.

These measures are monitored in addition to the equity/debt risk equivalence ratios as described in Note 8.1.

The monitoring of adherence to investment risk limits is conducted independently by the Risk group using both industry standards and internally developed risk models.

The tables below provide a summary of the key investment risk governance measures of the Investment Portfolios.

		As at March 31, 2020	As at March 31, 2019
(CAD millions, unless otherwise specified)	Limit	**base CPP**	base CPP
Plan adjustment risk	30 %	**26 %**	23 %
Potential investment loss:			
One-year horizon	$ 80,000	**$ 69,377**	$ 66,745
Five-year horizon[1]	25 %	**13 %**	15 %
Equity/debt risk equivalence ratio[2]	55–100 %	**84 %**	87 %

(CAD millions, unless otherwise specified)	Limit[3]	As at March 31, 2020 additional CPP	As at March 31, 2019 additional CPP
Plan adjustment risk	30 %	28 %	25 %
Potential investment loss:			
One-year horizon	$ 300	$ 252	$ 42
Five-year horizon[1]	15 %	8 %	8 %
Equity/debt risk equivalence ratio[2]	40–70 %	49 %	51 %

1. Percentage of investment value.
2. Conditional value-at-risk is measured to calculate the equity/debt risk equivalence ratio.
3. The additional risk governance measures of the additional CPP Investment Portfolio have been approved by the Board of Directors and are effective April 1, 2020.

8.2.1 Stress scenarios and results

As part of ongoing monitoring, CPP Investments performs scenario analysis to quantify the impact of potential stress events, including how severe market and geopolitical events could affect CPP Investments' portfolios. The monitoring of key stress scenarios, which are run on a quarterly basis, include:

- A repeat of the Global Financial Crisis (GFC) of 2008 – CPP Investments estimates that if an event like the GFC were to reoccur, the reported value of the Investment Portfolios would decline by approximately $49.4 billion or 12%. Under this scenario, CPP Investments' reported loss is expected to be within its stated appetite for shorter term losses.
- Hypothetical Severe Case – This scenario is an aggregation of the more severe historical market stress events. This scenario also removes the currency gains that have occurred during past market stress periods where some of CPP Investments' losses were partially offset by the depreciation of the Canadian dollar against the United States dollar. Realization of this more extreme scenario would result in losses of approximately $84.3 billion or 21%. This potential loss would exceed CPP Investments' standard estimate of losses that are expected to occur every one in twenty years based on CPP Investments' market risk target.
- COVID-19 Pandemic – CPP Investments has developed a series of scenarios in an attempt to assess the potential economic and financial impacts on its Investment Portfolios arising from COVID-19. This includes the impacts of lower CPP contributions due to increasing unemployment in Canada on our liquidity, as well as impacts on investment losses. Initial results indicate potential severe-case losses similar in magnitude to the historical market-stress scenarios. However, these estimates are highly sensitive to the assumptions made regarding the length and severity of the pandemic. The actual impacts could differ materially from this estimate. CPP Investments will continue to refine the views and assumptions underlying the assessment as the situation unfolds.

9. 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 Investments uses a tiered structure of limits to govern market risk by controlling the size of risk exposures. Limits include the use of equity/debt risk equivalence ratios of the two Investment Portfolios as well as various limits to reduce the probability that none of the individual investment departments' market risks grow faster than originally anticipated. These measures are supplemented with drawdown or reported loss triggers that highlight any public market strategies that are experiencing losses outsized to their estimated market risk levels. More granular limits are also used in certain cases that are investment program specific and are tailored to the way that the strategies are managed on a daily basis. Examples of such granular limits and measures include: DV01 which 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 risks against their respective benchmarks.

Investment departments are expected to stay within their limits but are allowed to request increases to management level limits. Any limit excesses are processed according to established escalation guidelines.

Market risk includes equity risk, interest rate risk, spread risk and currency risk. The sensitivity of these risks is summarized in each respective Note.

9.1 Equity

The 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 Investment Portfolios. The table below presents the effect of a 1% decrease/increase in the S&P 500 Index on loss/profit of public equity investments, with all other variables held constant. 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.

(CAD millions)	As at March 31, 2020	As at March 31, 2019
	Impact of 1% decrease in the S&P 500 Index	
Loss on public equity investments	$ (944)	$ (1,021)

9.2 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 Investment Portfolios are exposed to interest rate risk primarily through holdings of fixed income securities, certain investment liabilities and interest rate derivatives.

