

The Evolution of the Canadian Pension Model

Practical Lessons for Building
World-class Pension Organizations

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World-class Pension Organizations



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Second, we are grateful to the 25 pension professionals and experts who shared their deep insights and experience with us through interviews conducted to inform this study. A number of these interviewees, as well as other leaders in the pension community, greatly enhanced the report by taking the time to review and provide thoughtful comments on earlier drafts.

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September 2017
Toronto, Canada



Caisse de dépôt et placement
du Québec



HOOPP
Healthcare of Ontario
Pension Plan



OPTrust



Ontario



Executive Summary

Canada is home to some of the world's most admired and successful public pension organizations. This was not always the case. As recently as the mid 1980s, many Canadian public pensions were invested largely or entirely in domestic government bonds, were funded primarily on a pay-as-you-go basis, lacked independent governance, and were administered in an outdated and error-prone fashion. Over the past three decades, a "Canadian model" of public pension has emerged that combines independent governance, professional in-house investment management, scale, and extensive geographic and asset-class diversification. This report aims to document the emergence and evolution of this Canadian model, distilling practical lessons for stakeholders in emerging economies working to improve their pension arrangements and retirement systems. Although a growing body of literature exists on the Canadian model of pension organization, this report is unique in two respects: its emphasis on the evolutionary journey of Canadian pension organizations (as opposed to their current state) and its in-depth focus on Canadian pension funds that have received less attention than some of their peers.

Methodology

This report was a collaboration between World Bank staff, four participating Canadian pension funds (AIMCo, CDPQ, HOOPP, and OPTrust), the government of Ontario, and Common Wealth, a Toronto-based retirement security firm. The report is based on structured interviews that Common Wealth, together with a senior Ontario government official, conducted with 25 leaders in the Canadian pension field, including current and former pension fund board chairs, trustees, chief executive officers (CEOs), and executive team members; pension experts and advisers; and government officials.¹ These interviews were supplemented with a review of relevant academic and "gray" literature.

Key lessons

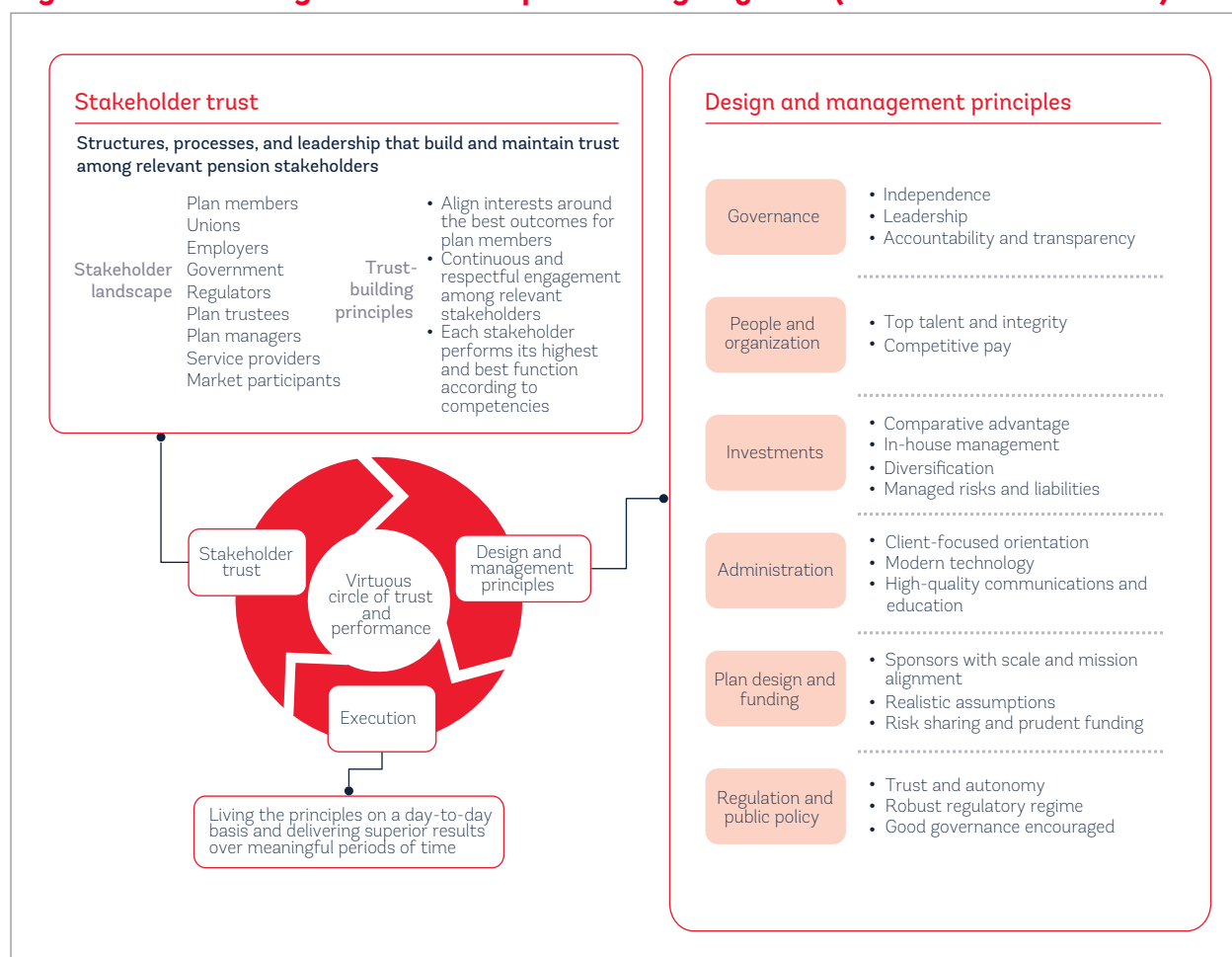
The success of the Canadian model can be attributed to collaborations between diverse stakeholders—labor, government, business, and finance—in which each stakeholder performs the role best suited to its expertise, and where there is alignment around the shared interest of serving plan beneficiaries. Maintaining the buy-in and shared vision of these diverse stakeholders was critical not only during the founding stage of Canadian pension organizations, but also at each phase of the organization's evolution. The importance of a stable, supportive stakeholder coalition should not be underestimated. Government-appointed

third parties, including experts or panels to consult stakeholders and make recommendations, have sometimes proved to be a useful step in building stakeholder trust and consensus in the early stages of the reform process.

Success in building a world-class pension organization can be seen as a continuous cycle consisting of three elements (see figure ES.1): (1), the building and maintenance of trust among a diverse range of relevant pension stakeholders; (2) adherence to a set of pension *design and management principles* that cut across a variety of pension disciplines, including governance, people and organization, investment, administration, plan design and funding, and regulation and public policy; and (3) results-focused *execution* that puts the principles into practice on a day-to-day basis and delivers superior results.

Strong, independent governance is perhaps the most important element of the Canadian model. Canadian pension organizations are governed to run as high-performing, arm's-length entities that meet high standards of transparency, accountability, and ethical conduct. Key steps to achieving good governance include careful attention to the organization's constituting documents (for example, framework legislation, sponsorship agreement), selecting a strong, independent-minded chair for the founding or reform phase of the organization

Figure ES.1: Building a world-class pension organization (Lessons from Canada)



using a rigorous, transparent process, and establishing a track record of independent decision making early in the life of the organization. The board, and especially the chair, should be willing to push back against potential infringements on the organization's independence. Trust that is earned and maintained among the key stakeholders as they work together goes a long way to building this independence.

Singularity of purpose is critical. Canadian pension organizations are designed to be run like businesses, with a focus on delivering retirement security for plan members. This focus has provided critical mission clarity to Canadian pension

organizations and has enabled them to avoid distractions from political factors or activities ancillary to the core goal.

Many of Canada's top pension organizations were quite unsophisticated as little as 20–30 years ago. The same organizations that today are regarded as global leaders had little to no independent governance, lacked investment diversification, operated under strict investment limits, suffered from significant administrative errors and poor member service, and were considerably smaller in terms of assets under management. The progress Canadian funds have been able to make over the past several decades should be a source of

encouragement to emerging economies seeking to modernize their pension systems.

Despite this progress, the evolution of Canadian pension organizations has taken time. Building a world-class organization can take decades, even in a global financial center such as Toronto. Earning the trust of governments, the private sector, and sponsoring organizations can be a slow, iterative process. By taking a phased approach to reform and continuous improvement, stakeholders can achieve a more realistic view of what is possible when and of what to focus on at each stage.

The Canadian model could not have emerged without the leadership of certain key individuals. Sound processes and design are necessary but insufficient to build strong pension institutions. They must be supplemented by the strong, ethical leadership of individual government officials, board members, union leaders, and pension and investment professionals. Building and continuously improving Canadian pension organizations has required significant persistence through ups, downs, and unforeseen circumstances. Had these individuals not prioritized doing the right thing in the long term over doing the comfortable thing in the short term, the Canadian model would not have been born.

Canadian pension organizations have not followed a straight path in their development. The Canadian model includes significant variation in organizational structure, investment approach, and governance. The model's evolution includes missteps and course corrections along the way. Rather than offering a singular blueprint to follow, the Canadian experience offers a diversity of design choices within a broader set of principles. While experts disagree on the relative merits of these design choices, the perfect pension should not become the enemy of the good pension. Just as the organizations profiled in this report were shaped by external political, economic, and

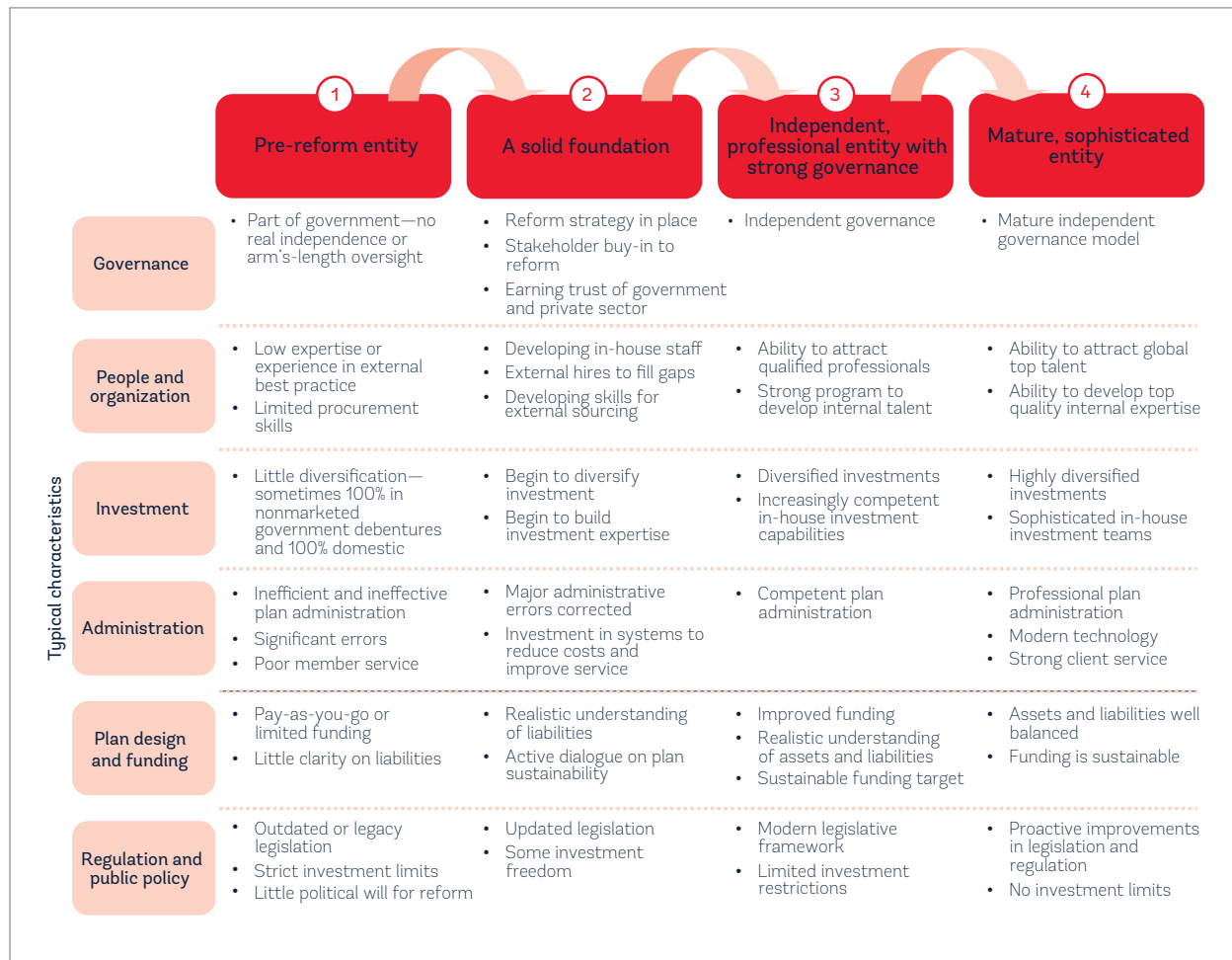
market circumstances, pension stakeholders in emerging economies are also likely to face local conditions that will influence their pension design and management choices. The diverse experience of exemplars of the “Canadian model” may be helpful to these stakeholders in choosing a path toward improvement that best fits their unique local circumstances.

A high-level, four-phase framework for the evolution of pension organizations has been developed based on the Canadian experience (see figure ES.2). The transition from phase 1 (“pre-reform entity”) to phase 2 (“a solid foundation”) is especially critical and deserves attention from pension stakeholders in emerging economies. The framework also suggests an integrated approach to pension management and design, in which gradual progress is made in each of the key elements of running and overseeing a pension organization—including governance, investments, administration, people and organization, plan design and funding, and the regulatory and public policy environment—and these elements are kept in alignment.

The quality of the people involved in Canadian pension organizations, has been a key driver of success. Talent—at the board, management, and service-provider levels—is critical. Canadian pension funds recruit globally and provide competitive, performance-based compensation to attract top-notch personnel. Integrity and the ability to navigate both the public and private sectors have also been distinguishing characteristics of high-impact Canadian public pension leaders. For pension organizations located outside major financial centers, a focus on long-term talent development is especially important.

The success drivers underlying the Canadian model are highly interrelated. This report identifies a set of principle-based lessons from the Canadian experience across the following six categories: governance; people and organization; investments;

Figure ES.2: Four-phase framework for the evolution of pension organizations



administration; plan design and funding; and regulatory and public policy environment. Yet few of these lessons can be seen in isolation from the others. For example, Canadian funds are distinctive in their ability to invest directly in alternative asset classes such as infrastructure, real estate, and private equity. Yet this ability to invest directly requires a number of conditions to be in place: (1) the right sponsoring organizations and membership base to provide sufficient scale; (2) the right governance structure to oversee a complex investment program; (3) the organizational culture and compensation model to attract a talented in-house investment team; and (4) the long-term patient capital that is

facilitated by the stable, defined-benefit nature of the pension plan designs that Canadian pension managers are charged with administering.

The “founding” stage of a new or reformed pension organization can be the most critical.

This report describes the stage as the transition from a “pre-reform entity”—often a fully or partially pay-as-you-go pension model that is part of government, lacks diversification, and has inefficient and ineffective plan administration—to a “solid foundation” in which key stakeholder buy into a reform strategy, trust is being earned with both the public and private sectors, and major

administrative mistakes have been corrected. Investments of time, energy, and resources in this founding stage are likely to pay considerable dividends in the years and decades that follow. The work during this stage can be thought of as a combination of developing pension management fundamentals and skillfully navigating a series of diverse stakeholder relationships with government, plan sponsors, and the business community.

Governments and the regulatory environment played a key role in creating the right environment for Canadian public pension funds to succeed.

Although Canadian pension funds tend to operate independently from government today, the right government action and regulatory environment has been critical to the funds' evolution. Framework legislation, independent board appointments, increasingly hands-off investment rules, and reforms to pension standards rules all are examples of government action that helped facilitate the emergence of the Canadian model.

Canada's investment in building top-performing pension organizations has paid dividends. The country's top 10 public pension organizations now manage over \$1.2 trillion in net assets, employ thousands of highly qualified professionals, and compete for investment opportunities around the globe on behalf of Canadian pension beneficiaries. The success of early adopters of the "Canadian model" is also leading to expansion of that model within Canada, including a recent enhancement to the Canada Pension Plan and ongoing reforms to improve the governance and management of public pensions across the country. A recent analysis estimates that public pension funds using the "Canadian model" have added additional value, relative to other comparable global funds, of \$4.2 billion annually over the past 10 years.² Canadian public pensions have also managed to avoid the funding crises and the crippling impact on government budgets that have been seen with public pensions in other jurisdictions.

Challenges ahead

Despite their success to date, Canadian public pension funds face challenges ahead. These challenges, many of which are similar to those faced by pension organizations around the world, will shape Canadian pension organizations over the coming 5 to 10 years and will require continued innovation, leadership, and change at a management, governance, and public-policy level. Seven challenges stand out:

- Lower expected returns and interest rates, over the long term, will make it more difficult to meet pension promises on a sustainable basis. This "low for longer" environment is leading funds to seek new investment strategies for achieving the required risk-adjusted returns.
- Pension plans are maturing, with active plan members supporting a rising number of retired plan members. This too is putting pressure on plan sustainability and raising questions of intergenerational equity. Plans are responding by making plan design changes and seeking new sources of membership.
- The gap between those who have a good pension and those who do not is growing. Many worry about a simmering "pension envy." Governments have responded by enhancing public pension programs, including the Canada Pension Plan. Some pension funds are exploring plans to offer their services to new constituencies.
- The growth of Canadian pension organizations confers significant economies of scale but also creates additional complexity as funds expand into new geographies and asset classes and compete globally for attractive investment opportunities. Staying focused on comparative advantage and seeking partnerships are two ways that pension funds are navigating this complexity.

- As they grow, Canadian funds are likely to face increasing scrutiny and thus need to continuously demonstrate value for money. Continuing to build trust with governments, key stakeholders, and the public and maintaining strong accountability, transparency, and ethics measures will be crucial in responding to this scrutiny.
- The regulatory environment presents two challenges. First, Canada's regulatory environment remains fragmented, and its existing regulators have not always kept up with the increasing sophistication of Canadian pension funds. Second, the global regulatory environment, particularly in the wake of the 2008–9 global financial crisis, has become more complex and uncertain.
- The next major market downturn or financial crisis will test the investment strategies and governance models of Canadian pension funds. Since the global financial crisis, Canadian funds have increased their focus on managing

investment and funding risk. They have also sought to build more proactive relationships with governments and regulators to avoid knee-jerk reactions to future crises.

Opportunities for collaboration with emerging economies

Deeper collaboration between Canadian pension funds and pension stakeholders in emerging economies could be of mutual benefit. It could enable Canadian funds to build local knowledge and partnerships to assist them in investing in emerging economies, and it could help emerging economy stakeholders to incorporate the most relevant, practical lessons from the Canadian experience into a program for reform and continuous improvement. Such collaboration could take the form of exchange programs, secondments, participation in capacity-building engagements (including World Bank-sponsored projects), joint ventures, or formal partnerships between Canadian pension institutions and pension institutions in emerging markets.



Section 1

Context



Who this Report is for

This report is for those with a stake in building better pension institutions. Its primary audience is the wide range of stakeholders in emerging economies that wish to deliver retirement security in a more efficient and sustainable manner. The report is designed to support and enhance the World Bank's extensive capacity-building work with these stakeholders. Such stakeholders include governments, regulators, pension managers, central banks, labor leaders, pension trustees and governors, Social Security administrators, and private-market participants that support pensions and retirement systems. This report is intended to offer a practical guide for these stakeholders, both individually and collectively, to assist them on their journey toward better pension systems.

We hope the report will also be useful for a similarly broad range of stakeholders in developed economies, including in Canada itself. We believe the Canadian experience, and the leaders who contributed to it, can offer much to anyone involved in the task of delivering retirement security through pension plans or similar vehicles.

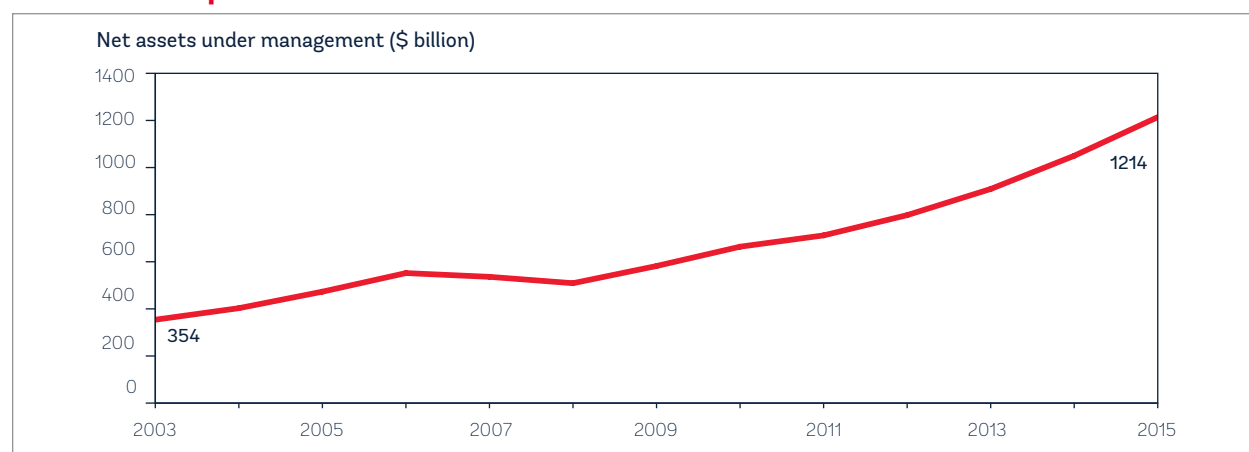
Why study the Canadian Pension Model?

Canada's largest public pension funds have attracted considerable attention in recent years. Global publications such as the *Economist*³, *Fortune*⁴, and the *Financial Times*⁵ have highlighted the unique approach and success of these growing public pension institutions. Jurisdictions around the world,

including those as financially sophisticated as New York City, have looked to the Canadian approach as a blueprint for pension reform. Delegations from every continent frequently travel to Canada to learn from the country's top public pension organizations.