9.2.1 Interest rate risk sensitivity

With all other variables held constant, a 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, 2020	As at March 31, 2019
Maturity	Impact of increase of 25 basis points on net assets[1]	
Within 1 year	$ 25	$ 14
1 to 5 years	(650)	(557)
6 to 10 years	(474)	(434)
Over 10 years	(1,363)	(1,091)
Total	$ (2,462)	$ (2,068)

1. This sensitivity only applies to debt instruments and interest-rate-sensitive derivatives.

The Investment Portfolios' sensitivity to various countries' risk-free rates is as follows:

Region	As at March 31, 2020	As at March 31, 2019
United States	53 %	43 %
Canada	32	39
Europe	6	11
Other	9	7
Total	100 %	100 %

9.3 Spread risk

Spread risk is the difference in yield on certain securities compared to a comparable risk-free security (i.e., government issued) with the same maturity date. Spread risk is the risk that the fair value of these securities will fluctuate because of changes in spread. With all other variables held constant, an increase in spread rates would result in a decrease in assets or an increase in liabilities.

	As at March 31, 2020	As at March 31, 2019
Percentage of credit risk in A or better rated debt	44 %	75 %

(CAD millions)	As at March 31, 2020	As at March 31, 2019
	Impact of 1 basis point widening of credit spread	
Decrease in net assets	$ 37	$ 31

9.4 Currency

The 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.

9.4.1 Currency risk exposures

The net currency exposures after allocating foreign currency derivatives, in Canadian dollars, are as follows:

(CAD millions)	As at March 31, 2020		As at March 31, 2019	
Currency	Net exposure	% of total	Net exposure	% of total
United States dollar	$ 230,536	56 %	$ 204,605	52 %
Euro	25,921	6	33,539	9
British pound sterling	15,438	4	18,219	5
Chinese renminbi	14,954	4	12,577	3
Australian dollar	12,669	3	13,587	3
Hong Kong dollar	11,526	3	10,376	3
Japanese yen	8,153	2	8,416	2
Indian rupee	7,897	2	6,509	2
Brazilian real	3,813	1	3,620	1
Swiss franc	3,286	1	2,623	1
Chilean peso	2,652	1	2,722	1
Mexican peso	1,948	–	1,785	–
Other	8,824	2	13,224	3
Total foreign exposure	347,617	85	331,802	85
Canadian dollar	62,027	15	60,192	15
Total	$ 409,644	100 %	$ 391,994	100 %

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 by $34,762 million (March 31, 2019 – $33,180 million).

10. 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. The 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.

10.1 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, is as follows:

(CAD millions)	As at March 31, 2020						
Credit rating	Bonds[1]	Money market securities[1]	Reverse repurchase agreements[1]	Over-the-counter derivatives	Other debt[1,2]	Total	% of total
AAA	$ 22,316	$ 129	$ –	$ –	$ 1,058	$ 23,503	14 %
AA	43,307	12,855	7,743	784	876	65,565	38
A	26,569	9,003	6,403	8,255	255	50,485	30
BBB	7,110	–	3,519	691	1,269	12,589	7
BB	3,969	868	–	–	3,543	8,380	5
B	865	–	–	–	8,307	9,172	5
CCC/CC/D	404	–	–	–	998	1,402	1
Total	$ 104,540	$ 22,855	$ 17,665	$ 9,730	$ 16,306	$ 171,096	100 %

(CAD millions) Credit rating	As at March 31, 2019 Bonds[1]	Money market securities[1]	Reverse repurchase agreements[1]	Over-the-counter derivatives	Other debt[1,2]	Total	% of total
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/CC/D	47	–	–	–	1,600	1,647	1
Total	$ 86,422	$ 7,876	$ 8,207	$ 3,187	$ 17,007	$ 122,699	100 %

1. Includes accrued interest.
2. Includes direct investments in private debt and asset-backed securities.

In addition to the above, the Investment Portfolios are indirectly exposed to credit risk on the underlying securities of fund investments.

CPP Investments 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 15). 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.