Although not the largest in the world, Canadian public pension funds feature prominently in global rankings and constitute a large portion of Canadian retirement-specific assets. According to a 2015 Boston Consulting Group study, "Investing for Canada on the World Stage," eight Canadian pension funds ranked in the top 100 global funds by size and three of the funds were in the top 20.⁶ The 10 largest Canadian public pension funds manage assets of over \$1.2 trillion.⁷ The net assets of these pension funds tripled between 2003 and 2015, including the period of the global financial crisis.⁸

Figure 1.1: Assets under management for the top 10 Canadian pension funds have more than tripled since 2003



The case for studying the “Canadian model” is founded not only on the reputation and size of Canadian pension plans. It is also rooted in evidence.

The performance of Canadian pension institutions has been strong. Two Canadian pension funds—Ontario Teachers’ Pension Plan (OTPP) and the Healthcare of Ontario Pension Plan (HOOPP)—have recently ranked first among global peers for their 10-year net investment performance, according to CEM Benchmarking. Canadian pension funds have also contributed to respectable ranking for Canada in the Melbourne Mercer Global Pension Index, which in 2016 ranked the Canadian pension system 8th among 27 developed countries, giving the system a high score for integrity and above-average scores for adequacy and sustainability. A recent analysis by pension expert Keith Ambachtsheer and CEM Benchmarking estimates that public pension funds using the “Canadian model” have added additional value, relative to other comparable global funds, of \$4.2 billion annually over the past 10 years.⁹

The core characteristics of the Canadian pension model, articulated in more detail in the next section, have been demonstrated to improve performance. Strong, independent governance is often cited by experts as a driver of outperformance.¹⁰ In-house investment management tends to result in improved returns after taking costs into account.¹¹ Pension portfolios that are highly diversified by both geography and asset class tend to achieve better results.¹² Pension funds with sufficient scale are able to drive down costs and obtain access to differentiated investment opportunities, improving investment outcomes.¹³

Academics, scholars, practitioners, pension experts, and research institutes have produced seminal pieces on the Canadian pension system and pension funds.¹⁴ While the literature on Canadian pension funds is growing, much of it has focused on larger, better-known funds such as OTPP and the Canada Pension Plan Investment

Board (CPPIB). Less known and documented are the stories of other high-performing Canadian pension organizations, including the four profiled in this case study: Alberta Investment Management Corporation (AIMCo), the Caisse de dépôt et de placement du Québec (CDPQ), HOOPP (Healthcare of Ontario Pension Plan), and OPTrust, which administers the Ontario Public Service Employees Union pension plan. Further, much of the documentation on the Canadian pension model focuses on current characteristics of Canadian funds, including sophisticated programs to invest directly in alternative asset classes such as private equity and infrastructure, rather than on the origins and evolutionary path of these institutions. Although studying the current state of Canadian pension institutions can be useful, for emerging economy stakeholders it is likely more instructive to go back further in time and examine how these institutions were founded and how they evolved. With this in mind, the study that follows provides an in-depth look at the evolution of several Canadian pension funds and endeavors to offer lessons for emerging economies seeking to improve their retirement systems and public pension institutions.

Defining the Canadian Pension Model

What is the “Canadian pension model”? There is no universally accepted definition, aside from the fact that it nearly always refers to Canada’s larger public pension funds. This study defines the Canadian model as a public pension plan or public asset manager that is typically defined-benefit, has at least one public sector sponsor or sponsors, and has the following characteristics:

- **Independent governance.** This is perhaps the primary characteristic of the Canadian pension model. Although many of the public pension funds have government as a sponsor or contributor, funds operate at arm’s length of

governments and sponsors and are overseen by independent boards that have a fiduciary duty to the plan members and operate within strong accountability and transparency frameworks.

- **Scale.** Assets under management exceed \$10 billion and are often significantly higher.
- **In-house management by professionals.** Canadian funds have evolved to have a significant portion of their investment management, pension administration, or both performed by in-house professionals who receive competitive compensation.
- **Diversification.** Canadian pension funds are highly diversified by both geography and asset class, including a significant allocation to alternative asset classes such as real estate, private equity, and infrastructure and significant direct investments in such asset classes. According to a recently released study by PwC, Canadian pension funds have a higher exposure to alternatives than large pension funds in Australia, the Netherlands, the Nordic countries, the United Kingdom, and the United States.¹⁵
- **Talent.** Through a combination of a compelling mission, competitive compensation, and intellectually stimulating work, Canadian pension institutions have been successful in attracting and retaining top talent from around the world at both the board and management levels.
- **Long time horizon.** Canadian pension funds are long-term investors able to withstand short-term market volatility.

Pension organizations or systems need not share all the characteristics of their Canadian counterparts to benefit from the lessons in this report. Although Canada's most successful pension organizations tend to be in the public sector and have defined-benefit plan designs, their lessons are also

applicable to plans in the private sector and with defined-contribution or target-benefit plan designs.

The Canadian Retirement System

Canada has had a long history of improving retirement income security for its citizens. Workplace pension plans provided by employers can be traced back to the middle of the 19th century. Then, in 1919, the federal government introduced income tax legislation to encourage implementation of workplace pension plans. Concerned with increasing poverty rates among seniors, the federal government began to introduce broad-based retirement programs in the early 1950s with Old Age Security (OAS), a tax-supported income-assistance program for seniors. In 1966, the Canadian government established the Canada Pension Plan and the Québec government established the Québec Pension Plan, contributory programs intended to supplement OAS. In 1967, the Canadian government created the Guaranteed Income Supplement (GIS), a targeted tax-supported program for lower-income seniors. Since then, significant reforms have been made to the retirement income system to ensure that Canadians have adequate income in retirement to enjoy the same standard of living as when they were working and to secure the sustainability of existing programs.

As in most member countries of the Organisation for Economic Co-operation and Development, Canada's retirement income system can be characterized in terms of three main components or "pillars" (see figure 1.2). Pillar I provides a basic income guarantee for seniors through two publicly financed programs, OAS and GIS. OAS is paid at age 65 to Canadians who meet residency requirements. The maximum annual benefit is \$6,800 (2016). For those with earnings greater than \$73,800 (2016), OAS benefits are reduced and eventually eliminated. GIS is an income-tested program that provides additional income to seniors who reside

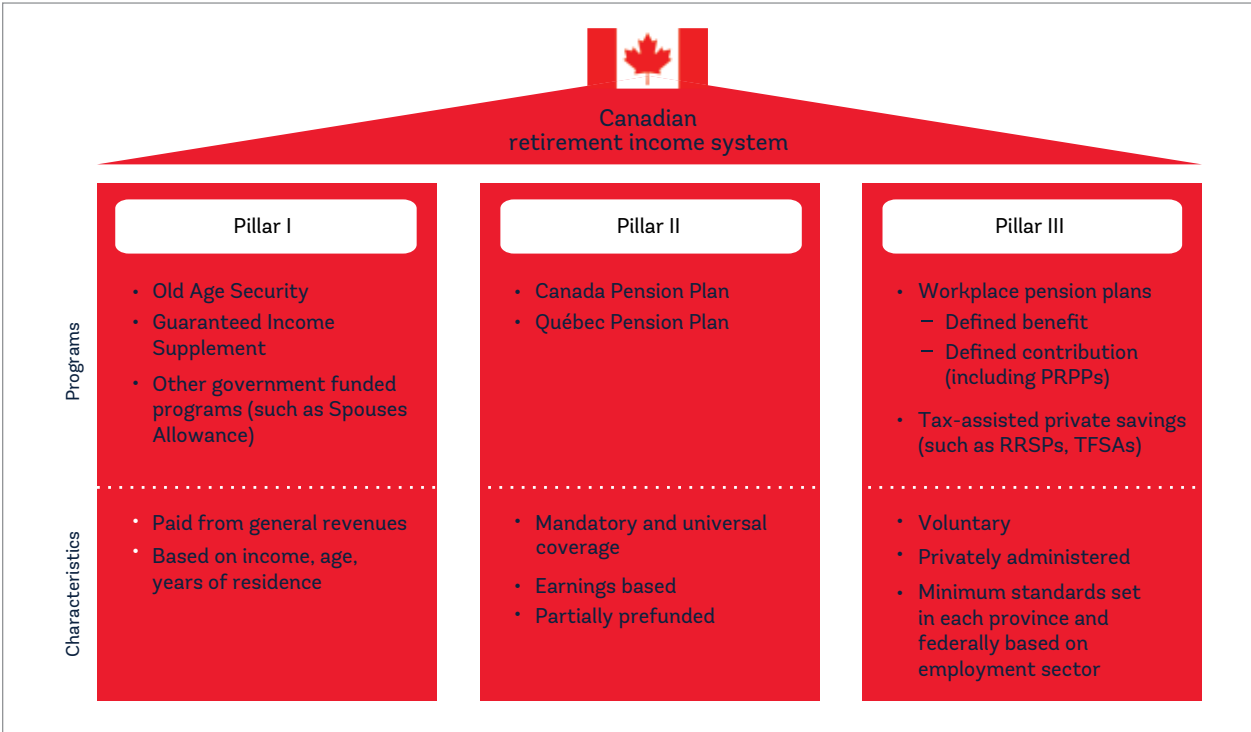
in Canada and live in lower-income households. To be eligible for GIS benefits, which assist about one-third of Canadian seniors, individuals must be receiving OAS benefits. The maximum annual GIS benefit is approximately \$9,300 (2016) for a single senior and \$12,300 (2016) for senior couples. The GIS benefit is reduced by 50 cents for every dollar of retirement income received from sources other than OAS. Seniors no longer qualify for GIS when their annual income in retirement exceeds approximately \$17,300 (2016) for single people and approximately \$22,800 (2016) for couples.

Pillar II includes the Canada Pension Plan (CPP) and Québec Pension Plan (QPP), which are mandatory earnings-related programs for the employed and self-employed in Canada and Québec. CPP and QPP provide a range of benefits including retirement, survivor, and disability benefits, as well as benefits for children of deceased and disabled contributors.

These are contributory plans that require a combined employer-employee contribution of 9.9 percent (10.5 percent for QPP) of earnings between \$3,500 and the year’s maximum pension earnings (\$56,900 in 2016), shared on a 50/50 basis. These plans aim to replace 25 percent of pensionable earnings, and the benefits are portable throughout Canada and can be drawn at age 65. They can also be drawn earlier and or later using reduced or increased payment formulas. The maximum annual retirement benefit from CPP/QPP is approximately \$13,000 (2016) annually.

Pillar III of the Canadian system consists of workplace pensions and private savings plans that allow for additional earnings replacement in retirement. These include registered pension plans (RPPs) with an employer, union, or other sponsor; individual or group Registered Retirement Savings Plans (RRSPs); and, since 2009, Tax-Free Savings

Figure 1.2: The three pillars of the Canadian retirement income system



Note: PRPP = Pooled Registered Pension Plan; RRSP = Registered Retirement Savings Plan; TFSA = tax-free savings account.

Accounts (TFSAs). All of these vehicles offer favorable tax treatment.

Although the retirement income system has generally served Canadians well in reducing the poverty levels of seniors, concern has been growing in recent years about the system's future effectiveness. As in many countries, workplace pension coverage, particularly in the private sector, has steadily declined over recent decades. Further, a number of studies, including those commissioned by federal and provincial governments, have shown that a significant minority of Canadians are not on track to maintain their standard of living in retirement.¹⁶

Against this backdrop, Canada has experienced a vigorous policy debate over nearly a decade about what actions government should take to address the retirement adequacy and coverage challenge. The expansion of mandatory public pension programs

has ended up winning the day. Until June 2016, Ontario was set to implement a new mandatory pension plan, the Ontario Retirement Pension Plan, which was expected to cover more than 4 million participants and provide up to \$13,500 annually in additional income to contributing members at retirement. Ontario's efforts to implement a provincial government-sponsored pension arrangement played a significant role in catalyzing an agreement between the federal government and the provinces and territories. In a deal that was nearly a decade in the making, the Canada Pension Plan will be enhanced effective 2019 to provide members up to an additional 8.3 percent in replacement income or approximately \$12,000 annually. Under the enhanced CPP, which will see both employee and employer contributions increase, a worker contributing to the national plan for 40 years would receive almost \$25,000 annually (figure 1.3).

Figure 1.3: Recently agreed-upon enhancement to Canada Pension Plan benefits



Note: CPP = Canada Pension Plan.



Section 2

Origins of the Canadian Pension Model

The Canadian model of public pension organization has its origins in the 1980s and 1990s. The model arguably began in Ontario and then spread across the country.

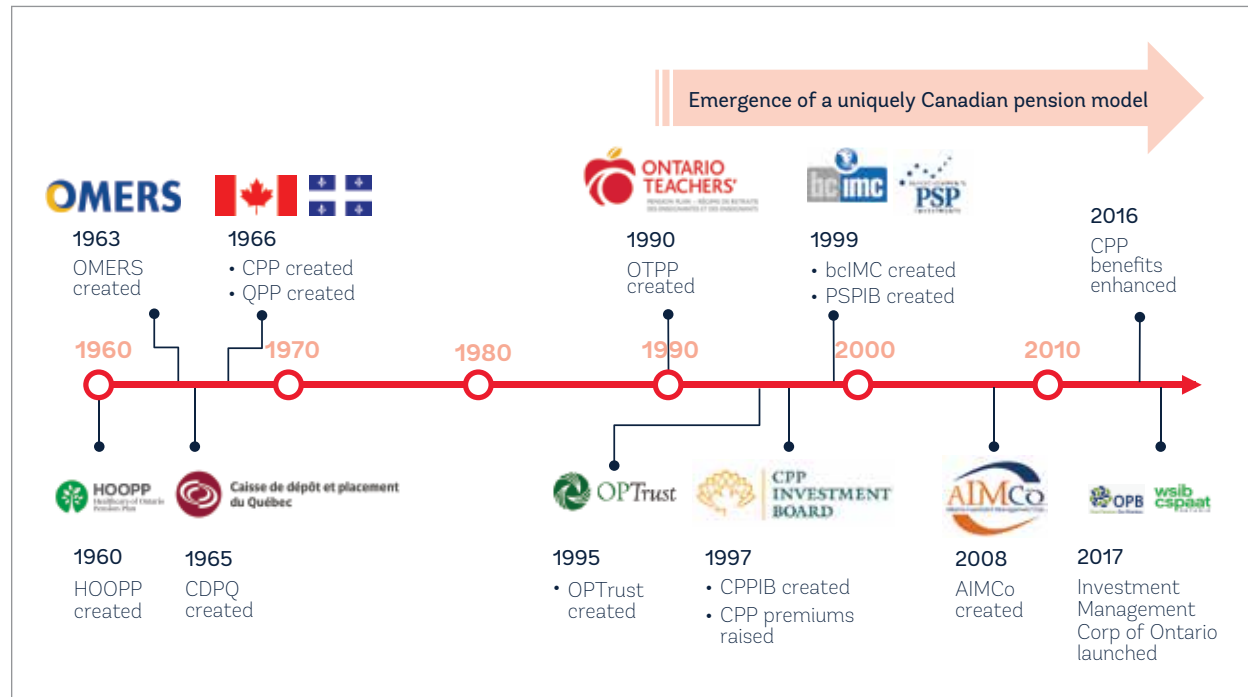
In the mid 1980s, larger Canadian public pension organizations took a variety of forms. A number of large public pension organizations—including HOOPP, Ontario Municipal Employees Retirement System (OMERS), and CDPQ—were already investing in markets and were in a process of diversifying their portfolios. Other organizations, including the organizations that would later become OTPP and OPTrust, were invested entirely in nonmarketable government debentures and had no true independence from government. The Canada Pension Plan was set up as a largely pay-as-you-go plan, and provinces were entitled to use the CPP as a captive source of borrowing.¹⁷

The late 1980s kicked off a period of significant reforms to Canada’s public pension organizations. There were two major inflection points: first, the Ontario reforms that led to the creation of OTPP; and second, the reforms to the CPP and the creation of CPPIB (figure 2.1).

Ontario’s Public Pension Reforms and Ontario Teachers’ Pension Plan

The late 1980s was a period of intensive pension reform in Ontario. In 1987, the provincial government reformed its pension benefit standards

Figure 2.1: Key moments in the evolution of the Canadian model



Note: OMERS = Ontario Municipal Employees Retirement System; HOOPP = Healthcare of Ontario Pension Plan; CDPQ = Caisse de depot et placement du Québec; CPP = Canada Pension Plan; QPP = Québec Pension Plan; OTPP = Ontario Teachers’ Pension Plan; CPPIB = Canada Pension Plan Investment Board; bcIMC = British Columbia Investment Management Corporation; PSPIB = Public Sector Pension Investment Board; AIMCo = Alberta Investment Management Corporation.

legislation, modernizing rules and introducing additional member protections. The government then turned its attention to public sector pension plans, with a focus on the pensions of teachers and public servants. These pensions were run on a partial pay-as-you-go model in which indexation was not prefunded. The government became concerned that these public sector pensions could become an insurmountable fiscal burden on government unless they were reformed. Public sector pensions had also become a contentious political issue and were the impetus for protest and intense political debate during that era.¹⁸

The government began by commissioning three expert reports—one on the investment of public sector pension funds (the Rowan Report), one on the financing of pensions for teachers and public servants (the Coward Report), and, following the first two reports, a third report synthesizing stakeholder consultations on the two previous reports and recommending a path forward (the Slater Report). The Rowan Report recommended setting up public sector pension funds as arm's-length entities independent of government and allowing those entities to diversify their portfolios by investing in markets. The Coward Report identified multibillion-dollar unfunded liabilities in Ontario's public pension arrangements and recommended a transition from a partial pay-as-you-go plan to a fully funded pension-financing model. The Slater Report identified sufficient stakeholder consensus to move forward with pension reforms that would move the plans in the following direction:¹⁹

- Joint trusteeship and governance
- Joint sharing of risks and rewards between the government and plan members
- Investment of the plan's funds in the market
- Arm's-length organizations that would operate independent of government

These recommendations eventually led to the transformation of teachers' and public servants' pensions in Ontario into three professional pension organizations: OTPP, OPTrust, and the Ontario Pension Board. The first of these to be formed, and the organization most often credited as pioneering the Canadian public pension model, was OTPP.

Several key steps were involved in establishing OTPP as an arm's-length, professional pension organization. First, the government introduced legislation that created OTPP as an independent institution, including providing for an arm's-length board. Second, a sponsorship agreement was negotiated between the teachers' unions and the government. Third, the government appointed a respected former governor of the Bank of Canada (the country's independent central bank), Gerald Bouey, to serve as the founding chair for the new organization. In accepting the role, Bouey insisted that the new organization be run independently from government.²⁰ Fourth, through a professional, arm's-length selection process, the new board chose actuary and insurance executive Claude Lamoureux to serve as the plan's founding CEO. Lamoureux envisioned a pension plan run "like a business." He moved quickly to hire an experienced executive team (including CIO Robert Bertram), invest more of the plan's assets in public equities, and modernize the plan's administration and member service, which were outdated and riddled with errors, and a frequent source of complaints from plan members.²¹

OTPP made several other pathbreaking moves following its founding years, including direct investing in private equity and infrastructure and acquiring real estate subsidiary Cadillac Fairview. With over \$175 billion in net assets, over 1,000 employees, a fully funded status, and a 10.1 percent annualized rate of return since 1990, OTPP is now well known globally as one of the world's leading pension organizations.²²

Reforming the Canada Pension Plan and the Establishment of CPPIB

In the mid 1990s, Canada's federal and provincial governments successfully passed a series of reforms to the CPP. The reforms were catalyzed by mounting evidence that the CPP was becoming unsustainable. The plan's modest reserve fund was running out, and its investments were restricted to nonmarketable federal and provincial government debt. Concerns about intergenerational inequity—heavy subsidies from younger generations to older generations—were mounting. A 1995 report from the chief actuary of Canada found that the CPP would run out of funds within 20 years if no reforms were made. The mid-1990s reforms to the CPP put the plan on a sustainable footing by raising contribution rates and reducing benefits. They also resulted in the creation of CPPIB, an arm's-length professional investment organization tasked with investing the CPP's assets. The remarkable story of how 11 governments came together to achieve these reforms has been well documented by Bruce Little in his book *Fixing the Future: How Canada's Usually Fractious Governments Worked Together to Rescue the Canada Pension Plan*.²³

Part of the reform agreed to by Canada's federal and provincial governments was to create an independent investment organization to manage the CPP's assets. Examples of other public sector funds that had recently moved to this type of model, especially OTPP, helped give policy makers comfort that such a model could work. The organization created by CPPIB's founding legislation had the following features, which continue to this day:

- Joint oversight shared between the federal government and the governments of Canada's provinces
- A board whose directors are appointed by Governor in Council²⁴ on the recommendation of the federal

minister of finance. The legislation allows the minister to establish a nominating committee to advise on board appointments, and the process also involves consultation with provincial finance ministers given the role of provinces as joint stewards of the CPP.²⁵ Only the Governor in Council may remove a director for cause.

- A single mandate to maximize long-term, risk-adjusted returns on CPP assets
- Accountability and transparency measures including regular public reporting

A nominating committee was formed to seek out the CPPIB's initial board directors. Gail Cook-Bennett, a management consultant, economist, and experienced board member who had previously served on the OTPP board, was selected as the chair. In the early days, Cook-Bennett said, the board put considerable emphasis on codifying the values of the organization: "We spent a lot of time on transparency, openness, and values, including developing a code of conduct. This very, very careful work by the governance committee served as an ideal foundation for the organization."²⁶ In those early days, CPPIB also focused heavily on earning the confidence of both the public and private sectors. Building a strong reputation across sectors was crucial, Cook-Bennett said, because many were skeptical that the organization would be truly arm's-length.²⁷

CPPIB received its first injection of funds—a cheque for \$12 million—in 1999. Based on the organization's structural comparative advantages—long-term horizon, scale, and certainty of assets—the board determined that it could add value through active investment management. Initially, regulation restricted CPPIB to passive investments in domestic equities, but the government lifted this restriction shortly after the organization's inception. CPPIB made its first private-market investments in 2001 and its first commitments to real estate and infrastructure in 2003.²⁸

Today CPPIB manages \$317 billion, employs nearly 1,400 professionals in eight offices around the globe, and has a highly diversified investment program that includes public equities, fixed income, real estate, infrastructure, private equities, and credit investments. CPPIB has earned a reputation as a best-in-class investment organization and is frequently studied by governments and pension and investment professionals from around the world, as evidenced by CPPIB's recent partnership with China around issues of pensions and aging.²⁹ As with OTPP, CPPIB's story and approach to governance and investment have been thoroughly documented elsewhere.³⁰

What Accounts for the Emergence of the Canadian Model?