10.2 Credit value-at-risk

In addition to incorporating credit risk within the potential investment loss measures as described in Note 8.2, a standalone measure for losses due to defaults and credit rating migration is also monitored. A Monte Carlo simulation that incorporates likelihood of default, credit rating migration and recovery in the event of default for underlying credit instruments is adopted to quantify this dimension of risk. Credit value-at-risk, at a 99% confidence level, implies there is a 1% chance that the credit instruments in the Investment Portfolios will lose more than the amounts shown below in any given year due to default and credit migration risk.

	As at March 31, 2020		As at March 31, 2019	
(CAD millions)	**base CPP**	**additional CPP**	base CPP	additional CPP
Credit value-at-risk	**$ 6,299**	**$ 26**	$ 5,317	$ 3

11. Liquidity and leverage risk

Liquidity and leverage risk includes three 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 Investments is unable to fund investment programs and rebalance Investment Portfolios back to their target level of market risk and leverage during periods of stress.
- Leverage risk – The risk that excessive on-and-off balance sheet leverage accelerates the worsening of market and liquidity risk factors during periods of stress.

11.1 Solvency risk and portfolio rebalancing risk

Liquidity risk increases from the use of various forms of leverage which CPP Investments uses to manage certain other risks and enhance fund returns. The use of leverage is governed directly through leverage measures (Note 11.2), and through liquidity risk limits which require sufficient liquidity to be available to manage both solvency and portfolio rebalancing risks.

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. The table below presents the unsecured credit facilities that CPP Investments maintained at each reporting date. There were no credit facilities drawn as at March 31, 2020 and March 31, 2019.

(CAD millions)	**As at March 31, 2020**	As at March 31, 2019
Unsecured credit facilities held	**$ 6,482**	$ 6,176

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 Investments is exposed to liquidity risk through its obligations to remit cash to the CPP and to fund investment commitments. 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 CPP Investments has the necessary liquidity to meet all of its CPP benefit payment obligations and investment obligations, without incurring unacceptable losses.

The liquidity coverage ratio measures the level of liquidity CPP Investments maintains to meet all CPP and investment obligations over various time horizons including any 10-day period. It measures the amount of liquid securities available to meet CPP Investments' payment obligations as they become due, to fund investment programs, and to rebalance the portfolio in periods of market stress, all without realizing unacceptable losses.

	Limit	**As at March 31, 2020**	As at March 31, 2019
Liquidity coverage ratio	1.0x	**3.3x**	2.8x

11.2 Leverage risk

Leverage risk is monitored against two metrics which together capture different aspects of leverage across the Investment Portfolios:

- Total financing liabilities is a notional-based measure which represents all financing activities that are undertaken to obtain leverage using both on-balance sheet and off-balance sheet items.
- Risk weighted liabilities is determined using risk-weighted notionals of recourse liabilities which represent the risk of the underlying leverage products, including derivatives financing, used by CPP Investments.

The table below presents the key leverage risk metrics of the Investment Portfolios.

	As at March 31, 2020	As at March 31, 2019
Total financing liabilities	**24.9 %**	23.2 %
Risk weighted liabilities	**13.0 %**	11.0 %

For the year ended March 31, 2020, the associated financing costs on total financing liabilities were $2,429 million (March 31, 2019 – $1,884 million). These financing costs are higher than the borrowing costs disclosed in Note 6.1 due to the inclusion of certain derivative transactions which are utilized to provide additional sources of leverage to CPP Investments.

In addition, CPP Investments seeks to maintain its issuer credit rating of "AAA" and maintains leverage ratios that are consistent with this rating.

11.3 Terms to maturity

11.3.1 Terms to maturity of non-derivative investments held directly by CPP Investments

(CAD millions)	Terms to maturity As at March 31, 2020 Within 1 year	1 to 5 years	6 to 10 years	Over 10 years	Total[2]	Average effective yield	As at March 31, 2019[3] Total[2]	Average effective yield
Non-marketable bonds								
Canadian provincial government	$ 1,502	$ 6,287	$ 1,918	$ 12,661	$ 22,368	2.4 %	$ 23,439	2.7 %
Marketable bonds								
Government of Canada	1,165	4,996	267	1,050	7,478	0.8	8,553	1.7
Canadian provincial government	–	542	2,243	3,502	6,287	2.4	6,158	2.7
Canadian government corporations	–	1,981	868	940	3,789	1.1	3,281	2.2
Foreign government	310	20,218	10,859	21,565	52,952	1.5	36,425	2.3
Corporate bonds	79	3,214	2,595	2,361	8,249	3.8	5,434	3.8
Other debt								
Private debt[1]	464	88	–	–	552	6.2	442	2.5
Asset-backed securities	25	82	192	2,012	2,311	3.9	1,972	3.0
Securities purchased under reverse repurchase agreements	17,665	–	–	–	17,665	0.5	8,205	0.8
Cash collateral pledged on securities borrowed	993	–	–	–	993	n/a	4,327	n/a
Total	$ 22,203	$ 37,408	$ 18,942	$ 44,091	$ 122,644	n/a	$ 98,236	n/a

1. Includes direct investments and excludes fund investments.
2. Represents fair value.
3. Certain comparatives have been reclassified to conform to the current year's presentation.

11.3.2 Terms to maturity of non-derivative investments held by investment holding subsidiaries

The following table presents supplemental information relating to the terms to maturity of investments held by investment holding subsidiaries.

(CAD millions)	Terms to maturity As at March 31, 2020 Within 1 year	1 to 5 years	6 to 10 years	Over 10 years	Total[2]	Average effective yield	As at March 31, 2019 Total[2]	Average effective yield
Marketable bonds								
Foreign government	$ –	$ –	$ –	$ –	$ –	– %	$ 45	7.0 %
Corporate bonds	–	647	1,626	262	2,535	7.3	2,269	6.1
Other debt								
Private debt[1]	802	5,308	7,982	–	14,092	10.2	15,909	7.9
Asset-backed securities	–	93	26	84	203	6.2	38	4.9
Total	$ 802	$ 6,048	$ 9,634	$ 346	$ 16,830	n/a	$ 18,261	n/a

1. Includes direct investments and excludes fund investments.
2. Represents fair value.

11.3.3 Terms to maturity of non-derivative investment liabilities held directly by CPP Investments

	Terms to maturity									
	As at March 31, 2020							As at March 31, 2019[4]		
(CAD millions)	Within 1 year	1 to 5 years	6 to 10 years	Over 10 years	Total[3]	Fair value	Weighted average interest rate	Total[3]	Fair value	Weighted average interest rate
Securities sold under repurchase agreements	$ 52,261	$ –	$ –	$ –	$ 52,261	$ 52,189	1.0 %	$ 38,548	$ 38,375	2.3 %
Cash collateral received on securities lent	158	–	–	–	158	158	n/a	1,116	1,116	n/a
Securities sold short[1,2]	20,776	–	–	–	20,776	20,776	n/a	29,027	29,027	n/a
Debt financing liabilities										
Commercial paper payable	5,775	–	–	–	5,775	5,757	1.7	4,378	4,323	2.7
Term debt	5,626	13,969	8,433	3,124	31,152	32,638	0.7	26,099	26,538	1.6
Short-term secured debt	1,430	–	–	–	1,430	1,430	1.1	1,358	1,358	2.5
Total	$ 86,026	$ 13,969	$ 8,433	$ 3,124	$ 111,552	$ 112,948	n/a	$ 100,526	$ 100,737	n/a

1. Considered repayable within one year based on the earliest period in which the counterparty could request payment under certain conditions.
2. Includes equities sold short for which the average interest rate is not applicable.
3. Represents contractual amounts.
4. Certain comparatives have been reclassified to conform to the current year's presentation.

12. Reconciliation of debt financing liabilities

The following table provides a reconciliation of debt financing liabilities arising from financing activities:

	For the year ended March 31, 2020				
(CAD millions)	As at April 1, 2019	Proceeds	Repayments	Non–cash Changes in fair value[1]	As at March 31, 2020
Debt financing liabilities	$ 30,861	$ 29,507	$ (24,830)	$ 2,857	$ 38,395
Total	$ 30,861	$ 29,507	$ (24,830)	$ 2,857	$ 38,395

	For the year ended March 31, 2019				
(CAD millions)	As at April 1, 2018	Proceeds	Repayments	Non–cash Changes in fair value[1]	As at March 31, 2019
Debt financing liabilities	$ 24,056	$ 36,784	$ (30,929)	$ 950	$ 30,861
Total	$ 24,056	$ 36,784	$ (30,929)	$ 950	$ 30,861