Why did the Canadian model emerge in the first place? The preceding origin story leads to the following observations:

- A pension funding/fiscal crisis was the core motivation behind the creation of the reformed Ontario public sector funds, including OTPP, and the creation of the CPPIB.
- Leaders in both the public policy and pension and investment spheres were able to harness these crises and create an opportunity to build world-class organizations and enact sensible pension reforms.
- Both the Ontario reforms and the CPP reforms in the mid-1990s involved extensive public, expert, and stakeholder consultation to build alignment around a vision for reform. What could have been polarizing political issues became the subject of collaborative, constructive work among diverse leaders and stakeholders.
- As we will see in greater detail from the case studies, the experience and success of first-mover “Canadian model” institutions helped establish the necessary stakeholder comfort to create more such institutions, eventually building a vibrant pension and public investment “ecosystem” in Canada.



Section 3

Fund Case Studies

This section profiles four different examples of the Canadian pension model: AIMCo, CDPQ, HOOPP, and OPTrust. The case studies in this section highlight the similarities and differences among examples of the Canadian model. Perhaps most important, they emphasize the variety of ways in which pension organizations employing variations of the Canadian model have evolved.

Overview

The four organizations profiled share the chief characteristics of the Canadian model, as defined earlier in this report.

- **Independence.** All four operate at arm's length from government. Both key strategic decisions and day-to-day operational decisions are made by independent boards and management teams. This does not mean, however, that the organizations operate in isolation from government. As we will see from the case studies, government has a role to play with respect to each of the funds, which themselves are public sector organizations.
- **Scale.** All four have assets under management exceeding \$15 billion, allowing them to make direct investments and build talented, in-house teams that smaller pension organizations would be unable to build. Collectively, the four organizations manage about \$460 billion in assets, while supporting the pensions of roughly 6 million members.³¹
- **In-house management by professionals.** Collectively, the four organizations manage the majority of their assets in-house as opposed to through external managers. All four provide their in-house professionals with compensation that is intended to be competitive with the private sector. Each of the four organizations also makes significant direct investments in external asset classes, including infrastructure, real estate, and private equity, although not all of the funds participate in every one of these asset classes.
- **Diversification.** Each of the four funds has an investment portfolio that is highly diversified

by both asset class and geography. Each has decreased its “home bias” over time.

- **Talent.** Each of the organizations has demonstrated the ability to attract and retain world-class pension professionals and has put a great deal of emphasis on building a long-term pipeline of talent.
- **Long time horizon.** All four funds profiled view themselves as long-term investors. Their main client base consists of members of defined-benefit pension plans in the public sector, giving them the contribution certainty to invest for the long term.

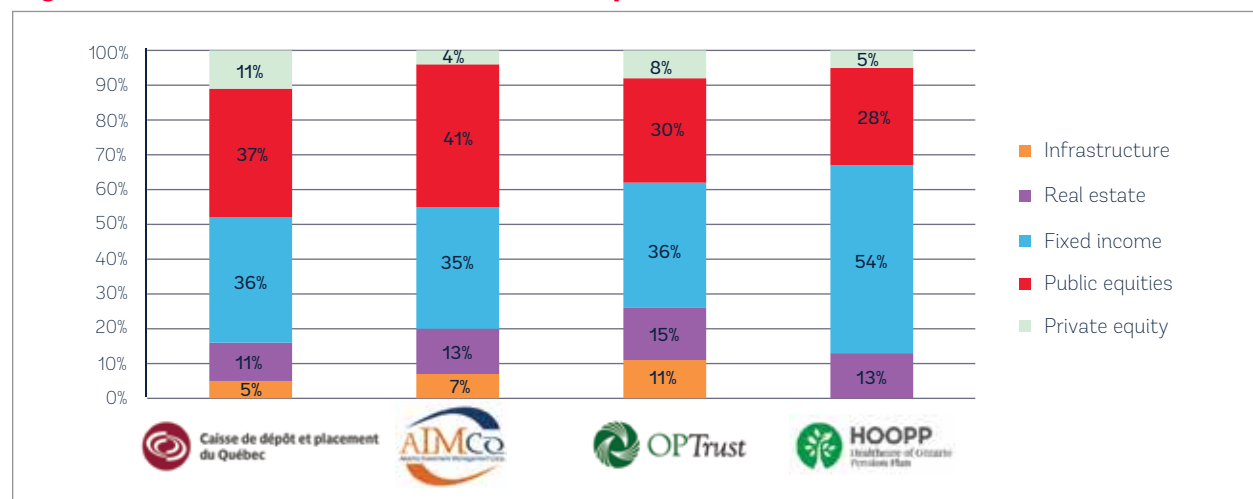
Despite the common characteristics among the four funds profiled, they also have important differences between them. Key areas of differentiation include the following:

- **Size.** The largest of the four organizations, CDPQ, has over 10 times the net assets under management of the smallest organization, OPTrust (\$271 billion vs. \$19 billion).
- **Mission and mandate.** CDPQ and AIMCo are focused strictly on asset management, whereas HOOPP and OPTrust serve as integrated pension delivery organizations, managing both the assets and the liability side of the balance sheet. The organizations also differ in their investment mandates. AIMCo focuses on maximizing long-term return on risk.³² HOOPP's and OPTrust's investment goals focus on paying pensions or liability management. CDPQ has a dual investment mandate: it seeks both to maximize return on capital and to contribute to Québec's economic development.³³

- **Asset allocation.** While each of the funds employs a highly diversified portfolio, their approach to asset allocation and portfolio construction varies considerably. HOOPP's portfolio is more heavily weighted to fixed income than the other funds profiled. Whereas CDPQ and OPTrust are putting increasing emphasis on investments in emerging markets investments (for example, CDPQ recently opened an office in India), AIMCo and HOOPP have largely kept their investment efforts to developed markets (for example, HOOPP has no employees outside Toronto). Whereas CDPQ, AIMCo, and OPTrust have invested significantly in infrastructure, HOOPP has stayed away from infrastructure as an asset class, although it does make some direct investments in real estate and private equity.
- **History and origins.** CDPQ and HOOPP are over half a century old and have had more time to mature as organizations. Both have been influenced by, and have evolved as a result of, the emergence of a distinctly "Canadian" model of pension plan in the 1990s. However, they also predated that model by a significant amount of time and were instituting some procedures well before the 1990s that

later became part of what is understood to constitute the Canadian model. These include pooling assets (HOOPP was established as a multiemployer plan for the Ontario hospital sector from the very beginning), investing in certain alternative asset classes (CDPQ began investing in private equity in 1971 and acquired its first office building in 1980), and establishing independence from government (despite the fact that its employees are in the public sector, HOOPP has always operated as a private plan, and the government has never been a sponsor of the plan). By contrast, AIMCo and OPTrust are newer entities. OPTrust recently marked its 20th anniversary and AIMCo is less than a decade old. The reasons each organization was formed also vary. CDPQ's founding was rooted in local economic development and economic independence for Québec. HOOPP was founded as a private initiative of the Ontario Hospital Association to achieve efficiencies and pension portability within the sector. OPTrust was formed out of a union sponsor's desire to have a shared say in how its members' pension plan was managed. AIMCo was founded in an effort to bring efficiencies to Alberta's pension and public asset management.

Figure 3.1: Asset mix of select Canadian pension funds



The four funds were chosen for review in this study for two main reasons. First, the variation among them will, we hope, make their experiences relevant to a wide range of global pension stakeholders, who themselves operate with a wide variety of aspirations and constraints. Readers will be able to choose the examples most relevant to their situations, considering local conditions, assets, and political dynamics (see figure 3.1). Second, as noted earlier, the four funds profiled here have been studied less than more well-known examples of the Canadian model such as OTPP and CPPIB, whose approach and evolution have been well documented in both academic and nonacademic literature.

AIMCo Case Study

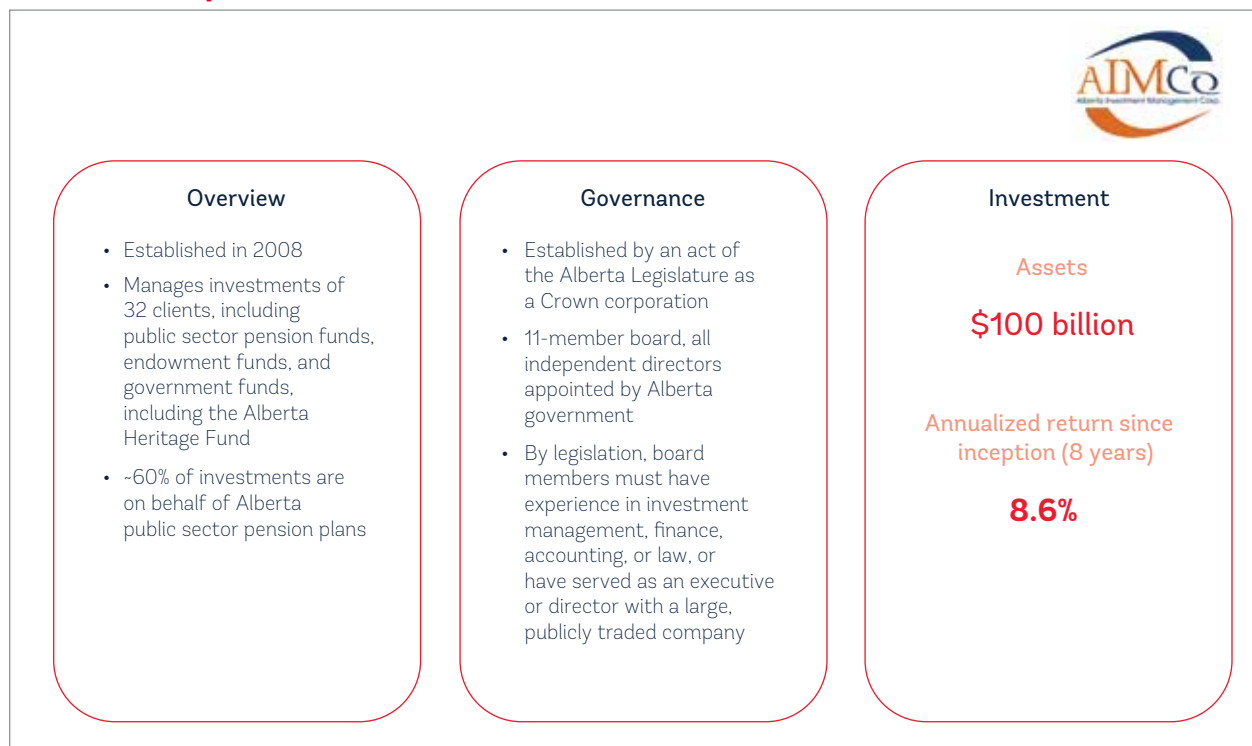
Established in 2008, AIMCo is among the newest public pension managers in Canada. Building the new crown corporation a few months before the

financial crisis presented its share of challenges, but almost a decade later AIMCo appears to be thriving.

AIMCo manages over \$100 billion in total assets, with pension assets account for almost 60 percent of the total assets, or approximately \$60 billion, making the organization the eighth largest public pension asset manager in Canada.³⁴ AIMCo has over 400 employees in four offices with its headquarters in Edmonton and satellite offices in Toronto, London, and Luxembourg.

AIMCo invests on behalf of 32 separate Alberta-based public entities, including public sector pension plans, the Alberta Heritage Savings Trust Fund (a resource revenue savings fund), endowments, government funds, and other special-purpose funds. Each of these entities has unique circumstances and investment-return requirements. This, in turn, affords AIMCo the opportunity to manage multiple client relationships. See figure 3.2.

Figure 3.2: Assets under management for the top 10 Canadian pension funds have more than tripled since 2003



AIMCo is a global investor with an active management investment strategy aimed at generating long-term sustainable returns. Since 2009, it has generated average annual returns of 8.6 percent. Expressed differently, since 2009, \$49 billion of AIMCo's growth can be attributed to growth from its net investment returns, \$4.2 billion of which was "value added" over and above relevant benchmarks (net of expenses). A significant portion of its investments—nearly a quarter of its portfolio—is allocated to illiquid markets, including infrastructure, private equity, and real estate.

To be effective in active management, AIMCo's CEO Kevin Uebelein believes there are five key prerequisites: (1) people and tools; (2) low cost; (3) appropriate risk taking; (3) stable/patient capital; and (5) proper incentives. Complementing these requirements are two essential "enablers"—scale and good governance—and two "advantages"—reasonable regulation and cooperation and risk sharing among public sector funds.³⁵

Independent governance and multiclient asset manager

The governance of public sector pension funds in Alberta can be described as both centralized and distributed. The minister of finance is technically the owner or trustee of most of AIMCo's clients. AIMCo manages the assets, and all functions related to the administration of benefits are delegated to the Alberta Pension Services Corporation. In addition, pension clients such as the Alberta Local Authorities Pension Plan Corporation and other organizations provide strategic guidance for the pension plans, including setting the investment policy and guidelines. Chris Brown, president and CEO of Alberta Local Authorities Pension Plan Corporation, AIMCo's largest client, noted that three elements are critical to making all of this work: (1) a strong board; (2) an understanding of the need for client service; and (3) AIMCo's independence from the government. Uebelein underscored the importance of a strong

board as the bedrock of supporting a world-class organization. Indeed, Uebelein identified the quality of the board as a critical factor in providing comfort that AIMCo has and would continue to aspire to be world class in orientation.³⁶

The creation of AIMCo emerged from the Capelle Report commissioned by the Alberta Finance Department in 2005 (see figure 3.3). The report examined various governance and organizational options and ultimately recommended that to achieve "investment excellence," it was important to move the investment management function outside government and establish a separate arm's-length corporation. In 2007, the government moved forward with the creation of the corporation highlighting that the goal was to improve governance, increase flexibility, and generate opportunities for greater investment returns by 25 to 100 basis points (0.25 percent to 1 percent) for Alberta's various funds.

To ensure that the Corporation would achieve the desired results, the government appointed a blue ribbon board with directors from both within and outside Alberta. One of the most important decisions that the government made was to appoint former Toronto Dominion Bank CEO Charlie Baillie as its first chair. Baillie was trusted by the government, and there was confidence that he would be able to manage the delicate governance structure. By all accounts, that was a successful choice.

AIMCo was created by the Alberta Investment Management Corporation Act as a board-governed provincial corporation. Under the act, the corporation's budget is approved by the government and it is audited by the auditor general. This would give the appearance of limited autonomy. However, since its inception, AIMCo has acted at arm's length from the government while recognizing the importance of the role of the government's oversight. This oversight, according to all of those interviewed, has not affected investment decisions, recruitment of senior executives, compensation frameworks, or other operational matters.

Figure 3.3: Key moments in AIMCo's evolution

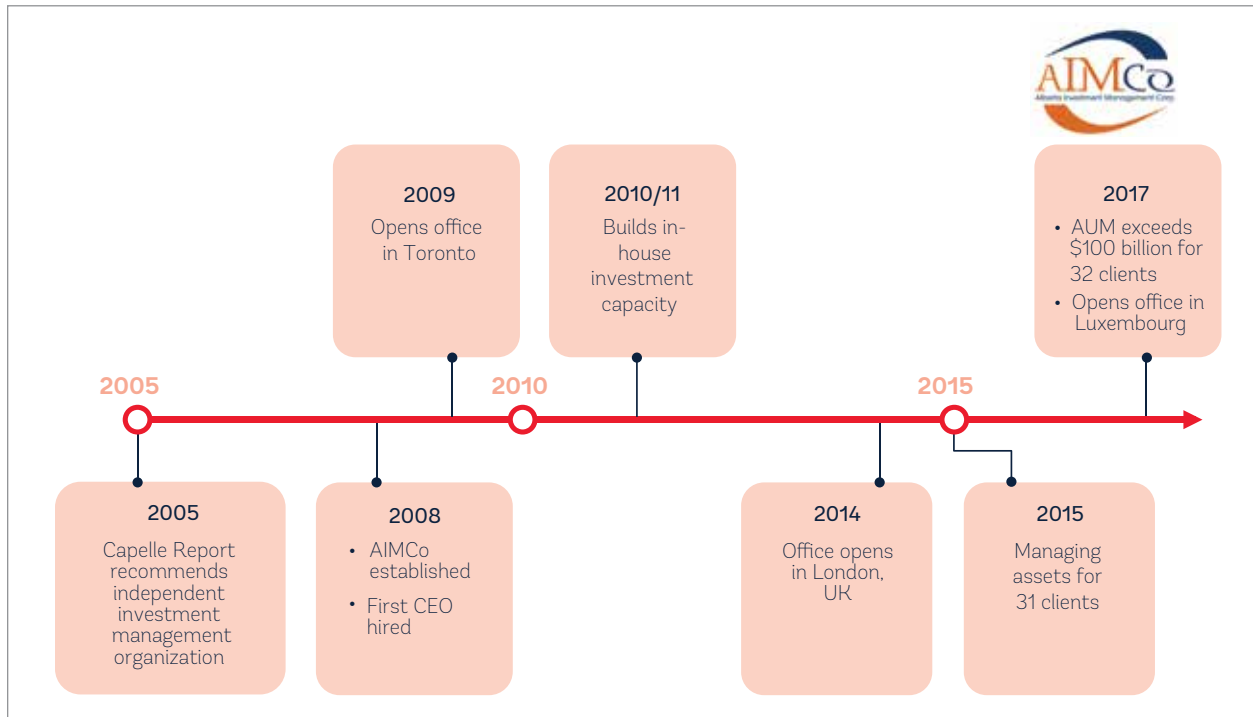
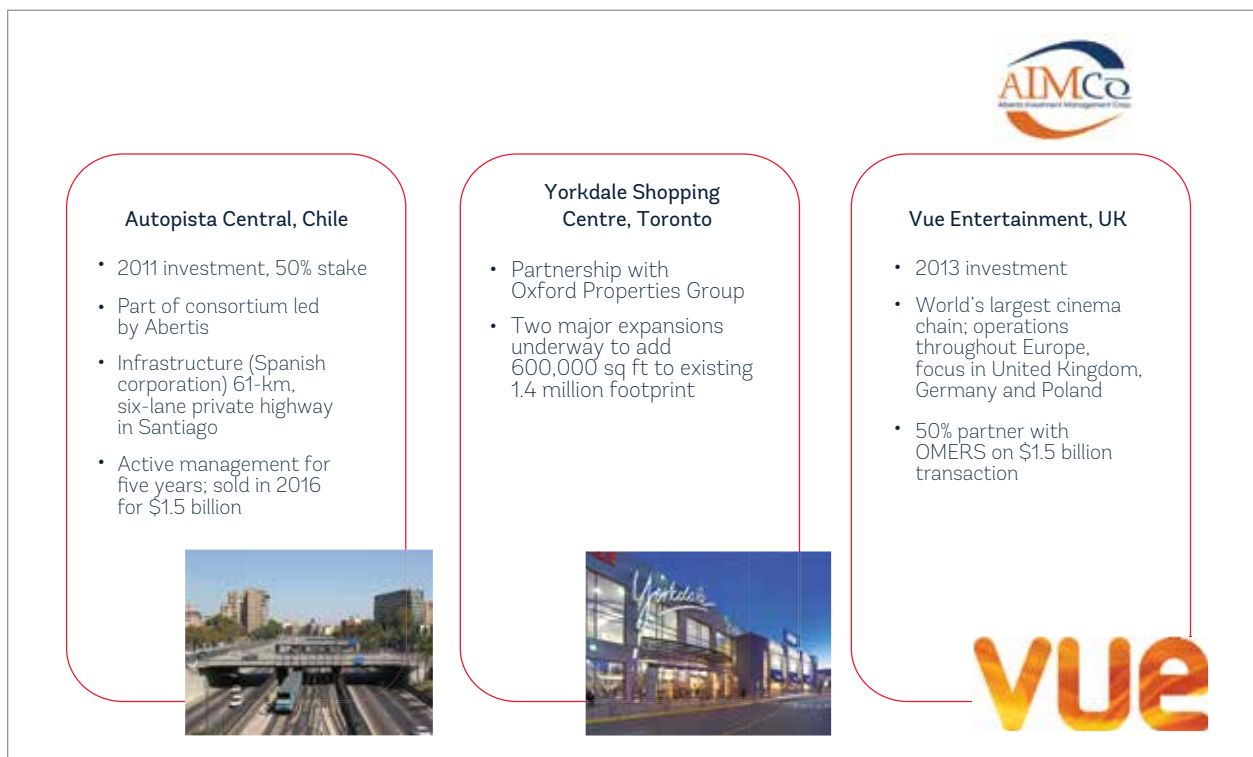


Figure 3.4: AIMCo: notable assets and recent transactions



While the focus of AIMCo in the early days was to improve investment performance, today a broader approach engages AIMCo's clients more actively in investment decisions. Under Uebelein's leadership, AIMCo has adopted a "Client First" philosophy, which he describes as "working to build a constant, multifaceted dialogue with our clients, creating optimal transparency to them regarding what we are doing and affording us with the best possible understanding of their needs and opinions."³⁷ More concretely, this means developing stronger relationships between AIMCo and its clients and having AIMCo's investment teams work more closely with their clients to develop appropriate investment portfolios that consider the risk and return characteristics so that they can meet those targets.