1. Includes foreign exchange losses of $1,824 million (March 31, 2019 – $377 million).

13. 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, 2020					
				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[2]	Net exposure
Securities purchased under reverse repurchase agreements	$ 17,665	$ –	$ 17,665	$ (6,300)	$ (11,365)	$ –
Derivative assets[1]	9,730	–	9,730	(6,470)	(3,260)	–
Total investment receivables	**$ 27,395**	**$ –**	**$ 27,395**	**$ (12,770)**	**$ (14,625)**	**$ –**
Securities sold under repurchase agreements	$ (52,189)	$ –	$ (52,189)	$ 6,300	$ 45,889	$ –
Derivative liabilities	(10,023)	–	(10,023)	6,470	2,643	(910)
Total investment payables	**$ (62,212)**	**$ –**	**$ (62,212)**	**$ 12,770**	**$ 48,532**	**$ (910)**

	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[2]	Net exposure
Securities purchased under reverse repurchase agreements	$ 8,205	$ –	$ 8,205	$ (7,335)	$ (870)	$ –
Derivative assets[1]	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)

1. Includes nil (March 31, 2019 – $2 million) relating to interest rate derivative assets transacted by investment holding subsidiaries.
2. Securities and cash collateral exclude over-collateralization, collateral in transit, and initial margin to clearing houses. Refer to Note 15 for the total amount of collateral.

14. Operating expenses

14.1 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 Investments, consisting of the Senior Management Team and the Board of Directors.

Compensation of key management personnel of CPP Investments is as follows:

	For the years ended	
(CAD millions)	March 31, 2020	March 31, 2019
Short-term employee compensation and benefits	$ 28	$ 26
Other long-term compensation and benefits	17	26
Total	$ 45	$ 52

14.2 Operating expenses

Operating expenses consist of the following:

	For the years ended	
(CAD millions)	March 31, 2020	March 31, 2019[2]
Personnel costs	$ 837	$ 802
Information technology and data services	139	118
Professional services[1]	93	107
Amortization of premises and equipment	50	20
Custodial fees	35	36
Tax on international operations	32	35
Travel and accommodation	27	25
Premises and equipment	22	40
Communications	15	14
Directors’ remuneration	2	2
Other	2	4
Total	$ 1,254	$ 1,203

1. Includes auditor’s remuneration of $4 million (March 31, 2019 – $4 million).
2. Certain comparatives have been reclassified to conform to the current year’s presentation.

15. Collateral

Collateral transactions are conducted to support investment activities under terms and conditions that are common and customary to collateral arrangements. These arrangements may be transacted by CPP Investments or its investment holding subsidiaries in their normal course of business.

15.1 Collateral held and pledged directly by CPP Investments

The net fair value of collateral held and pledged directly by CPP Investments was as follows:

(CAD millions)	As at March 31, 2020	As at March 31, 2019[6]
Third-party assets held as collateral on[1]:		
Reverse repurchase agreements	$ 17,606	$ 8,207
Over-the-counter derivative transactions	3,709	965
Securities lent[2]	613	1,627
Own and third-party assets pledged as collateral on:		
Repurchase agreements	(52,072)	(38,383)
Securities borrowed[3]	(23,265)	(34,090)
Short-term secured debt[4]	(1,879)	(1,817)
Over-the-counter derivative transactions	(3,855)	(407)
Loans[5]	(3,607)	(3,557)
Total	$ (62,750)	$ (67,455)

1. The fair value of the collateral held that may be sold or repledged as at March 31, 2020 was $18,025 million (March 31, 2019 – $8,785 million). The fair value of collateral sold or repledged as at March 31, 2020 was $11,145 million (March 31, 2019 – $3,504 million).
2. Includes cash collateral of $158 million (March 31, 2019 – $1,116 million). The fair value of securities lent as at March 31, 2020 was $675 million (March 31, 2019 – $1,602 million).
3. The fair value of securities borrowed as at March 31, 2020 was $16,953 million (March 31, 2019 – $27,110 million) of which $16,160 million was sold or repledged (March 31, 2019 – $26,631 million) for securities sold short.
4. Represents securities pledged as collateral on short-term cash borrowings from prime broker.
5. Represents investment assets pledged by CPP Investments on loan liabilities held by its investment holding subsidiary.
6. Certain comparatives have been reclassified to conform to the current year's presentation.