As AIMCo's Chief Investment Officer Dale MacMaster points out, although this is the right thing to do, the challenge that a multiclient asset manager faces is developing an appropriate asset allocation given the different investment strategies of its clients. Interestingly, MacMaster notes that AIMCo's clients are increasingly looking for less volatile, more illiquid, longer-duration investment strategies, a preference that has led AIMCo to create strategies to support those client demands.³⁸ AIMCo has always felt comfortable investing in Alberta and in the past several years has benefited from Alberta's enjoying the highest growth rate in Canada. Key drivers of investment success that MacMaster highlighted were to (1) focus on recruiting high-performing, creative, entrepreneurial staff; (2) maintain a client-centric approach; (3) approach its work with humility; (4) build investment programs (particularly in public equities) that allow access to cheap "beta," largely through thoughtful in-house management; (5) have the discipline to do some direct investing in alternative asset classes first in their "own backyard" before extending over time to the United States, Europe, and elsewhere; and (6) maintain the longevity of both strategy and the senior management teams of various investment verticals.³⁹

Attracting top talent

Before the creation of AIMCo, Alberta's pension funds were managed by a dedicated unit (Investment Management Division) within the Alberta Ministry of Finance. Although the ministry did an admirable job of managing a sizeable portfolio of assets over several years, it was thought that salaries needed to go up to attract and retain the best talent and that step required the organization to be removed from government, according to Lowell Epp, assistant deputy minister, Alberta Treasury Board and Finance (who brings the perspective of 16 years of government service).⁴⁰ An added benefit of removing the organization from government was that AIMCo no longer needed to compete for resources with other government priorities, a change that enabled it to make proper investments in new information technology systems and operations.

To become a world-class institutional investor, AIMCo recognized from the outset that it would need to have a team of top talent with global experience. This remains a priority today. Attracting top talent is commonly understood to be a critical element to building an effective in-house capacity that is expected to generate superior returns at lower cost.

AIMCo has deployed several strategies to attract, retain, and develop talent. First, for its senior executive positions and particularly for the CEO position, the board, with the assistance of external advisers, has conducted a global search to find the best and most suitable candidate. This was the case in the hiring its first CEO, Leo de Bever, who had extensive experience with Victorian Funds Management Corporation, Manulife, and OTPP. It was also true in the recruitment of the current CEO, Uebelein, who also has extensive global investment and executive experience. Uebelein noted that moving from Boston to Edmonton was not something that he had envisioned, but the unique opportunity to lead a world-class institutional investor was most appealing to him.⁴¹ Importantly, as Epp observed, there has been no interference by

the government of Alberta in the selection of either the first or the second CEO of AIMCo.⁴²

Second, AIMCo has put into place a competitive compensation structure that enables it to recruit and retain top investment, corporate, and operating professionals who are capable of managing and delivering a superior risk-adjusted return on the \$100 billion of client assets under management. The corporation's compensation philosophy follows six key principles: (1) alignment with vision; (2) pay based on performance; (3) sustained, long-term performance; (4) fairness based on market-competitive context; (5) incentives provided for successful active investment management; and (6) qualitative measures for performance. The financial elements of the compensation program include base salary, annual incentive plan, long-term incentive plan, special long-term incentive plan, restricted fund units, contributory pension plan, and health and medical benefits.

Third, the fund has been successful in retaining key talent within executive and investment teams. This stability has been invaluable not only from a corporate knowledge perspective but also in developing a positive and integrated organizational culture.

Finally, being headquartered in a city—Edmonton—that is not a major financial center presents its share of challenges for recruiting top talent in a fiercely competitive industry. AIMCo has addressed this challenge through two creative approaches. It has actively reached out to Alberta and Canadian expats who have spent several years overseas and who may be interested in returning home to consider joining AIMCo and contributing to its mandate. In addition, Uebelein has continued to support a “grow your own” approach of developing the next generation of leadership talent within the organization by providing them with opportunities to work in different and more complex areas and to

learn from more experienced professionals. Indeed, he identified the growth of its own “farm team” as critical to achieving “sustainable alpha returns.”⁴³ This approach appears to be paying dividends.

CDPQ Case Study

CDPQ was established in 1965 by an act of the Québec National Assembly (figures 3.5 and 3.6). Initially created to manage the funds of the Québec Pension Plan, it has since been entrusted with managing the funds of other public pension and insurance plans too.

Today, CDPQ has 41 clients (called “depositors”) and \$271 billion in assets under management, making it the second-largest public pension fund manager in the country, after CPPIB. Eight of the 41 depositors make up 97 percent of CDPQ's assets under management. Depositors are responsible for plan administration (collecting contributions and paying benefits), while CDPQ is entrusted with investing depositor funds, in accordance with a defined investment policy that details risk tolerance, the investment horizon, and a benchmark portfolio. CDPQ also offers advisory services to clients.

CDPQ's initial investing approach was entirely focused on bonds. The fund started to invest in public equities in 1967 and created a private equity portfolio in 1971. Through the 1970s and 1980s, CDPQ continued to diversify its holdings, entering global equity and real estate markets (figures 3.6 and 3.7). The 1990s saw further diversification of CDPQ's real estate investments and a legislative change allowing CDPQ to increase its allotment to equities from 40 percent to 70 percent. In the late 1990s, CDPQ became one of the first Canadian pension funds to invest in infrastructure by investing in the Highway 407 toll road in Ontario. As noted earlier, over the past several years, CDPQ has been increasing its investments in emerging markets.

Figure 3.5: Profile: CDPQ

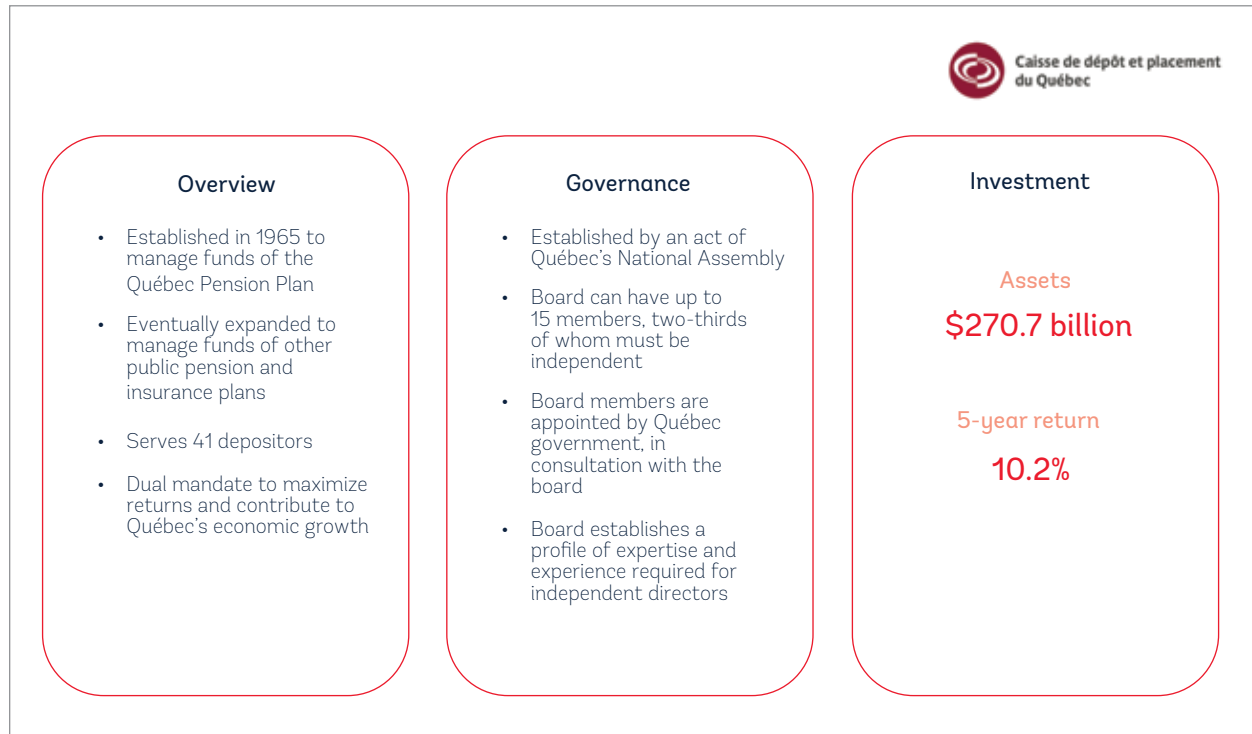


Figure 3.6: Key moments in CDPQ's evolution

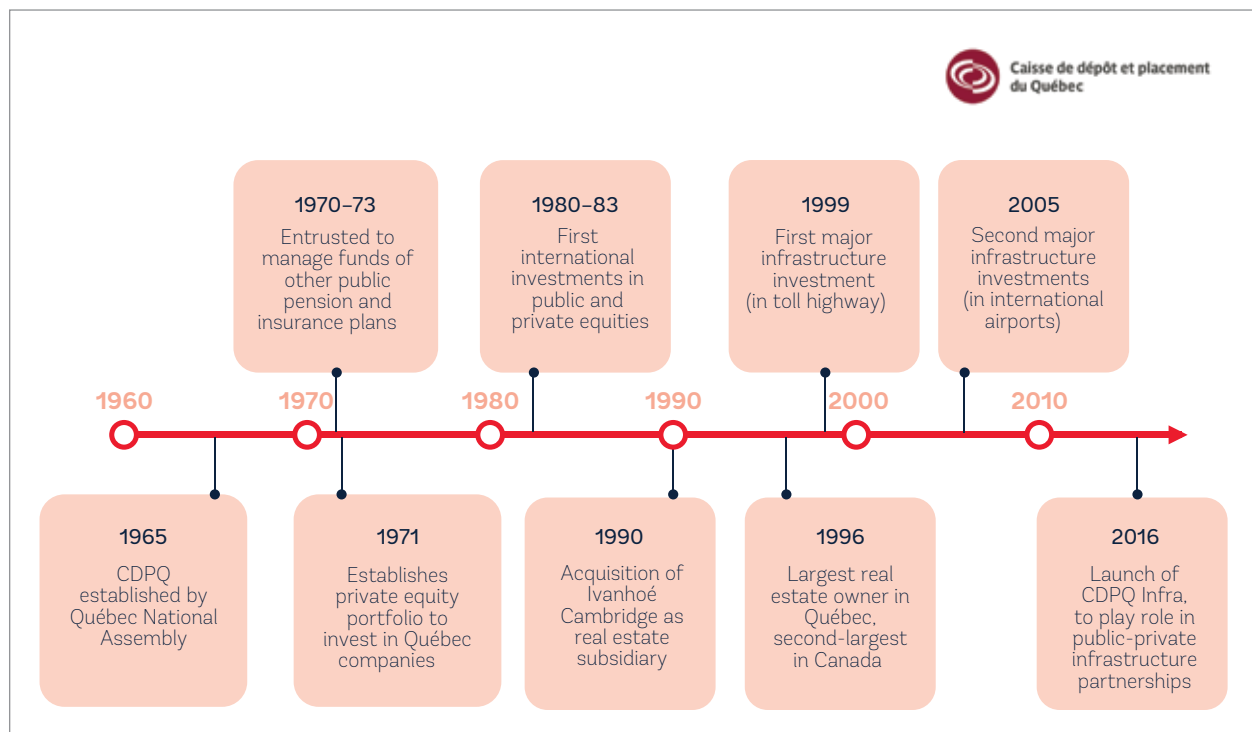


Figure 3.7: CDPQ: notable assets and recent transactions



Dual mandate

CDPQ is unique among Canadian pension funds for its dual mandate: to both maximize returns and contribute to Québec's economic development. CDPQ's approach to investing in Québec comprises three themes: (1) investments in the growth and globalization of small, medium, and large corporations; (2) investments in innovative companies and ecosystems and the next generation of entrepreneurs; and (3) high-impact real estate and infrastructure projects.

Although some have argued that an economic development mandate could interfere with a pension fund's independence, CDPQ operates at arm's length from government (a principle enshrined in its founding legislation) and CDPQ's performance has generally matched that of its peers, including a 10.2 percent average annual return for the past five years.

Notably, CDPQ uses the same return criteria across all its investment portfolios, including its Québec investments, and does not set specific targets or percentages for investments in Québec. The government of Québec has access to its own economic development agency, which is separate and apart from CDPQ, should it wish to directly make investments in the province that are not tied to financial returns. As stated by Robert Tessier, chair of CDPQ's board, "We don't see a conflict between our two mandates. Our investments in Québec perform well. Québec companies know us well, they know CDPQ will be here for the long term, and that makes us a first choice as investors."⁴⁴

According to Michael Sabia, CEO of CDPQ, "We use our expertise and networks to support the growth of medium-sizes businesses, accelerating their success and expansion beyond Québec. Both

our depositors and Québec businesses benefit from our investments in the Québec economy. That's why generating returns and contributing to Québec's economic development go hand in hand."⁴⁵

Not surprisingly, CDPQ has become a specialist in Québec business investing. By focusing on its home, CDPQ has developed a deep understanding of all the business players in the province and is able to identify (and get access to) the best deals for its depositors. CDPQ has developed a good reputation as a long-term, growth-seeking investor.

Infrastructure investing at CDPQ

Starting in 1999, CDPQ became one of the first Canadian pension funds to invest in infrastructure assets, with the purchase of a toll highway in Ontario. In 2005, CDPQ followed up with investments in several international airports. Since CDPQ refocused on long-term investing in the real economy—a priority for Sabia, the current CEO—infrastructure investments have more than doubled, from \$5.8 billion in 2011 to a \$15 billion portfolio today that includes ports; airports; highways; wind farms; oil, gas, and electricity transmission and distribution systems; water distribution systems; and passenger transportation systems. Notable infrastructure assets include the Eurostar high-speed train service, container ports in Australia and Canada, Heathrow Airport, a \$2.8-billion coinvestment consortium platform in Mexico, and a natural gas pipeline network in the United States.

This emphasis has resulted in greater asset diversification, both geographically and by sector. In particular, CDPQ has increased exposure to the United States and Australia, as well as to public service infrastructure, targeting assets that build productivity and strengthen a nation's ability to supply global goods and services.

CDPQ's infrastructure program is 100 percent direct, and the organization has spent considerable

time and energy recruiting a team of infrastructure experts to build its portfolio. Another crucial success factor has been finding the right partners for long-term investments.

Macky Tall, CDPQ's executive vice president of infrastructure and CEO of CDPQ Infra, offers the following advice to emerging economy pension funds looking to invest in infrastructure:⁴⁶

- Develop strong in-house teams that can understand the drivers of value and regulatory risk.
- Find partners with strong local and sector knowledge who can create value from an operational perspective.
- Take a long-term macroeconomic perspective on the countries you invest in.
- Ensure there is a stable and transparent framework for private investment.

CDPQ Infra

To deepen CDPQ's investments in infrastructure assets, CDPQ created a new subsidiary, CDPQ Infra, in 2015.

CDPQ Infra is a unique, vertically integrated model for investing in and operating greenfield infrastructure worldwide. The value chain begins with a government identifying certain infrastructure needs. CDPQ identifies projects that meet its commercial criteria, submits a proposal to the government, and then assumes full responsibility for the project, including design, build, financing, maintenance, and operations. CDPQ Infra may in turn decide to syndicate the financing.

The partnership aims to generate value for both parties, allowing governments to move significant infrastructure projects off their balance sheets while giving CDPQ an opportunity to invest in commercial projects that generate returns for depositors.

The first project proposed by CDPQ Infra is the Réseau électrique métropolitain, a 67-kilometer

light-rail transport system running through the greater Montreal area, connecting several suburbs and the airport through the downtown of the city. The estimated cost of the project is \$6 billion, and CDPQ Infra has proposed a CDPQ investment of 51 percent, with the remaining shares owned equally between the Québec and federal governments. CDPQ Infra estimates a return on the investment of between 8 percent and 9 percent.

Lessons from the global financial crisis

During the global financial crisis, CDPQ suffered heavy losses, which led to a significant amount of public attention being focused on CDPQ.

Two key lessons emerged from this episode: the need to better manage risk and the importance of proactively managing CDPQ's relationships with stakeholders. As explained by Jean Michel, executive vice president for depositors and total portfolio, "We had created silos in different asset classes. ... One of the side effects of the silos was that everyone was increasing risk at the same time."⁴⁷

As part of significant changes to CDPQ's investment process, Sabia was appointed the new CEO in 2009. With significant experience as an executive in two industrial companies, Sabia began to reorient CDPQ toward a business owner mindset focused on long-term investing to reduce risk.

Key to this new approach was broadening the focus of investment teams beyond financial statements and analysis and having them develop an in-depth understanding of business fundamentals—and the sources of long-term value creation—in their respective industries. As a result, CDPQ has reoriented to invest more in assets rooted in the "real economy" and away from synthetic instruments and financial engineering. CDPQ now invests from a bottom-up approach, investing much more heavily across a smaller number of equities rather than starting with an index and increasing or decreasing

weights. CDPQ began converting its portfolios to this approach in 2012 and targets having 80 percent of its assets managed in this style.

This investment mindset has been complemented by a new approach to recruiting and development, with CDPQ hiring experienced operators who bring a deep understanding of their fields to the investment process.

Another key lesson from the global financial crisis has been the need to break down the silos across different asset classes that, in the run-up to the financial crisis, magnified CDPQ's risk exposure. Today, risk staff is embedded across all verticals and deals as an integrated risk function, highly integrated in the investment decision-making process.

Reflecting this approach, CDPQ has transformed its investment committee into an "investment-risk committee" that encourages debate between the investment and risk teams. CDPQ has also reevaluated its approach to measuring risk, shifting from a focus on shorter-term volatility to an understanding of core strengths and weaknesses and of the financial and nonfinancial risk factors that could lead to permanent loss of capital.

In the aftermath of the global financial crisis, CDPQ has focused more on managing the expectations of various stakeholders, doing proactive work to ensure they have a stronger understanding of CDPQ's strategies, especially during inevitable periods of downturn. Michel explains the dangers of failing to manage such expectations: "In the past, we have made changes and reconsidered our strategies during down markets, and that can lead to instability. We are doing our best to avoid this kind of problem in the future, managing expectations and [doing] proactive work to gain trust."⁴⁸

As Sabia puts it, "The world right now has a lot of risk, geopolitically, in particular, and we will continue to build a portfolio that we call an 'all-terrain' portfolio. We're looking for stability."⁴⁹

HOOPP Case Study

History and evolution

HOOPP was established in 1960 by the Ontario Hospital Association (OHA) with the goal of offering a uniform, portable pension to all hospital workers in Ontario (figure 3.8). Before HOOPP was created, Ontario hospitals varied in the retirement arrangements offered to their employees. Some offered no retirement plan whatsoever. At its inception in 1960, HOOPP was one of Canada's first multiemployer pension plans, with 71 employers, fewer than 10,000 members, and \$9 million in assets. During its first 33 years, the plan was overseen solely by the OHA through a board of trustees, originally operating as part of the OHA. The plan evolved incrementally during this phase, gradually building a team that could oversee the plan and beginning to bring investments in house. The HOOPP fund topped the \$1 billion mark in 1980 and, by the early 1990s, had reached nearly \$8 billion.

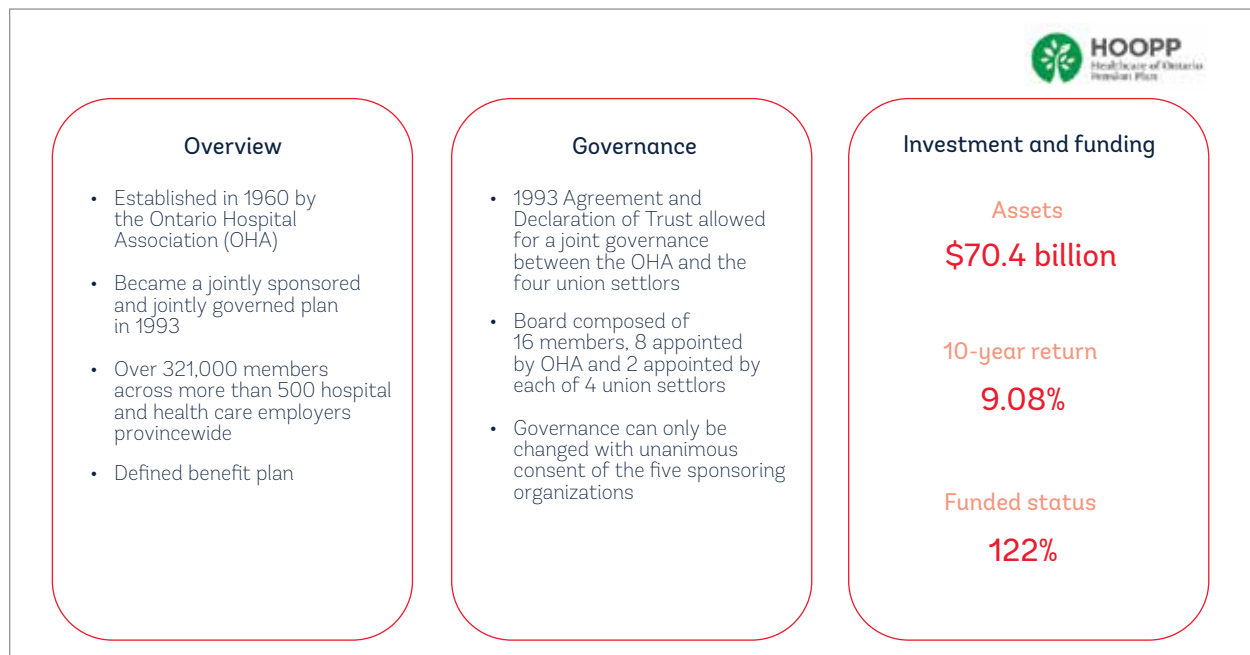
HOOPP's two most significant evolutions arguably occurred during the 1990s and the prefinancial crisis period of the 2000s. The evolution during the 1990s transformed HOOPP's governance structure, whereas the evolution during the 2000s transformed HOOPP's investment program (figure 3.9).

Governance model

In 1993, HOOPP became a jointly sponsored pension plan, an entity that was truly independent from its sponsoring organizations. It transitioned from an organization that was sponsored solely by an employer association, the OHA, to one that was also sponsored by four major unions in the Ontario health care sector: the Ontario Nurses' Association, the Canadian Union of Public Employees, the Ontario Public Service Employees Union, and the Service Employees International Union.

According to Dan Anderson, a HOOPP union-side trustee and vice-chair who has been involved with the plan's governance since 1989, a number of factors precipitated HOOPP's transition to joint sponsorship and governance:⁵⁰

Figure 3.8: Profile: HOOPP



- Reforms to pension standards legislation in the late 1980s had created a provision for joint governance.
- The health care unions launched a complaint to the pension regulator demanding joint governance.
- The provincial government's desire to achieve sectorwide agreements to constrain compensation created a greater willingness to negotiate a joint governance agreement, HOOPP's Agreement and Declaration of Trust.
- HOOPP's plan document contained a critical provision—the “contribution corridor”—which provided both certainty and perceived fairness on both sides about contribution rates and how benefit enhancements would be funded

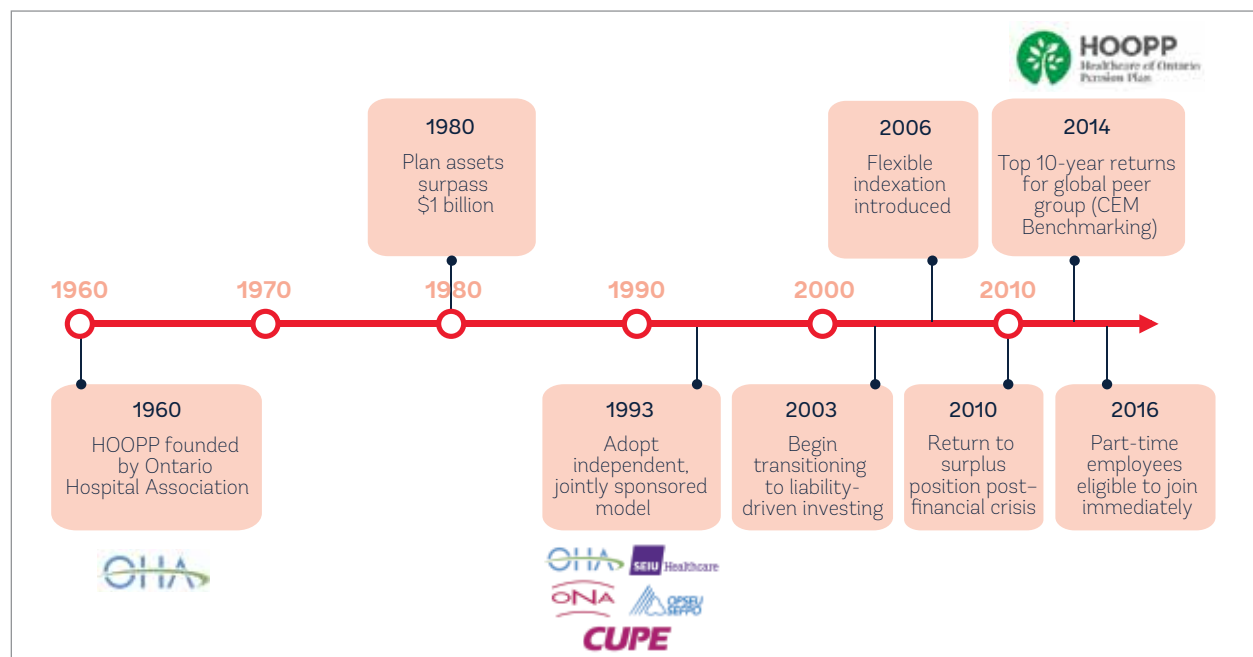
In addition to the move to joint sponsorship, the 1990s also saw HOOPP move to an integrated management structure. Previously, HOOPP's administration had been managed separately from its investments. Each side of HOOPP's balance sheet had its own manager and governance structure. During the 1990s the organization transitioned to a

single plan CEO, responsible for all aspects of plan management, reporting to a single board of trustees.

Today, HOOPP's governance structure has the following characteristics:

- The board of trustees has 16 members—8 appointed by the Ontario Hospital Association and 2 each appointed by the four sponsoring unions. Neither the union-appointed trustees nor the management-appointed trustees represent a majority on the board, and so every decision must represent at least some agreement between trustees appointed by both labor and the Ontario Hospital Association. In the case of a deadlock, there is a dispute resolution provision whereby the Chief Justice of Ontario would appoint a 17th trustee who would break the tie. The provision has never been used.⁵¹
- The board members represent a mix of backgrounds, including hospital administration, labor relations, asset management, and business. Today, the board is a hybrid model

Figure 3.9: Key moments in HOOPP's evolution



that combines pension-specific expertise with expertise in the sponsoring organizations and their members.

- The fundamental governance structure can be changed only with the unanimous consent of the five sponsoring organizations.
- The board is unicameral, meaning it has responsibility for both plan management (administration, investments) and plan design (contributions, benefits, funding). This is unusual within the Canadian model. When the plan has a surplus or deficit, the trustees must decide what, if any, changes should be made to benefits, contributions, or plan assumptions

The plan is set up as a private trust, governed by trust law principles, and was not created by legislation.

Several of the interviewees for this case study indicated the governance of HOOPP has been very highly consensual between labor- and Ontario Hospital Association-appointed trustees.⁵² This is especially noteworthy given that the demand for joint governance had originated in an adversarial context: the threat of litigation by the unions. Asked what factors had contributed to this culture of consensus, interviewees pointed to several key elements:

- The plan defined itself as an independent business with a single mission: delivering on the pension promise. This has helped focus the board and management team on a singular objective.
- The plan's structure as a private trust encourages board members to bring a fiduciary perspective, rather than a labor- or management-side outlook, to their HOOPP work.⁵³
- HOOPP's founding chair, Cliff Nordal, although appointed by the employer sponsor, was seen as fair-minded by the union side and not there solely to advance employer interests.⁵⁴
- The unicameral structure of the board means that board members must come to plan design

decisions together, including having to agree on such potentially contentious issues as how to deal with a plan deficit, what to do with a plan surplus, and whether to make indexation contingent on plan performance.

- The plan's strong performance has created a sense of shared success and pride in the plan.⁵⁵
- Perceived political and regulatory threats to the plan have served as a unifying force, leading both union and Ontario Hospital Association sponsors to rally in the plan's defense.⁵⁶

Liability-driven investing

HOOPP's governance evolution during the 1990s was followed by a transformation of its investment program in the 2000s. The crux of this change was a shift toward liability-driven investing (LDI). An early adopter of LDI, HOOPP has now embedded a focus on liabilities throughout its investment program and investment governance.

HOOPP's journey toward a liability-driven approach began around the time of the dot-com crash of the early 2000s. "We went from a big surplus to being materially underfunded in less than two years," said CEO Jim Keohane, who led HOOPP's transition to LDI. "Both sides of our balance sheet moved against us—equities crashed and interest rates dropped. We realized that the disconnect between our assets and liabilities was one of the biggest risks to the plan."⁵⁷ The management team began assessing the main risks to the plan's funded status.

Employing stress tests and other analyses, management identified three main risks: equity risk, inflation risk, and interest-rate risk. The board concluded that the plan had both too much equity risk and too much inflation risk. In 2007, the plan took action to reduce these two risks. The fund's equity weighting was decreased by 30 percent, and this capital was redeployed in real estate, real-return bonds, and nominal bonds.⁵⁸ During this transition, HOOPP moved from a 60 percent

equities/40 percent fixed-income allocation to a 46 percent/54 percent allocation. The move to liability-driven investing also increased HOOPP's use of derivatives, including futures contracts, options, and swaps, to help the plan manage risk and increase value-added returns (figure 3.10).

"People often think of LDI as a full hedge of the liabilities," said Marlene Puffer, HOOPP trustee and asset-liability management committee chair. "But that's not what it means at HOOPP. We are looking for ways to get paid by the market to reduce risk."⁵⁹

HOOPP weathered the global financial crisis better than most pension plans, losing 12 percent in 2008 compared with the 15–25 percent losses that other large pension funds sustained during that year. The plan avoided exposure to U.S. subprime mortgages and to nonbank-issued asset-backed commercial paper. HOOPP's timely reduction of its equities allocation by 14 percentage points in 2007 protected roughly \$2 billion in asset value. Thanks to these decisions, and to its positive-funded status before the crisis, HOOPP was able

to return to a surplus position by 2010 without increasing contribution rates.

HOOPP has since deepened its approach to liability-driven investing. Material changes have included these two strategies:

- The HOOPP fund has been divided into two separate portfolios: a "return-seeking" portfolio and a "liability hedge" portfolio. Largely derivatives based, the return-seeking portfolio comprises public equities, private equity, corporate credit, a long-term option strategy, and a variety of other return-seeking strategies. The liability-hedge portfolio includes short-term assets, nominal bonds, real-return bonds, and real estate.
- Investment policies and procedures have been reoriented to focus on an LDI approach, framing the policies in terms of a risk budget and risk appetite, rather than a more traditional asset-weight-based approach. The board has an asset-liability management committee, not an investment committee.

Figure 3.10: HOOPP implements its LDI strategy through a two-part portfolio



Figure 3.11: HOOPP: notable assets and recent transactions



Current outlook

Today, HOOPP serves over 321,000 members, manages over \$70 billion in net assets, and has a funded status of 122 percent. It is the pension provider for over 500 employers in health care in Ontario. HOOPP has built a large in-house team of several hundred professionals, all of whom are housed within a new HOOPP-owned office tower in downtown Toronto. Unlike other plans profiled here, HOOPP has not yet opened an office outside Canada. HOOPP's scale has allowed it to keep costs to 19 basis points for investments and 30 basis points overall. HOOPP has also delivered very strong annualized investment performance of above 9 percent over the past 20 years. In 2014 CEM Benchmarking recognized HOOPP for having the highest 10-year net returns of 124 global peer funds.⁶⁰ See figure 3.11 for examples of recent transactions.

OPTrust Case Study

OPTrust is the 14th largest pension fund in Canada with assets under management of \$19 billion supporting approximately 90,000 members. Although OPTrust is relatively new—just over 20 years old—its roots can be traced back to the Public Service Superannuation Fund (and subsequently the Public Service Pension Plan), which was created in 1920. The plan was spun off into a separate entity in the mid -990s, a few years after the creation of OTPP.

The plan was established by a trust agreement by its two sponsors, the government of Ontario and the Ontario Public Service Employees Union (OPSEU) in late 1994, and OPTrust became operational in 1995. The plan's creation was rooted in OPSEU's longstanding desire to have a greater say over its members' pensions.⁶¹ It was spurred into reality

through a high-stakes labor negotiation between public sector unions and the government during a time of fiscal restraint. The government put a jointly trustee pension plan on the negotiating table as a concession to OPSEU, and the union accepted.⁶²

The plan's governance structure was modeled from the HOOPP Agreement and Declaration of Trust. As noted earlier, HOOPP had adopted an independent, jointly sponsored model in 1993 and OPSEU, also a sponsor of HOOPP, was familiar with that governance framework. The plan/fund was created to provide members and pensioners a say in their plan through a joint trusteeship. The joint sponsorship means that OPTrust members and the Ontario government share equally in the plan's/fund's financial risks and rewards. See figures 3.12 and 3.13.

Today, the majority of OPTrust members are current and former employees of the Ontario public service, including several government agencies. As a result of an agreement reached between the

sponsors in January 2013, OPTrust has been able to expand its membership by admitting certain classes of employees whose employers deliver a public service or perform a public function.

OPTrust is a global investor with offices in Toronto, London, and Sydney. Its investment mandate focuses on achieving the investment returns needed to fund members' and retirees' pensions decades into the future. OPTrust views itself as a long-term investor, and this is reflected in its asset allocation. It diversifies across asset classes and different geographies to achieve its objectives. This approach aims to generate the funding target return over a long-term horizon, while avoiding substantial negative returns in the short term.

Along with strong governance and long-term sustainability, another key priority for OPTrust is service excellence. The organization has been recognized for its personalized and proactive service in helping members make informed decisions about their pensions. This has resulted

Figure 3.12: Profile: OPTrust

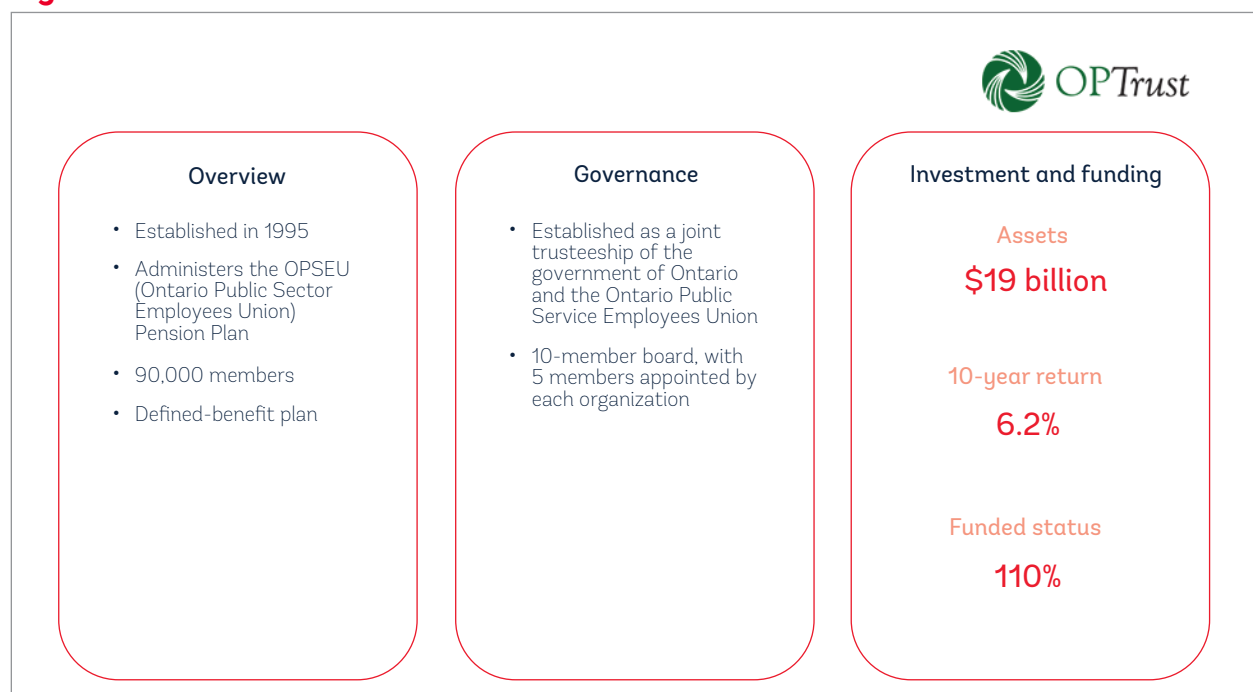
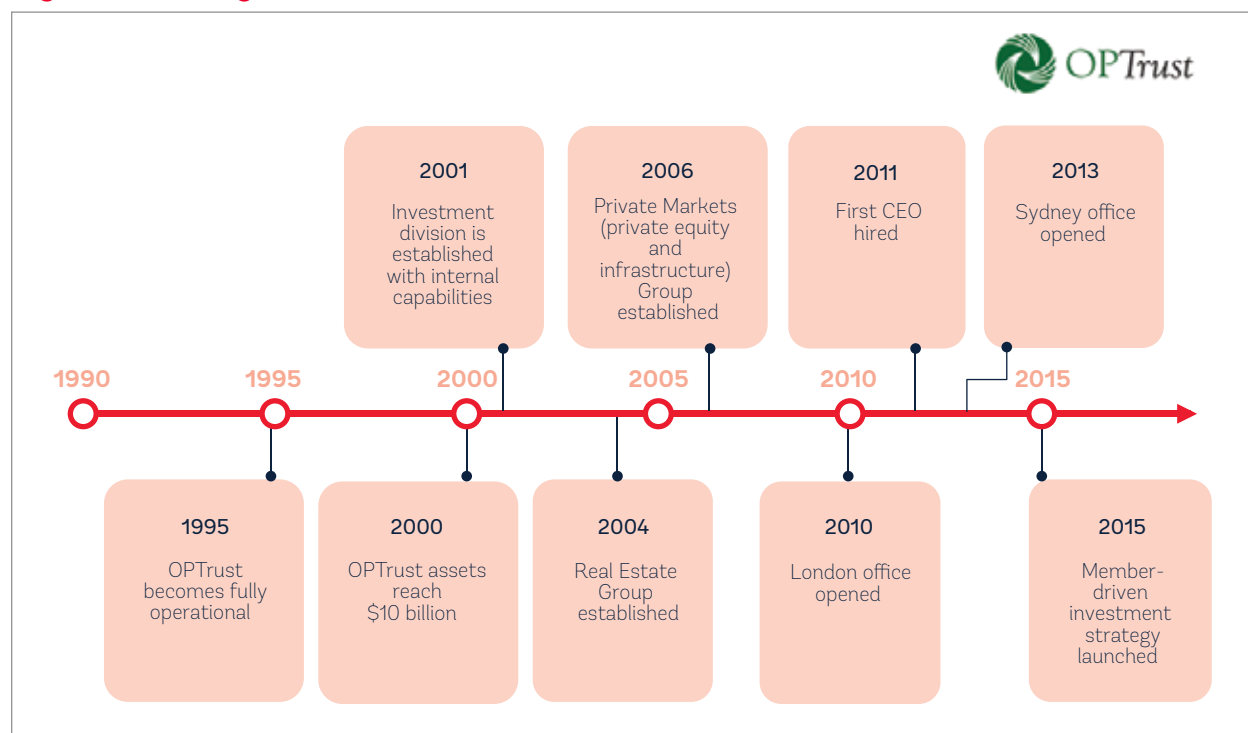


Figure 3.13: Key moments in OPTrust's evolution



in consistent strong overall member satisfaction ratings. To ensure the high quality of service, in 2016 OPTrust embarked on a multiphase project to upgrade its pension administration system and enhance its web capabilities.

Among Canadian pension plans, OPTrust has distinguished itself as an active participant in public policy debates and broader industry issues, advocating on matters such as retirement security policy, responsible investing, and climate change. It also has a keen interest in investing and forming partnerships in emerging markets.

Over the past decade, OPTrust has undertaken significant changes to both its governance structure and investment philosophy and strategy. This may be the result of the natural evolution of a relatively young pension plan. More important, though, the fundamental changes have arguably made OPTrust a more effective, stronger, and more sustainable plan.

An evolving governance model

OPTrust's governance structure has evolved differently from that of most pension funds. The governance model, especially in the plan's early years, has been tightly linked to a key reason for the plan's founding: the union sponsor's desire for a greater say in how its members' pensions were being managed. The ability to negotiate and establish the organization in less than one year reflected a strong commitment by OPSEU leadership to create a plan for its members at a time when sentiment for joint trusteeship was gaining political support. This commitment instilled a more hands-on approach by the board of trustees in the initial years and has shaped and distinguished the organization from other jointly sponsored pension plans.

OPTrust is governed by a 10-member board of trustees, five of whom are appointed by OPSEU and five by the Ontario government. While the sponsors are responsible for the plan (including

any changes to the benefit structure or contribution rates), the board of trustees is the plan administrator and is responsible for the overall administration of the plan and the management of the assets.

The board carries out its work through four standing committees: the governance and administration committee; the audit, finance, and risk committee; the investment committee; and the human resources and compensation committee. The standing committees operate under prescribed terms of reference and report to the board on matters within their mandate. In addition, the board has established an adjudication panel to review matter of dispute between plan members and pensioners and management regarding eligibility, benefit entitlements, or other pension-related rights issues under the plan.

From the outset, the sponsors made a conscious decision to have a jointly trustee model of governance with each sponsor appointing five members and with the board serving as the plan administrator, owing a fiduciary duty to the plan members. Unlike the boards of some other Canadian funds, the OPTrust board has been primarily a representational board. The government sponsor has tended to appoint a mix of senior civil service executives and retired executives with pension, investment, financial, and administration experience. OPSEU has tended to appoint active and retired public service employees with different backgrounds and experience in the Ontario public service.

In more recent years, a greater emphasis has been placed on selecting board members with specific skill sets to manage the significant size of the fund, the complexity of investment strategy, the importance of technology for administration, and the delicate relationships that need to be managed. OPTrust's experience demonstrates that, if done properly, a representational board can add significant value to a fund.

Another unique aspect of OPTrust's governance is that, when it was established in 1995, the board adopted a management structure that included two senior executives—the chief administration officer (CAO) and the chief investment officer (CIO)—at the head of the organization. Rather than have one chief executive officer accountable to the board, the CAO and CIO were independently accountable to the board. The board effectively assumed the role of the CEO with the support of the two senior executives and the rest of the management team. The board also retained the services of expert advisers such as legal counsel, actuarial support, an investment adviser, and a compensation adviser.

The two-part senior management structure was intended to serve as a check and balance in the system, so that no single individual could control all aspects of the operation. It was also a system that recognized the diverse business activities within the pension plan—administration and investment management—with a view to giving equal weight to each.

Around the time of the global financial crisis, there was considerable discussion about the governance structure and, in particular, the relationship between the board and management. The board retained a consultant to review the governance structure and propose options, including a model with a single CEO accountable to the board. After an in-depth search, in April 2011 the board hired its first CEO. Although the initial transition to this model proved difficult, OPTrust now appears to have struck the right balance between board and management responsibilities, in the process alleviating considerable pressure on the board that resulted from having to do everything from oversight to day-to-day management. OPTrust President and CEO Hugh O'Reilly, then the board's legal counsel, said that the absence of a CEO proved to be a real challenge during a time of crisis such as in 2008–9.⁶³

OPTrust's governance model has continued to evolve. The board has been delegated to the CEO broad management responsibilities that include managing day-to-day affairs while the board sets the strategic direction and carries out oversight and monitoring responsibilities. The board approves the structure of the executive team, which the CEO is responsible for appointing. Further, the CEO is accountable for the delegated portfolios. The board sets the compensation framework with the CEO recommending annual payments within the approved mandate.