15.2 Supplemental information on collateral relating to investment holding subsidiaries

The net fair value of collateral held and pledged directly by investment holding subsidiaries was as follows:

(CAD millions)	As at March 31, 2020	As at March 31, 2019
Third-party assets held as collateral on[1]:		
Other debt	$ 987	$ 772
Own and third-party assets pledged as collateral on:		
Loans[2]	(10,762)	(8,854)
Total	$ (9,775)	$ (8,082)

1. The fair value of the collateral held that may be sold or repledged as at March 31, 2020 was $987 million (March 31, 2019 – $772 million). The fair value of collateral sold or repledged as at March 31, 2020 was nil (March 31, 2019 – nil).
2. The loans liability is included in the fair value of investment holding subsidiaries.

16. Commitments

CPP Investments 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, 2020, the unfunded commitments for CPP Investments and its investment holding subsidiaries totalled $1,940 million (March 31, 2019 – $1,779 million) and $53,453 million (March 31, 2019 – $45,629 million), respectively.

17. Related-party transactions

Related parties of CPP Investments include unconsolidated subsidiaries, joint ventures and associates. All related-party investments are measured at fair value.

Unconsolidated subsidiaries include 224 wholly owned investment holding subsidiaries (see Note 1.2) (March 31, 2019 – 219) managed by CPP Investments. These investment holding subsidiaries hold private investments, debt, funds and real assets. The 224 investment holding subsidiaries are incorporated as follows: 155 in Canada (March 31, 2019 – 148), 26 in the United States (March 31, 2019 – 25), 20 in Australia (March 31, 2019 – 20), six in Hong Kong (March 31, 2019 – six), and 17 in other jurisdictions (March 31, 2019 – 20). CPP Investments provides financial or other support to these investment holding subsidiaries to fund their day-to-day operations and investment activities under loan agreements or shareholders' resolutions, as needed.

In addition, CPP Investments 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 Investments.

Investments in joint ventures are those arrangements where CPP Investments or its investment holding subsidiaries have joint control. An associate is an entity in which CPP Investments or its investment holding subsidiaries 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.

18. Guarantees and indemnifications

18.1 Guarantees

As part of certain investment transactions, CPP Investments and its investment holding subsidiaries agreed to guarantee, as at March 31, 2020, up to $263 million (March 31, 2019 – $359 million) and $4,832 million (March 31, 2019 – $4,078 million), respectively, to other counterparties in the event certain investee entities default under the terms of loan and other related agreements.

18.2 Indemnifications

CPP Investments provides indemnifications to its Officers, Directors, certain others and, in certain circumstances, to various counterparties and other entities. CPP Investments 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 Investments from making a reasonable estimate of the maximum potential payments CPP Investments could be required to make. To date, CPP Investments has not received any material claims nor made any material payments pursuant to such indemnifications.

19. 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 CPP Investments' base CPP account and additional CPP account.

19.1 Changes in net assets

Pursuant to Sections 108.1 and 108.3 of the CPP Act, the CPPIB Act and an administrative agreement between Her Majesty the Queen in right of Canada and CPP Investments, amounts not required to meet specified obligations of the CPP are transferred weekly to CPP Investments. The funds originate from employer and employee contributions to the CPP.

CPP Investments 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, 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
As at April 1, 2019	**$ 143,935**	**$ 421**	**$ 144,356**	**$ 247,622**	**$ 2**	**$ 247,624**	**$ 391,980**
Total net income for the year	**–**	**–**	**–**	**12,084**	**13**	**12,097**	**12,097**
Transfers from CPP	**42,619**	**1,902**	**44,521**	**–**	**–**	**–**	**44,521**
Transfers to CPP	**(39,010)**	**–**	**(39,010)**	**–**	**–**	**–**	**(39,010)**
Balance as at March 31, 2020	**$ 147,544**	**$ 2,323**	**$ 149,867**	**$ 259,706**	**$ 15**	**$ 259,721**	**$ 409,588**

19.2 Net assets of base CPP and additional CPP

The net assets of CPP Investments' base CPP and additional CPP accounts are as follows:

	As at March 31, 2020		
(CAD millions)	base CPP	additional CPP	Total
Cash and cash equivalents held for investment purposes	$ 23,469	$ 86	$ 23,555
Net investments other than cash and cash equivalents	383,848	2,241	386,089
Net investments	407,317	2,327	409,644
Premises and equipment	461	13	474
Other assets[1]	261	1	262
Accounts payable and accrued liabilities	(789)	(3)	(792)
Net assets	$ 407,250	$ 2,338	$ 409,588

	As at March 31, 2019		
(CAD millions)	base CPP	additional CPP	Total
Cash and cash equivalents held for investment purposes	$ 8,606	$ 12	$ 8,618
Net investments other than cash and cash equivalents	382,979	397	383,376
Net investments	391,585	409	391,994
Premises and equipment	373	14	387
Other assets[1]	243	1	244
Accounts payable and accrued liabilities	(644)	(1)	(645)
Net assets	$ 391,557	$ 423	$ 391,980

1. Includes cash held for operating purposes.

19.3 Schedule of Investment Portfolio for base CPP and additional CPP

The table below provides details of the investments and investment liabilities for CPP Investments' base CPP and additional CPP accounts:

	As at March 31, 2020		
(CAD millions)	base CPP	additional CPP	Total
Equities			
Public equities	$ 117,847	$ 394	$ 118,241
Private equities	105,030	351	105,381
Total equities	222,877	745	223,622
Fixed income			
Bonds	102,363	1,295	103,658
Other debt	27,123	91	27,214
Money market securities	24,818	90	24,908
Total fixed income	154,304	1,476	155,780
Absolute return strategies	27,829	93	27,922
Real assets			
Real estate	43,572	146	43,718
Infrastructure	34,563	116	34,679
Power and renewables	8,682	29	8,711
Energy and resources	7,257	24	7,281
Total real assets	94,074	315	94,389
Investment receivables			
Securities purchased under reverse repurchase agreements and cash collateral pledged on securities borrowed	18,595	63	18,658
Derivative assets	9,698	32	9,730
Other	6,186	26	6,212
Total investment receivables	34,479	121	34,600
Total investments	$ 533,563	$ 2,750	$ 536,313
Investment liabilities			
Securities sold under repurchase agreements and cash collateral received on securities lent	(52,173)	(174)	(52,347)
Debt financing liabilities	(38,267)	(128)	(38,395)
Securities sold short	(20,707)	(69)	(20,776)
Derivative liabilities	(9,989)	(34)	(10,023)
Short-term secured debt	(1,425)	(5)	(1,430)
Other	(4,090)	(14)	(4,104)
Total investment liabilities	(126,651)	(424)	(127,075)
Pending trades receivable	7,002	23	7,025
Pending trades payable	(6,597)	(22)	(6,619)
Net investments	$ 407,317	$ 2,327	$ 409,644

	As at March 31, 2019[1]		
(CAD millions)	base CPP	additional CPP	Total
Equities			
Public equities	$ 141,105	$ 84	$ 141,189
Private equities	96,601	58	96,659
Total equities	237,706	142	237,848
Fixed income			
Bonds	85,379	225	85,604
Other debt	27,309	16	27,325
Money market securities	9,817	12	9,829
Total fixed income	122,505	253	122,758
Absolute return strategies	25,497	15	25,512
Real assets			
Real estate	45,819	27	45,846
Infrastructure	33,111	20	33,131
Power and renewables	5,072	3	5,075
Energy and resources	7,997	5	8,002
Total real assets	91,999	55	92,054
Investment receivables			
Securities purchased under reverse repurchase agreements and cash collateral pledged on securities borrowed	12,524	8	12,532
Derivative assets	3,190	2	3,192
Other	2,027	2	2,029
Total investment receivables	17,741	12	17,753
Total investments	$ 495,448	$ 477	$ 495,925
Investment liabilities			
Securities sold under repurchase agreements and cash collateral received on securities lent	(39,467)	(24)	(39,491)
Debt financing liabilities	(30,843)	(18)	(30,861)
Securities sold short	(29,010)	(17)	(29,027)
Derivative liabilities	(2,329)	(1)	(2,330)
Short-term secured debt	(1,357)	(1)	(1,358)
Other	(1,154)	(1)	(1,155)
Total investment liabilities	(104,160)	(62)	(104,222)
Pending trades receivable	4,689	3	4,692
Pending trades payable	(4,392)	(9)	(4,401)
Net investments	$ 391,585	$ 409	$ 391,994