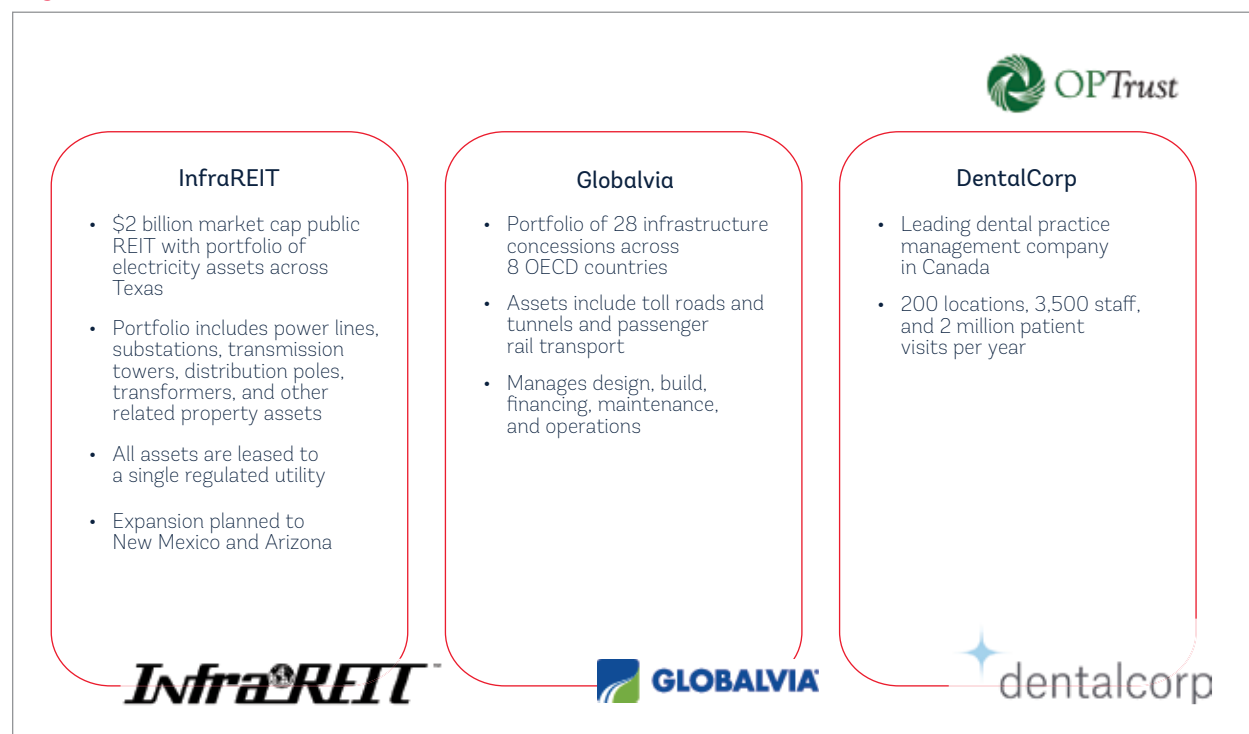
Investment strategy: From asset allocation to risk allocation

Since its inception, OPTrust has generated an average annual investment return of 8.4 percent, exceeding the fund's long-term target rate of return of 6.15 percent. Asset allocation has been a primary driver of the fund's long-term investment performance, and OPTrust is diversified across asset classes and

investment strategies. The fund's asset allocation has remained relatively stable over the years with the largest change being in investments in alternatives (real estate, infrastructure, and private equity). Even relative to the other major Canadian public pension plans, OPTrust has a high portion of its total assets in alternative assets (38 percent).

OPTrust's alternative asset investments include class "A" buildings in Toronto, a shopping center in Hawaii, intermodal freight transportation services in Newfoundland and Labrador, and infrastructure investments such as toll roads and passenger rail transport in eight member countries of the Organisation for Economic Co-operation and Development. To execute its investment strategy, OPTrust has built an extensive team of investment professionals and has established a strong presence in London and Sydney. The fund combines robust internal investment capacity with a roster of external managers to generate a risk-adjusted return that protects its members (figure 3.14).

Figure 3.14: OPTrust: notable assets and recent transactions



Note: REIT = real estate investment trust; OECD = Organisation for Economic Co-operation and Development;

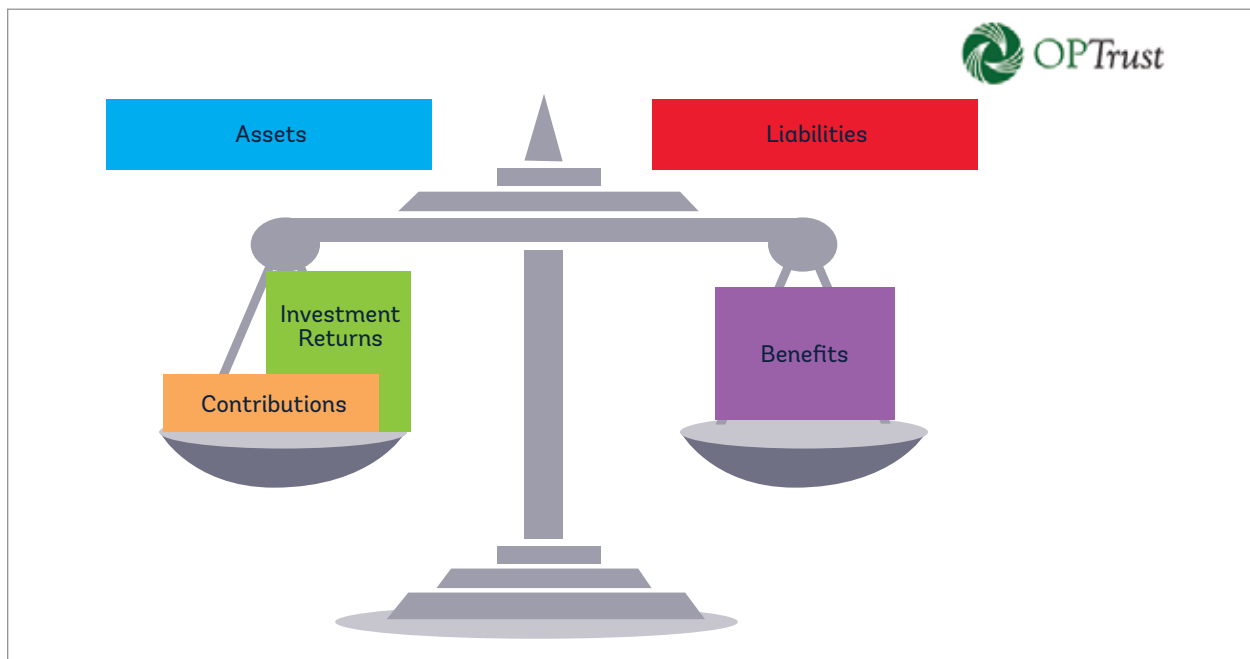
As a long-term investor, OPTrust has prioritized responsible investing. The fund acknowledges the relevance of material environmental, social, and governance (ESG) factors to investment performance and to the health and stability of markets. Accordingly, the fund has integrated ESG considerations into its investment beliefs, policies, and strategies. This emphasis on responsible investing has earned OPTrust top ratings from the Principles for Responsible Investment initiative.

In 2015, OPTrust embarked on a yearlong process to establish a new framework that better aligned its investment activities with the interests of its members, consistent with its mission of paying pensions today and preserving pensions for tomorrow. It examined the best practices of many leading organizations intent on adopting leading-edge pension management thinking. The impetus for this reflection and review was a rapidly changing environment driven by challenges of demographic maturity, volatile investment markets, and persistent low interest rates, and the resulting downward pressure of expected investment returns.

By the end of 2015, OPTrust adopted a new investment strategy framework called Member-Driven Investing or “MDI” (figure 3.15). As O’Reilly explains, the aim of this strategy is “to change the conversation” away from a narrow focus on investment returns to a focus on pension certainty, contribution stability, and sustainability for plan members. According to O’Reilly, this is a fundamental shift from “asset allocator to risk allocator” and more significantly from being an asset manager to being an effective “pension management organization.” To this end, the fund even changed the name of its year-end report from an annual report to a “funded status report.”⁶⁴

The board and management believe that the primary goal for the plan membership is to improve plan certainty, namely for members to know that they will receive the pensions that they are counting on and having the confidence that the contribution rates they pay and the benefits they receive will remain as stable as possible over a long period. To achieve plan certainty requires the balancing of two objectives: sustainability (generating sufficient returns to

Figure 3.15: Member-Driven Investing focuses on keeping the plan in balance



keep the plan fully funded) and stability (keeping contributions and benefits as stable as possible over the long term). In practical terms, the mandate requires that OPTrust maintain a regulatory funded ratio between 95 percent and 110 percent.

The implementation of MDI also represents a more fundamental philosophical and practical shift for OPTrust. In the past, the fund's investment activities were driven through the lens of asset management, where the focus was on delivering excess rates of return, often above what the actuaries required, to deliver on the pension promise. This often meant taking on greater risk. In shifting to a pension management organization, the members' interest is paramount with a priority on fully funded status and stability in contribution and benefit levels. This philosophical shift has been driven in part by OPTrust's increasing maturity as a plan: its active-member-to-retiree ratio was 1.3 in 2015, down from 12.8 in 1995 at the plan's inception.

Risk management and efficiency are central to the MDI strategy. OPTrust's investment philosophy defines risk broadly. Risk is more than just market volatility. It is about risk to the plan's funded status, encompassing both quantifiable risks such as funding risk, drawdown risk, market risk, tail risk, liquidity risk, and counterparty risk, as well as more qualitative risks such as operational risk, key-man risk, ESG risk, and reputational risk. MDI places a premium on efficient allocation of risk and on earning risk-adjusted returns at the total fund level.

Portfolio construction under MDI begins by building "the most risk efficient portfolio with the risk diversification that is appropriate for the prevailing market environment."⁶⁵ This allows the fund to achieve a desirable mix of "beta" exposures. To this, OPTrust seeks to add "alpha," or

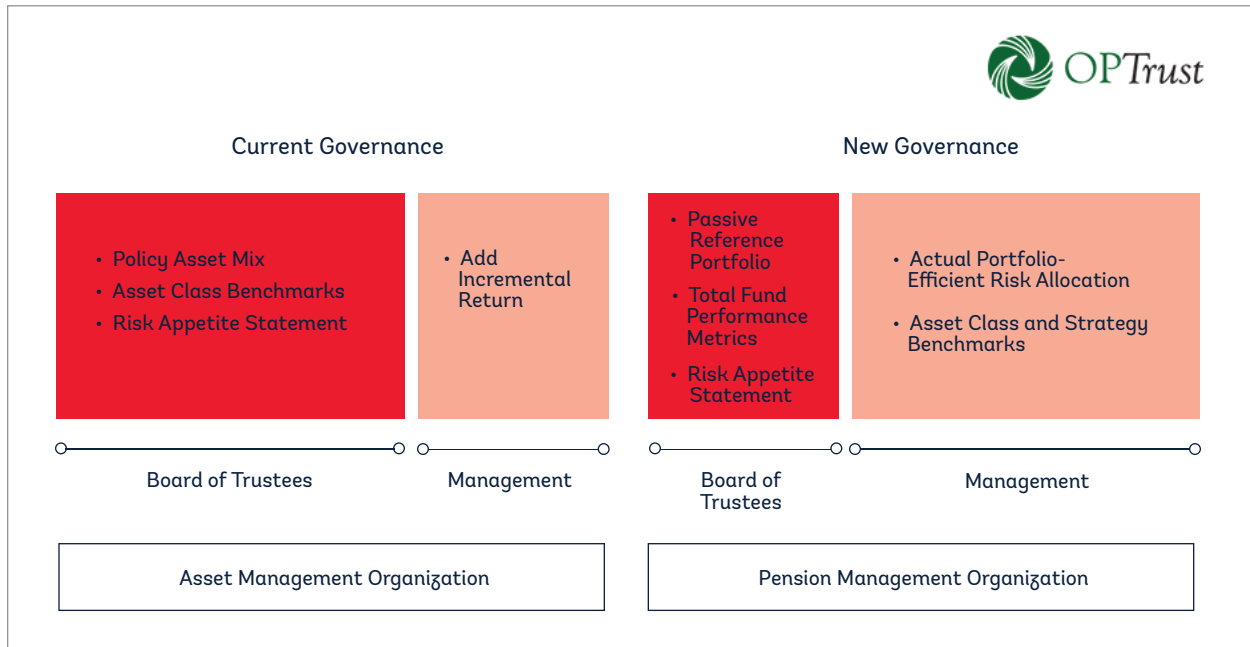
uncorrelated value-added, by using its differentiated skills and relationships to take advantage of market inefficiencies (such as informational asymmetry, structural or regulatory constraints, and behavioral biases). The portfolio construction process aims to allocate risk efficiently between these "beta" and "alpha" components.

To more effectively allocate risk, OPTrust employs leverage, including borrowing to buy government bonds, which helps offset the impact of interest rate fluctuations on the plan's liabilities. Internationalization of certain investment capabilities is another risk-allocation tool that OPTrust is implementing as part of its MDI strategy. By internalizing certain trading activities that were previously outsourced, OPTrust believes it can better manage liquidity, gather better market intelligence, increase potential for value-add, and reduce costs.

To ensure the effective implementation of MDI, OPTrust also realigned its governance framework (figure 3.16). In moving from an asset management organization focused on adding incremental return to a pension management organization concerned with efficient risk allocation and providing flexibility on setting asset class benchmarks, the board uses three key policy documents to hold management accountable: (1) a passive reference portfolio, (2) a set of total fund performance metrics, and (3) a risk appetite statement. OPTrust has also readjusted the compensation policies for its investment team to align these with funded status.

OPTrust's shift to MDI is significant for the organization. It will likely take three to five years to fully assess the impact of the new approach.

Figure 3.16: OPTrust's investment governance has shifted to enable the MDI strategy



The background of the slide is a collage. The top left shows two elderly men, one in a black tank top and the other in a red and white tank top, both smiling and holding medals. The bottom half of the slide is dominated by a large red diagonal shape. Below this shape, there are images of Canadian banknotes, including a yellow 100 dollar bill and an orange 50 dollar bill. The text 'Section 4' is written in white on the red background.

Section 4

Framework for the Evolution of Pension Organizations

Each of the funds examined as part of this case study evolved in a unique way. There are many paths, in other words, toward achieving the “Canadian model” of public pension fund. Yet certain patterns emerge from studying the evolution of various Canadian funds. To capture some of these common patterns, and also to help pension stakeholders in emerging economies think about the evolution of their own pension organizations, we have developed a simplified framework for the evolution of pension organizations. Not all Canadian pension funds have followed this framework exactly. Nevertheless, we believe it provides a useful heuristic for thinking about the evolution and continuous improvement of pension organizations, in both developed and developing economies.

Framework

The framework is meant to chart the journey of a pension organization—either a pension asset manager or an integrated pension delivery organization (including both assets/investments and liabilities/administration). Note that the framework is chiefly concerned with the evolution of an existing organization. However, the framework could also serve as a useful guide for the creation of new pension organizations.

The framework, summarized in figure 4.1, breaks the evolution of pension organizations into four phases:

- Phase 1: Pre-reform entity
- Phase 2: A solid foundation
- Phase 3: Independent, professional entity with strong governance
- Phase 4: Mature, sophisticated entity

Figure 4.1: Four-phase framework for the evolution of pension organizations



Phase 1: Pre-reform entity

This phase describes what some of Canada's leading public sector pension organizations were like before an active period of reform in the 1980s and 1990s. For instance, as of the 1980s, the organizations that are today known as OTPP and OPTrust were

- 100 percent invested in nonmarketable government debentures;
- Partially pay-as-you-go; and
- Run largely by government employees.

Until the mid 1990s, the Canada Pension Plan was run in a similar manner. Pension funds at this stage are not really professional pension organizations. They are run more like government programs.

At this stage, there is no clear path toward reform or aligned stakeholder will to engage in such reform. One of the key insights from this study is that much of the work in transitioning from this phase to the next phase in the framework has to do with building stakeholder consensus around a vision for reform.

Phase 2: A solid foundation

Reaching this second phase means that the reform of the pension organization is well underway. A strategy is in place to improve the organization, including a vision for how the organization will evolve over the medium and long term. Key stakeholders, including the government, labor, and employer groups, are largely aligned around a shared vision for the future of the organization. The organization has recruited some very good people including, crucially, the initial board chair and perhaps the initial CEO. Through its people and its actions, it will have begun to win the confidence of stakeholders in both the public and private sectors.

The organization will have begun transitioning its investments away from a purely fixed-income portfolio to a portfolio with broader market exposure. Finally, but certainly not least important, the organization will have corrected—or be on the road to correcting—its major administrative problems,

including poor member data, transaction processing backlogs, or errors in pension calculations.

Phase 3: Independent, professional entity with strong governance

By this phase, a truly professional, independent pension organization is in place. The governance model is established and has successfully asserted its independence from government or sponsor influence in a number of real-life scenarios. The organization will have made the transition from pay-as-you-go or partially pay-as-you-go to prefunded, meaning it will have built up a base of assets to enable it to meet future liabilities in a sustainable manner. A diversified investment program will have been established, including broad exposure to equity markets.

At this point the organization will have begun to build strong internal investment capabilities, including the ability to perform core investment activities such as investment strategy, asset allocation, and portfolio construction. The organization should have a strong sense of its comparative advantage relative to other investors, and of where it believes it can add value through active investment management. The team may have chosen to manage some asset classes—or portions of asset classes—in house rather than through external managers. However, it is expected that the organization may continue to rely substantially on external managers in this phase.

To the extent the organization is involved in pension administration, that function will have reached a competent level, with levels of member satisfaction rising and per-member costs becoming more competitive. Finally, the organization will be seen as an attractive place to work for pension and investment professionals and will have established a track record of recruiting and retaining talented people from the investment management industry and the pension field.

Phase 4: Mature, sophisticated entity

This mature phase is the one in which many large Canadian public sector pension funds, including the funds profiled in this case study, find themselves today. Reaching this stage does not mean that improvements are not still possible. As we will see in a subsequent section, executives at the helm of Canadian pension funds see significant challenges and opportunities ahead.

By this phase, the governance model for the pension fund will have evolved to a point that is both independent and well suited to the unique characteristics of the fund in question. For some organizations, such as OTPP, CPPIB, and AIMCo, that has meant a strong emphasis on, or even an explicit requirement for, appointing board members with professional and business experience. For other organizations, such as HOOPP and OPTrust, that has meant creating hybrid boards that aim to balance such experience with knowledge of the plan's membership and its sponsoring organizations.

The investment programs in this phase have become highly diversified both by geography and by asset class. By this phase we can expect the majority of investments to be managed by in-house teams, although funds usually continue to maintain partnerships with external managers to complement in-house capabilities. To the extent the fund invests in alternative asset classes, such investment will often occur directly rather than through funds.

Plan administration, by this phase, will have moved from merely competent to truly professional, including employing modern technology and finding new ways to serve members.

A mature, sophisticated pension organization is seen as a very attractive place to work, with competitive compensation, a high-performance culture, and interesting, meaningful work that makes it possible to attract and retain talent not only locally but also on a global scale.

By this stage, the legislative and regulatory environment will have evolved to grant pension organizations more autonomy and flexibility, as the organizations grow in capability, improve their governance, and build trust with government and regulatory officials.

Navigating the Evolution of a Pension Organization

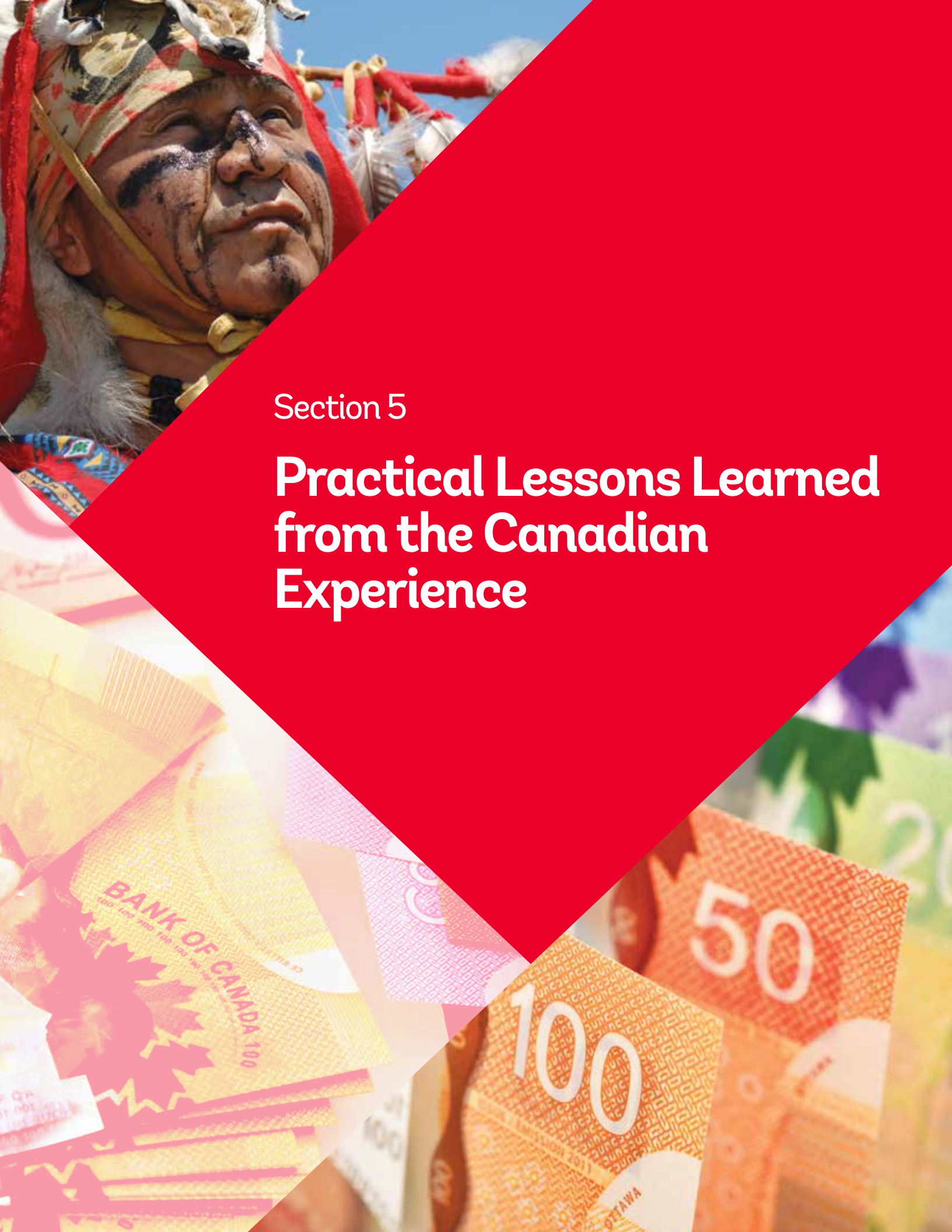
Moving through these phases and becoming a highly functioning pension organization is far from inevitable. For the Canadian funds profiled in this case study, navigating each transition required leadership, innovation, and a willingness to learn from mistakes. The next section aims to document some of the lessons learned from the evolutionary journey of each of these funds, including specific lessons for governance, investments, administration, plan design and funding, organization, and the regulatory and public-policy environment. Before moving on, however, it is worth making a few general observations on the evolutionary framework previously laid out.

- **Evolution of pension organizations takes time.** HOOPP is over 50 years old and continues to change. OPTrust recently celebrated its 20th anniversary and has only recently begun the process of bringing public-markets investments in house. AIMCo (not yet a decade old), its pension plan clients, and its government shareholder have in recent years examined new approaches to pension governance. CDPQ, over half a century old, recently underwent major changes in its investment strategy and has begun to invest directly in new markets, including an increasing focus on emerging markets.
- **Considerable variation appears within each phase.** There are as many differences among exemplars of the “Canadian model” of pension plan as there are similarities. This includes both differences in the paths Canadian pension

organizations took toward their destination and differences in their current characteristics. Thus, the features of each phase of evolution in this framework have been kept deliberately broad. For instance, for investments, rather than referring to a specific asset allocation or asset class, we refer to the broad principles of diversification and in-house capability. CDPQ, for instance, places significant emphasis on infrastructure investment, whereas HOOPP does not invest in infrastructure.

- **Maintaining stakeholder buy-in is crucial at each phase.** Lack of stakeholder and political will is often cited as a major obstacle to pension reform. One of the reasons that Canadian

pension organizations have been successful has been their ability to build and maintain a consensus around a particular model of pension governance and management among a broad group of stakeholders. These stakeholders include elected officials of different partisan affiliations, civil servants, regulators, labor leaders, the financial services sector, and the broader business community. Although building such consensus is particularly critical during the early stages of reform—the transition from phase 1 to phase 2—the importance of maintaining and strengthening the consensus as the organization evolves should not be underestimated or taken for granted.



Section 5

Practical Lessons Learned from the Canadian Experience

What can be learned from the experience of Canada's more successful public pension organizations? Drawing on the history of the Canadian model, and the specific examples of the evolution of Canadian pension organizations described earlier, this section aims to distill practical lessons for pension stakeholders in emerging economies. We believe that at least a portion of these lessons will be relevant to a wide range of stakeholders, from government officials to regulators to pension fund trustees to pension administrators to labor leaders to private industry.

The goal here is not to provide a specific blueprint for the ideal pension organization. The optimal approach will necessarily vary depending on local conditions, including the characteristics of the stakeholders, assets, and constraints. Rather, our objective is to provide a set of principles that, if followed, are likely to drive better retirement outcomes and better-performing pension organizations.

Further, and equally important, we aim to review a variety of strategies and tactics that Canadian organizations have used to put these principles into practice. We place the greatest emphasis on the first three phases of the framework for the evolution of pension organizations described in the previous section because we believe that these earlier phases are likely to be of greater relevance to audiences in emerging economies.

Overview

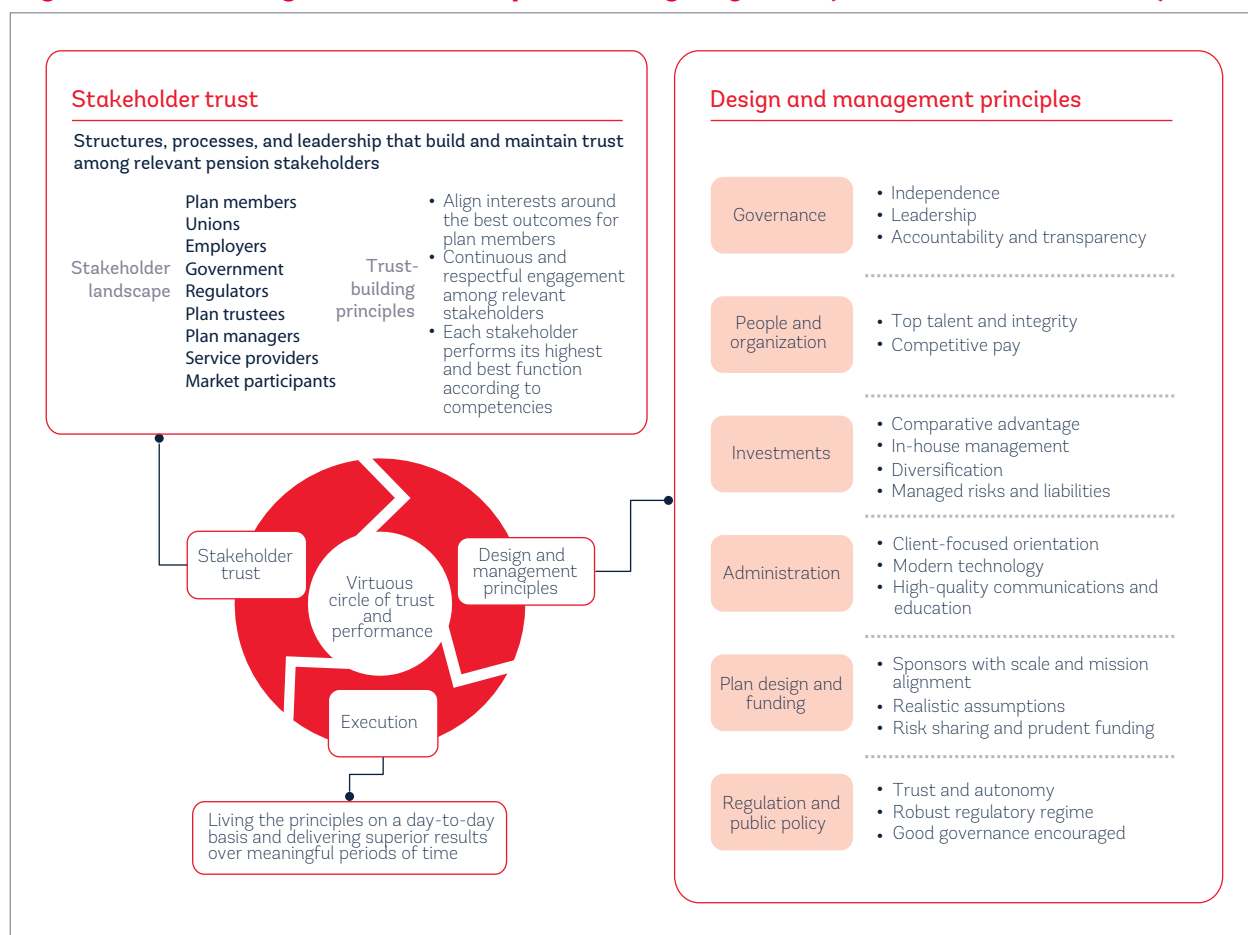
The principles and lessons detailed in this section are grouped into six categories: (1) governance; (2) investments; (3) administration; (4) plan design and funding; (5) regulatory and public policy environment; and (6) organization and people. Each of these categories, on its own, is an important driver of performance for pension organizations.

One of the overarching lessons from the Canadian experience is the importance of thinking of pension organizations in an integrated fashion, one in which the categories listed align and work together to produce the best possible outcomes.⁶⁶ How do integration and alignment occur? It is not just a matter of thinking in the right way. It is also a matter of getting a diverse range of powerful stakeholders

to agree on a vision and to collaborate in a way in which each stakeholder does what it does best and respects the strengths of the other stakeholders. In Canada, this approach has created unusual partnerships between labor unions, governments, employer associations, business people, and financial services professionals—groups that often find themselves on the opposite side of issues or negotiations. If there has been one critical precondition to the success of the Canadian model, we would argue that it has been the collaborative and mutually respectful nature of these unusual partnerships. The shared mission of delivering the best possible retirement security value for every pension plan member, of meeting the pension promise, allowed these “strange bedfellows” to align in a form of division of labor that has created considerable value for millions of Canadians. Without this alignment and division of labor, the governance models, investment programs, and strong performance of the Canadian funds would not have been possible. (See figure 5.1.)

If one accepts this argument about the core lesson regarding the evolution of the Canadian pension model, then the implications for emerging economies should be more optimistic than pessimistic. Building these kinds of partnerships among diverse stakeholder constituencies is challenging. In Canada, it has taken many years, has included many missteps and failures, has required extraordinary leadership from certain key individuals in each of the stakeholder groups, and remains a work in progress that requires ongoing maintenance and continuous improvement. On the other hand, there is nothing unique to Canada about these partnerships. Other countries, such as

Figure 5.1: Building a world-class pension organization (Lessons from Canada)



Germany or the Netherlands, are better known than Canada for their collaboration among government, labor, and business. While Canada has a strong financial services sector, particularly in Toronto, other developed countries are better known for their depth in this field. And while luck and circumstances certainly played a role in the emergence of the Canadian model—including very favorable market conditions during the 1990s when many of the funds diversified their investment programs—a number of the conditions that led to the creation of Canadian plans can be replicated outside Canada with the right leadership, people, processes, and vision.

Governance

In our interviews and our review of the relevant literature, governance came up again and again as perhaps the single most important factor in the success of the Canadian model of pension fund. Three aspects of the governance of the Canadian model have been particularly important.

Governance principle 1: Independence

Independence is perhaps the most important governance principle. What does independence mean? Chiefly, it means that the pension organization can make decisions based solely

on its mission—whether that is an investment-oriented mission (CDPQ, AIMCo) or a retirement-security-oriented mission (HOOPP, OPTrust). This independence implies the ability to make decisions without political interference and without pressure or incentives to serve stakeholder interests or pursue goals that conflict with or distract from their core mission. “Depoliticized governance” is how pension expert Keith Ambachtsheer puts it.⁶⁷ OTPP founding CEO Claude Lamoureux calls it “run like a business,” a phrase that remains embedded in OTPP’s self-description.⁶⁸ A third way of expressing this concept is in the idea that pension organizations exist at arm’s length from both government and the sponsoring organizations, including labor unions and employers. “The miracle of the Canadian model,” Ambachtsheer said, “has been the willingness of politicians and labor leaders to step aside.”⁶⁹

Independence from politics does not mean complete isolation from political forces or actors. To the contrary: the relationship between independent pension organizations and the political entities that create, help govern, and regulate them is an ongoing one. After all, each of the pension organizations profiled in this report is a public entity, even if each operates in ways that are more common to the private sector. A set of specific and facilitating political conditions helped create the Canadian model of pension organization and have helped it evolve and improve over time.

Former Bank of Canada governor David Dodge frames this idea in terms of trust.⁷⁰ Trust is a precondition for independence. Political actors, and the public they serve, will be reluctant to grant autonomy to an organization unless they trust that organization to deliver against its stated mission and ultimately act in the public interest. Trust, and therefore independence, is not granted all at once, when an organization is founded, but instead must be earned over time. Independence, in other words, requires a continual and constructive dialogue

between the pension organization and its political stakeholders. We discuss this dialogue in a more granular fashion later as part of the lessons regarding the regulatory and public policy environment.

Independence of the pension organization is realized through both structure and through day-to-day human decisions and actions. The formal, structural enablers of independence, in the Canadian context, have included the following:

- **Legislation.** Many Canadian pension organizations (including CPPIB, OTPP, AIMCo, CDPQ, and OPTrust) are creations of framework legislation.⁷¹ Such legislation enshrines the independence of the organization from government, both by providing for specific processes and structures (such as the organization’s mission, board appointment process, and exemption of the organization from government budgeting and procurement rules), and through the very fact of legislation, which can make it more difficult for future governments to interfere with the organization’s structure and governance for short-term political gain. In the case of the Canada Pension Plan (including CPPIB), the framework legislation is quasiconstitutional in the sense that any amendment requires the consent of not only the federal legislature, but also the legislatures of two-thirds of the provinces representing two-thirds of the Canadian population.⁷² Dodge calls this framework legislation “the basic operating rules to keep the government hands-off and give the organization the ability to run well.”⁷³
- **Board appointments.** A strong board member appointment process is a critical element of ensuring independent board members. This process sometimes involves the use of a nominating committee—a group of outside experts whose sole job is to recommend qualified candidates for the board. Whether or not a nominating committee is involved, the boards and management teams of all

organizations profiled provide advice to sponsoring or appointing organizations on board appointments, including (1) using a detailed skills matrix that identifies the needs of the board and any gaps currently existing and (2) retaining specialized recruiting firms that can help create and vet a pipeline of qualified candidates for sponsoring or appointing organizations to consider. These board appointment tactics are relevant regardless of whether the organization uses a more professional board model or a hybrid model that combines professional board members and more representative board members.

- **Track record of independent decision making.** Independence gains meaning and credibility to the extent that organizations and their leaders practice it in real-life situations in which the organization is being subjected to external political pressure to do something that may conflict with its stated mission. OTPP experienced this earlier in its existence. As Claude Lamoureux recounts it, the Teachers' plan was asked by the government of the day (also a sponsor of the Teachers' plan) to invest in a new government-created vehicle that was intended to promote economic development in the province. Whatever the program's public-policy merits, Teachers' management, including its CIO at the time, Robert Bertram, did not feel it was a good investment from a plan beneficiary viewpoint. Government officials were invited to present the opportunity to the Teachers' board. After the presentation, the officials left the boardroom and Board Chair Gerald Bouey asked Lamoureux what he wanted to do. Lamoureux said he did not want to make the investment. "Next item," was Bouey's response.⁷⁴
- **Protection for fund managers that allows them to do their job.** Once the organization has recruited professionals to help administer

the fund, and provided those professionals do a good job in pursuing the mission assigned to them, it is critically important that fund executives and board members protect those professionals from interference and allow them the appropriate autonomy. This autonomy can be achieved through structured processes, such as written and transparent rules governing the approval of investments, which often limit board or senior executive approval of investment decisions to those exceeding a particular threshold of size or risk.

Governance principle 2: Leadership

"The most important thing for a pension organization," Lamoureux said, "is the quality of the people involved."⁷⁵ This is true at both the management level and at the board level. Lamoureux observed, "Bad boards are the number one reason why pension plans fail."⁷⁶ Without great people, without exemplary leadership from individuals involved in building and running the organizations, even the soundest and most thoughtful framework legislation and governance structure will fail to produce superior outcomes and may even result in poor outcomes or worse.

We delve into the issue of people and organization in more detail in a dedicated section. However, it is important to also emphasize the importance of people and leadership as fundamental elements of pension governance. The following advice is in order:

- **Pick the right chair.** Perhaps no decision is as critical to the success of a pension organization as the choice of the chairperson for the founding or reform phase of the pension organization. This initial chair sets the tone for the organization, is the guardian of the organization's independence, and leads the effort to hire a CEO and build a strong board. This is the case both for the start-up of a new organization and for the reform of an

existing organization, in which bringing in a new board chair to oversee the reform process can be critical in setting the right tone. From a people perspective, an excellent choice of founding chair can be leveraged dozens if not hundreds of times in terms of other quality people who are attracted to the organization. A poor choice of founding chair can have a similar cascading effect, but in the opposite direction. “The choice of the first chair is critical,” Ambachtsheer said. “He or she will set the tone for the whole organization and will often be the person who can make or break the organization’s independence.”⁷⁷ Former Bank of Canada Governor Gerald Bouey, founding chair of Ontario Teachers’, is often identified as an example of an outstanding founding chairperson. Bouey’s daughter Kathy identifies two key qualities that she believes made her father a strong board chair: objectivity (“he felt an obligation, rooted in his public service, to provide the best, most objective advice in a studiously nonpartisan way”) and a sensitivity to both the public and private sectors (“he was neither ‘of’ government nor ‘of’ the private sector, but he deeply understood both”).⁷⁸ CPPIB founding chair Gail Cook-Bennett identifies three critical characteristics: (1) sensitivity to both the public and private sector; (2) courage, including the ability to stand behind business decisions in the face of political pressure; and (3) a broad range of relevant experience.⁷⁹

- **Solve for both talent and integrity.** Public pension organizations, to maintain the trust of the public, must meet very high standards of conduct (see the later discussion of accountability and transparency). Public pension leaders, therefore, should meet a high standard not only of professional talent but also of integrity. A track record of honesty and of doing the right thing under pressure can be as important as an outstanding record of professional skill and accomplishment. These

characteristics, it should go without saying, are especially important for those occupying key leadership positions, such as board members and members of the senior executive team. Integrity should therefore be embedded in the hiring criteria for such key leaders, as well as in the values and codes of conduct of the organization. A professional, timely recruitment and appointment process for board members is an important factor in attracting world-class board members, who usually have many opportunities to serve on boards. Extended delays in the appointment process can mean losing talent to other opportunities and are especially important to avoid in situations in which government approval is required for appointments.

Governance principle 3: Accountability and transparency

Accountability and transparency mechanisms are critical tools for public pension organizations in earning and maintaining the trust of stakeholders. Such mechanisms should be built into the governance of public pension organizations from the beginning. The accountability and transparency mechanisms that work best in a public pension context are not necessarily the same as those traditionally applied in the public sector. Some would argue they are more akin to those applied to publicly traded companies, though ideally without the same pressures to deliver short-term results. The optimal mechanisms allow the public pension organizations to meet a very high bar of accountability, transparency, and ethical conduct, while also allowing room for them to run their affairs in an operationally independent manner, with a focus on long-term goals. Specific mechanisms, tactics, and strategies for achieving these goals include

- **Robust public reporting.** All major Canadian pension organizations profiled in this study publish detailed annual reports. These reports

are publicly available—easily accessible on the organization’s websites—and are crafted to communicate with a wide variety of stakeholders, from plan members to employers, sponsors, journalists, regulators, and private entities that do business or aspire to do business with the pension organizations. The reports include audited financial statements and, typically, a detailed section that includes discussion and analysis by plan management.

- **Codes of conduct.** A publicly available code of conduct can be a key tool for pension organizations in establishing a culture of ethical conduct. These codes govern the actions of employees, officers, and board members of pension organizations. They deal with issues such as conflicts of interest, gifts and other benefits, personal trading activities, and personal and professional conduct. While many organizations have codes of conduct, Canadian pension organizations have treated these documents as especially important, foundational elements of their governance. According to Cook-Bennett, CPPIB’s founding board members were heavily involved in the detailed drafting of the organization’s code of conduct, seeing it as a documentation of CPPIB’s guiding values.⁸⁰ CPPIB created an external conduct review adviser position, currently former Supreme Court Justice Frank Iacobucci, to provide confidential advice on issues related to the code of conduct and to report directly to the board chair.

People and Organization

Closely related to governance are the issues of people and organization. It can be argued that, if a pension organization has the right governance and the right people, these two foundational aspects will create a high chance of achieving success in the other elements of pension delivery, including investments, administration, and funding. The

theme of people and organization relates not only to employees, officers, and board members of the organization itself, but also to the broader range of stakeholders and partners with which the organization collaborates. The presence of people of leadership, talent, and integrity at the plan sponsor and government levels can be critical on issues of governance, plan design, regulation, and public policy – each of which has been an important enabler of the Canadian model.

People and organization principle 1: Top talent and integrity

Canadian public pension organizations have been able to recruit and retain some of the best leaders in the pension and investment industry. They now recruit globally for top positions. Over the course of several decades, Canadian pension organizations have gone from being seen as relatively sleepy to being seen as highly desirable places to work, attractive because of their public mission, stimulating work, global orientation, and competitive pay. The organizations are highly selective in whom they hire and in which service providers they work with, and they now have the ability to work with the “A” teams of some of the best firms in the world. Lamoureux tried to set the tone for this approach in the early days of OTPP, insisting on hiring the external auditor that he regarded as the best in the country, even though other options cost less.⁸¹

Jean Michel, executive vice president, depositors and total portfolio at CDPQ, identifies talent, along with independent governance, as keys to the organization’s success over the years. “When hiring for a new position,” he said, “we adopt the mentality of ‘who’s the best person in the world?’ We want to compete with the best globally.”⁸²

Recruiting talent can be more challenging for those funds that operate outside major financial centers. This is the case for AIMCo, whose headquarters in

Edmonton houses 90 percent of AIMCo's employees. Because Edmonton has not traditionally been a major center for finance and asset management, AIMCo has focused on building a "farm team" of local talent, ensuring the next generation of leadership is in place for the organization. "We have a strong internship program," AIMCo's CIO Dale MacMaster said. "We build talent from the bottom up. It can be difficult to recruit people, but once they join they don't leave, unlike the 'revolving door' phenomenon [in bigger financial centers]. Older workers are willing to come back from overseas. In terms of recruitment, you need to be creative, but you can be successful."⁸³

The Canadian talent pool for pension management has grown as the funds themselves have grown. It is now possible for senior pension and investment talent to build diverse, global careers working for Canadian pension organizations. In recent years, senior leadership of Canadian pension organizations have moved among the funds as they have grown. Former CPPIB CEO Mark Wiseman began his pension career at OTPP in private equity, then moved to CPPIB's private investments group before becoming head of that organization. André Bourbonnais, CEO of PSP Investments, headed CPPIB's private investments group before assuming his current role. BC Investment Management Corporation CEO Gordon Fyfe previously served as CEO of PSP Investments.

People and organization

principle 2: Competitive pay

A key part of the Canadian model is that organizations pay competitively, enabling them to build professional internal teams and decrease reliance on external service providers, particularly on the investment side. Though pay varies from organization to organization, it tends to follow a few general patterns. It is not subject to public sector compensation limits; exemption from these rules is often part of the enabling legislation of these

organizations. It typically involves a significant performance-based component, tied to factors such as investment value added, member satisfaction, or funded status. It is regularly benchmarked against compensation elsewhere to ensure it remains competitive. The approach to pay taken by Canadian funds means that Canadian internal compensation costs are higher than those of funds in some other countries (such as the United States). However, such compensation also gives funds the ability to bring investment management and other functions in house, a tactic which tends to result in lower costs and better net performance.⁸⁴

Most Canadian pension organizations, particularly those with more professional governance models, also provide competitive pay for their board members, enabling them to compete with private sector boards for talent and helping ensure board members devote adequate time and attention to their governance duties.