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

19.4 Net income of base CPP and additional CPP

Details of net income of CPP Investments' base CPP and additional CPP accounts are as follows:

	For the year ended March 31, 2020		
(CAD millions)	base CPP	additional CPP	Total
Investment income	$ 15,699	$ 22	$ 15,721
Investment-related expenses	(2,365)	(5)	(2,370)
Net investment income	**13,334**	**17**	**13,351**
Operating expenses	**(1,250)**	**(4)**	**(1,254)**
Net income	**$ 12,084**	**$ 13**	**$ 12,097**

	For the year ended March 31, 2019[1]		
(CAD millions)	base CPP	additional CPP	Total
Investment income	$ 35,084	$ 11	$ 35,095
Investment-related expenses	(1,882)	–	(1,882)
Net investment income	33,202	11	33,213
Operating expenses	(1,194)	(9)	(1,203)
Net income	$ 32,008	$ 2	$ 32,010

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

Ten-Year Review[1]

($ billions)	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
	For the year ended March 31									
CHANGE IN NET ASSETS										
Net investment income	**13.4**	33.2	37.8	34.4	10.0	41.4	30.7	16.7	9.9	15.5
Operating expenses	**(1.3)**	(1.2)	(1.1)	(0.9)	(0.9)	(0.8)	(0.6)	(0.5)	(0.4)	(0.3)
Net contributions	**5.5**	3.9	2.7	4.3	5.2	4.9	5.7	5.5	3.9	5.4
Increase in net assets	**17.6**	35.9	39.4	37.8	14.3	45.5	35.8	21.7	13.4	20.6
NET ASSETS	**409.6**	392.0	356.1	316.7	278.9	264.6	219.1	183.3	161.6	148.2

($ billions)	2020	2019[2]	2018[2]	2017[2]	2016[2]	2015[2]	2014[2]	2013[2]	2012[2]	2011[2]
EQUITIES										
Canada	**8.2**	8.9	9.7	11.7	13.5	19.5	18.6	15.3	14.2	21.0
Foreign	**156.9**	162.7	165.1	140.0	112.6	98.0	75.6	64.0	56.7	50.8
Emerging	**51.5**	51.5	36.0	23.7	17.6	15.5	12.6	12.4	10.6	7.6
FIXED INCOME										
Non-marketable bonds	**21.1**	22.2	23.6	24.0	24.4	25.8	23.4	24.4	23.6	21.8
Marketable bonds	**76.6**	63.9	53.2	49.1	32.5	34.4	31.0	28.5	21.2	19.7
Cash and Absolute Return Strategies	**(14.7)**	(16.2)	(13.6)	(2.4)	16.8	18.8	17.4	8.7	2.5	2.3
External debt issuance	**(38.4)**	(30.9)	(24.1)	(19.9)	(15.6)	(9.9)	(9.7)	(9.5)	(2.4)	(1.4)
CREDIT	**50.8**	35.8	22.6	17.6	17.0	17.2	11.4	8.6	8.8	6.1
REAL ASSETS										
Real estate	**46.5**	47.5	46.1	40.1	36.7	30.3	25.5	19.9	17.1	10.9
Infrastructure	**35.1**	33.3	28.6	24.3	21.3	15.2	13.3	11.2	9.5	9.5
Energy and resources	**7.3**	8.2	6.1	4.3	1.4	–	–	–	–	–
Power and renewables	**8.7**	5.1	3.0	4.4	0.9	–	–	–	–	–
NET INVESTMENTS[3]	**409.6**	392.0	356.3	316.9	279.1	264.8	219.1	183.5	161.8	148.3
NET RETURN (%)										
base CPP	**3.1%**	8.9%	11.5%	11.8%	3.4%	18.2%	16.0%	9.7%	6.2%	11.5%
additional CPP	**4.2%**	5.0%								
TOTAL FUND	**3.1%**	8.9%	11.5%	11.8%	3.4%	18.2%	16.0%	9.7%	6.2%	11.5%

1. The net investment table aligns with the Asset Mix within the Management's Discussion and Analysis.
2. Historical figures for fiscal 2016 to 2019 are consistent with the current year's presentation. Fiscal 2011 to 2015 figures have not been updated to the current year's presentation.
3. Includes $407.3 billion of base CPP and $2.3 billion of additional CPP.

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