Increasing compensation for internal pension managers can be politically challenging. Compensation levels for Canadian pension managers have, on occasion, been subject to political scrutiny and media controversy—for example, in the wake of significant losses by Canadian pension funds during the global financial crisis. The political challenge associated with competitive in-house compensation levels has been cited as a major obstacle to other jurisdictions wishing to adopt the Canadian model. Such in-house compensation levels, however, need to be seen in comparison with the alternative: fees to external managers that are usually significantly higher, particularly for illiquid, alternative investments. Government officials and regulators considering a shift to greater in-house expertise will likely require education on the costs and risks associated with an outsourced model and on the potential cost savings and performance advantage associated with bringing investments in house. In the long run, the political risk associated with uneconomic outsourcing may be greater than that associated with higher in-house

compensation, because outsourcing ultimately costs plan members and public treasuries and is likely to be subject to increasing scrutiny as the cost of asset management becomes the topic of greater regulatory and public debate.

Investments

Unlike many institutional investors, many Canadian pension funds have demonstrated the ability to add after-cost value through active investment management.⁸⁵ Recent analysis by Keith Ambachtsheer found that funds using the “Canadian model” generated an average of 0.6 percent per year in after-cost value relative to a passive reference portfolio, compared with an average of 0.1 percent for global peer funds.⁸⁶ Today, large Canadian pension funds are heavily diversified, active public investment managers with large, sophisticated in-house teams. The funds are part of some of the most significant deals on the planet and are sought-after investment partners and sources of capital.⁸⁷ Many large funds have opened offices outside of North America, including some funds that are building teams in emerging markets.

How did the funds get to this point? A number of key principles help explain their evolution.

Investment principle 1: Comparative advantage

Canadian pension funds have evolved their capacity to do active investment management over time. A critical question that has guided this journey is the matter of comparative advantage. In an increasingly competitive asset management environment, in which a greater and greater share of investors are sophisticated institutional players, investors need a significant edge over the competition if they wish to outperform. Individual and even many institutional investors struggle to do better than market indices. The bar for value-adding active management is therefore very high. Investors that wish to stand a good chance of outperforming need to develop a

deep understanding of their comparative advantage relative to the many other talented, sophisticated institutional investors. “You can’t be world-class at everything,” AIMCo CEO Kevin Uebelein said. “You need to be thoughtful about assessing in what functional areas you are truly outstanding.”⁸⁸ HOOPP CEO Jim Keohane put it this way: “We don’t believe that we can outsmart people. We look to our comparative advantage—what can we do well that other people can’t or are unwilling to do?”⁸⁹

Comparative advantages can exist at a number of levels. CPPIB, for instance, sets out two categories of comparative advantage:⁹⁰

- **Structural advantages**—attributes inherent in the structure of the pension fund, including long time horizon, scale, and certainty of assets
- **Developed advantages**—attributes that evolve over time, including internal expertise, expert partners, and a risk-based, total-portfolio approach

Comparative advantage can exist at the asset-class or geographic level. CDPQ professionals, for example, talk about the organization’s comparative advantage when it comes to investing in its home province of Québec, where the fund has developed a very deep understanding of the economy, business community, and local deal flow.⁹¹ OPTrust has developed a comparative advantage in midmarket infrastructure, often competing effectively for smaller deals that may not be of interest to larger funds.

Some comparative advantages of Canadian funds are a function of plan design or policy features. The defined-benefit nature of the vast majority of Canadian public pension obligations gives the Canadian funds stable, patient capital, which enables them to invest directly in long-dated assets such as infrastructure and real estate. The relatively hands-off regulatory environment governing the investment of Canadian pension assets has also enabled Canadian pension funds more leeway to

pursue new and innovative investment strategies with less concern about regulatory intervention. This freedom has given Canadian funds a comparative advantage relative to pension funds in other jurisdictions and financial institutions that operate under more prescriptive regulatory regimes.

Investment principle 2: In-house management

In-house management is often cited as one of the key characteristics of the Canadian model. Indeed, roughly three-quarters of the assets of the top 10 Canadian pension funds, across a range of asset classes, are internally managed rather than managed by external asset managers.⁹² If properly executed, an internal management approach can lower costs, allow access to more investment opportunities and deals, reduce principal-agent problems, and enable the fund to play a more active role as an asset owner. In addition to these basic advantages, a number of aspects of the Canadian funds' evolution toward in-house management deserve emphasis:

- **Phased approach to bringing assets in house.** Canadian funds did not bring assets in house all at once. The process was gradual and in some cases opportunistic. Most of the funds' evolution toward in-house, direct investment began with investments through funds before investments were made alongside partners. Sometimes in-house teams were built from the ground up, as in the case of OMERS's infrastructure subsidiary, OMERS Infrastructure. Sometimes they were acquired, as in OTP's entry into direct real estate investment through the acquisition of Cadillac Fairview. The decision to build capacity in a particular asset class may be based around a particular person who is recruited to the investment team. Lamoureux describes OTP's entry into new asset classes in terms of leadership by certain key individuals, including Leo de Bever (who later became CEO of AIMCo) in infrastructure,

Neil Petroff (who later became OTP's CIO) in derivatives, and George Harrison and Jim Leech (who later became CEO of OTP) in private equity.⁹³ Similarly, Michael Nobrega (who later became CEO of OMERS) was the key person behind OMERS's move to invest directly in infrastructure. Many funds began the move to internal management with more liquid investments such as public equities, then moved to in-house, direct investment in alternative asset classes at a later date. OPTrust has taken the opposite approach, building in-house capability in private markets first and moving to in-house management of public-market investments more recently. The decision to bring a particular asset class in house needs to be based on a business case, tied to the comparative advantage of the fund, and based on a realistic assessment of the fund's scale and the pool of investment talent that the fund might realistically recruit.

- **Collaboration and coinvestment.** Although Canadian pension funds compete over some elements, such as talent, their nonprofit structures and largely captive membership bases create much more space for collaboration than would be possible in the competitive world of private sector asset management. The evolution of the Canadian model, then, has created not just a number of individual successful entities but also a collaborative public pension ecosystem that allows for the sharing of knowledge and best practices, and also coinvestment, often alongside Canadian peer plans. "The creation of an ecosystem has been important to the model's success," OPTrust CEO Hugh O'Reilly said. "Competition among the plans encouraged innovation, while the first couple of funds set the tone for the system."⁹⁴ The coinvestment approach, which is common in asset classes such as real estate and infrastructure, allows funds to share investment risk on deals. It can

also result in lower diligence costs when funds work together to scrutinize potential investment opportunities. Canadian funds have also used coinvestment as a way to enter and develop expertise in new asset classes. Examples of coinvestments by Canadian pension funds include

- **TMX (Canada).** In 2012, CPPIB, AIMCo, OTPP, and CDPQ led a consortium of investors to acquire the TMX Group Inc., which owns the Toronto Stock Exchange among other assets. This consortium was put together in the wake of a bid by the owner of the London Stock Exchange to merge with TMX.
- **Yorkdale Shopping Centre** (Toronto, Canada). OMERS and AIMCo are owners of the fifth-largest shopping mall in Canada.
- **Chicago Skyway Toll Bridge** (United States). In 2015 CPPIB, OTPP, and OMERS acquired the company that manages the Chicago Skyway toll road, a 12.5 kilometer (7.8-mile) link between downtown Chicago and the city's southeastern suburbs, for US\$2.8 billion.
- **Transelec** (Chile). CPPIB, bcIMC, and PSP Investments coinvested in the largest electricity transmission company in Chile.
- **Technology as a key driver.** An important but sometimes overlooked component of in-house management, particularly within a plan with sufficient size, is technology related. "In the mid 2000s, we revamped all our investment operations, allowing us to do things many other plans can't," said HOOPP's Keohane. "Technology is a big advantage of scale that is often underestimated. We can do large technology projects that many other entities can't."⁹⁵ Indeed, investment information technology comprises a significant portion of the in-house teams of many Canadian plans

Investment principle 3: Geographic and asset-class diversification

Diversification is a basic principle of investment management, an essential tool for managing risk. The story of the evolution of Canadian pension funds is in part a story of increasing diversification, both by geography and by asset class (figure 5.2). "Canadian funds have not been afraid to change their asset mix," former OMERS CEO Michael Nobrega said. "They have continued to evolve. For OMERS the asset mix shift took 30 years."⁹⁶ As discussed earlier, some of the Canadian pension funds that are now regarded as among the world's most successful were, less than three decades ago, invested 100 percent in nonmarketable government bonds. They were less diversified than a typical retail investor—and far less diversified than many institutional investors around the world. These same funds are now investing in a wide range of geographic markets and asset classes, many of which are not accessible, at least not at a reasonable cost, to most retail investors or even many institutional investors.

Each fund's journey toward increasing diversification has been unique. CDPQ and HOOPP, for instance, have been investing in equities since the 1960s. CDPQ made its first international investments in the 1980s. By contrast, before OPTrust and OTPP were spun off as independent entities, their members' assets were invested entirely in nonmarketable government debentures.

Considering these differences, the diversification of Canadian funds has followed two broad themes:

- **Increasing investment in alternative, illiquid asset classes.** Canadian funds are well known for their exposure to alternative asset classes such as real estate, infrastructure, and private equity. Although increasing allocation to alternatives has become a broader trend in more recent years among institutional investors, Canadian funds began to follow this path

Note: AUM = assets under management.

Figure 5.2: Asset mix for Canadian pension funds has diversified over time (CDPQ and OTPP examples)

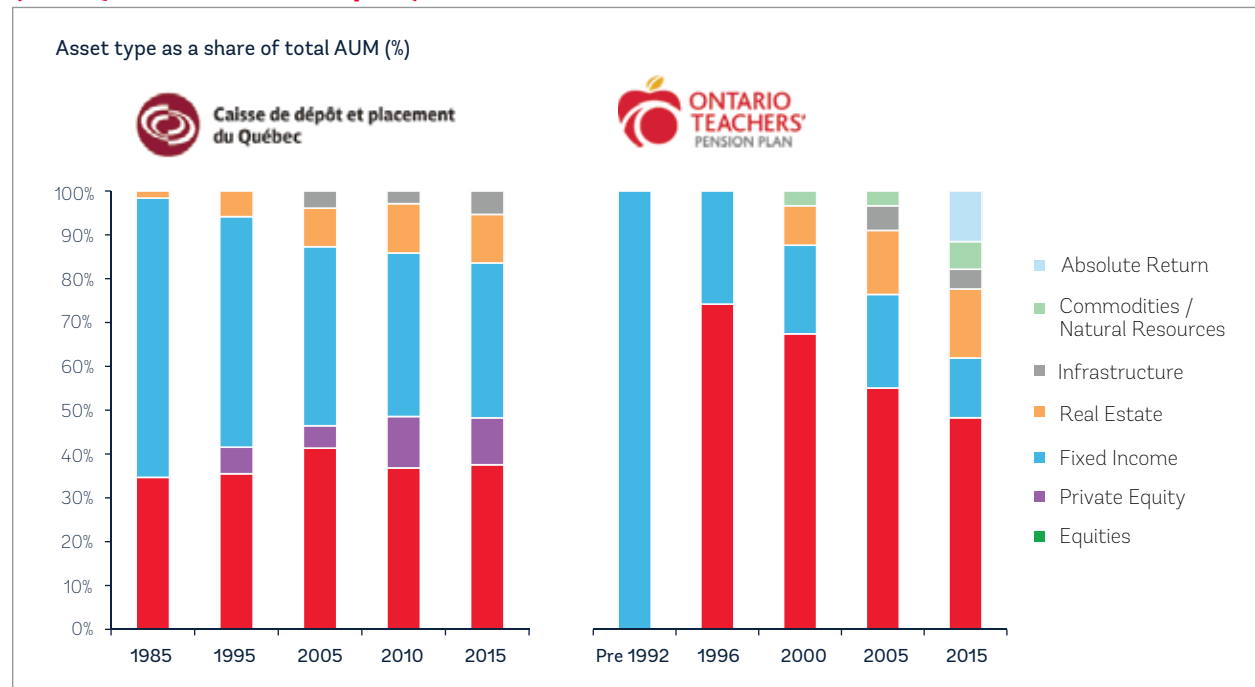
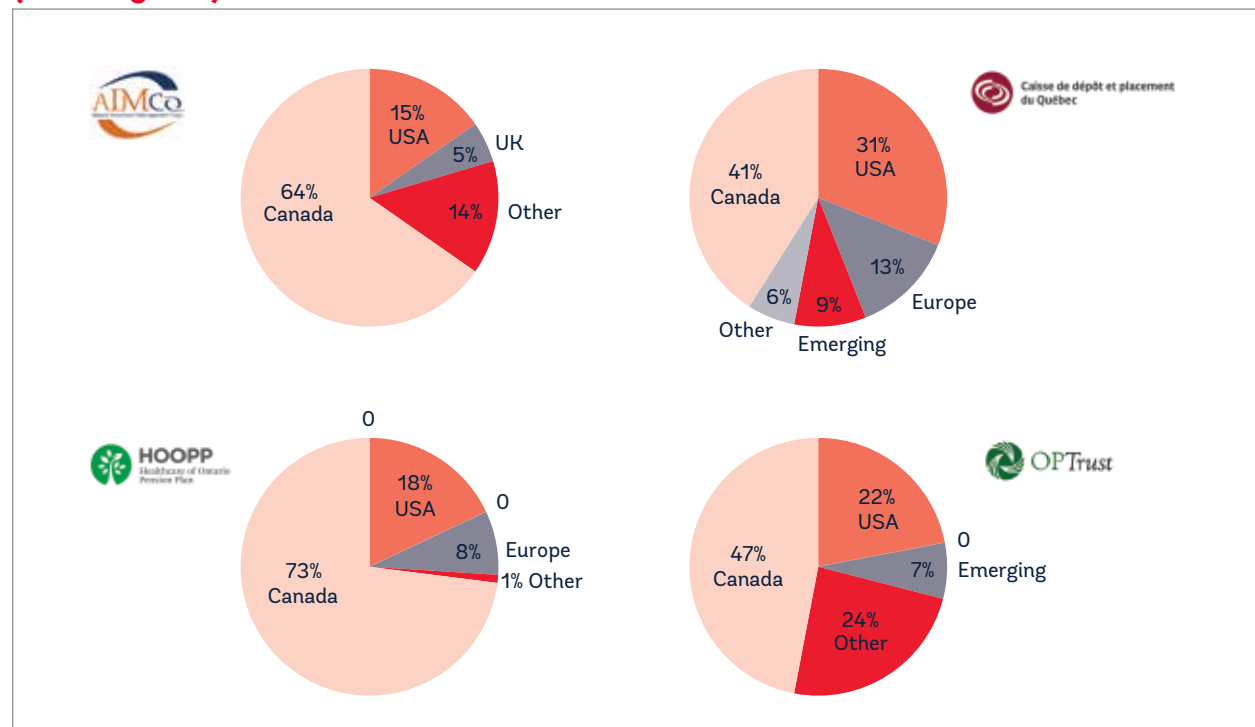


Figure 5.3: Asset allocation by geography of select Canadian pension funds (2016 figures)



relatively early, in the 1990s and early 2000s. Today, roughly one-third of the portfolios of the top 10 Canadian public pension funds are in alternative asset classes.⁹⁷

- **Increasing international investment.** Canadian funds have tended to decrease their “home bias” over time and continue to do so, particularly in asset classes outside fixed income, which has tended to remain largely within Canada. For the top 10 Canadian pension funds, as of 2014, non-Canadian assets comprised 77 percent of public equities, 28 percent of fixed income, 85 percent of private equity, 74 percent of real estate, and 39 percent of real estate.⁹⁸ To facilitate international investments, particularly in private markets, most Canadian funds have opened international offices over the years. OTPP has offices in Hong Kong SAR, China; New York, and London. OPTrust has offices in London and Sydney. AIMCo recently opened a London office. CDPQ has offices in Washington, D.C.; New York, Mexico City, Paris, Singapore, Sydney, and Beijing, in addition to an office the fund opened in Delhi in 2016. CPPIB has offices in New York; São Paulo; London; Luxembourg; Mumbai; Hong Kong SAR, China; and Sydney. The trend toward international investment is likely to continue, especially given the limited size of the Canadian market (figure 5.3). CDPQ, for instance, recently opened an office in India and plans to increase its allocation to emerging markets, with a focus on building on-the-ground knowledge and partnerships in priority geographies.⁹⁹ OPTrust, CPPIB, and OTPP are other examples of Canadian funds that have identified emerging markets as priorities for future growth.

When discussing the implications of the increasing sophistication of Canadian public pension investment for emerging economies, interviewees

emphasized that important preconditions—both internal and external to the plan—should be in place before such strategies become advisable. These preconditions include the true independence of the pension fund from sponsors and government, a strong rule of law and regulatory framework, and a board and management team with the capability to properly oversee and execute the program.¹⁰⁰

Investment principle 4: Risk and liabilities management

Although many Canadian pension funds have achieved strong after-cost returns, they do not see the generation of investment return as their primary purpose. Indeed, one of the key shifts over the years in the investment approaches of the four funds profiled here has been a greater emphasis on two other factors: risk and liabilities. This shift, in some cases, was accelerated by the 2008 financial crisis. These factors are now at the center of how these organizations think about investments. Strategies and tactics that these organizations have used to advance this goal include an effort to

- **Develop a deep, integrated understanding of the sources of risk to the fund or plan.** HOOPP, one of the early adopters of liability-driven investing (LDI), began its transition to this approach by assessing the major sources of risk to its funded status. It identified three main risks: equity risk, inflation risk, and interest-rate risk. Managing these risks to the plan’s funded status then became the basis of a revamped investment strategy that focused on increasing the interest-rate and the inflation sensitivity of the plan and reducing the plan’s sensitivity to equity markets.¹⁰¹
- **Orient investment governance around managing risks to funded status.** HOOPP’s LDI approach, which has evolved over more than a decade, is now deeply embedded in the plan’s investment governance. The board does

not have an investment committee; it has an asset-liability management committee whose mandate is aligned with the plan's overall goal of achieving and maintaining fully funded status. The plan's investment policies and procedures have been rewritten from scratch and reframed to focus on liability management and risk budgets, now differing from more traditional investment documents focused on asset weights.¹⁰² OPTrust has also recently begun to shift to a similar type of approach, which it calls "Member Driven Investment."

- **Appoint a chief risk officer or equivalent.** Many Canadian pension organizations include on their senior executive teams a person in charge of managing risk. The role of this person and the function he or she oversees has grown in importance over time. "Risk has become much more integrated into our investment process," CDPQ's Jean Michel said. "The chief risk officer is at the same level as the chief investment officer in the investment decision-making process."¹⁰³

Administration

The pension administration functions of Canadian pension organizations have received less attention than the investment functions. Administration should not, however, be overlooked. For the Canadian pension organizations that include administrative functions (investment-only organizations such as AIMCo, CDPQ, and CPPIB do not have such functions), those functions have improved considerably since the early days of those organizations. High-quality administration is a major driver of increased member satisfaction. Administrative mistakes can also have huge consequences for pension organizations and can result in costs of hundreds of millions of dollars, as a number of Canadian plans have learned.

Administration principle 1: Client-focused orientation

An important part of running a pension organization like a business involves treating plan members like valued clients, aiming to deliver a high-quality level of service. Lamoureux, the founding CEO of Ontario Teachers', identifies client service orientation as one of the key leadership qualities for pension professionals.¹⁰⁴ This orientation comes, in part, from the kinds of people that a pension organization hires and the type of culture the organization encourages. Client service orientation can also be fostered through a number of other tactics and approaches, including by the following.

- **Measure and benchmark client satisfaction.** Canadian pension plans regularly survey their members and employers to gauge their level of satisfaction. These satisfaction levels are treated as important business metrics, including in setting the compensation of the pension professionals who work for these plans. Benchmarking client satisfaction against global pension peers—and reporting the results in public annual reports—is a common practice that Canadian plans use to hold themselves accountable and identify opportunities to deliver even better service to members. Firms such as CEM Benchmarking, a Toronto-based company founded in 1990, help pension organizations compare their performance and costs against global peers on the basis of a standard set of metrics.
- **Build strong in-house teams for front-line member and employer service.** While administrative functions of Canadian plans are performed through a mix of in-house staff and outsourcing, the front-line, client-facing service is almost always performed by in-house teams that are fully dedicated to serving the clients of the plan. These in-house teams are usually

highly trained on the client base and features of the plan, and their tenures with the plan are often much longer than those of a typical call center or front-line client service employee. This longevity enables them to become experts in the plan and to enable member and employer issues to be dealt with quickly and efficiently, in a one-stop-shop type of approach. The client-focused mentality can manifest itself in the physical offices of the pension organizations. OPTrust's offices, for example, include meeting rooms that are reserved exclusively for plan members who want to talk to someone face-to-face about their pension.

- **Make it easy for employers.** Larger Canadian public sector plans are usually multiemployer in nature, meaning that the individual employers that are part of the plan are not generally themselves the sponsors of the plan but are rather participants in it. This creates value for the employer because it minimizes or removes legal liability and administrative responsibility for running a pension plan, and it turns these duties over to an expert pension administrator and a fiduciary board. Pension organizations can create even more value for participating employers by making the employer's part of plan administration as easy as possible, minimizing employer administrative burden and developing a clear understanding of the constraints and environment facing employers, both large and small. Being client focused, then, involves attention not just to members of the plan, but also to employers and their needs. When employer service works well, it can significantly improve compliance (in the case of a mandatory plan) and member participation (in the case of a voluntary plan).
- **Hire people with talent for customer service.** This tactic applies not just within the administrative function but within the

organization as a whole, including at the senior management and board levels. "Customer service talent was one of the main reasons Claude Lamoureux was hired [as the first CEO of OTPP]," Kathy Bouey recalled. "Better customer service was one of the main motivations for the teachers' unions to set up OTPP as a separate business."¹⁰⁵ AIMCo's Uebelein, who previously had extensive client-facing experience at major private sector firms Fidelity and Prudential, believes that there is a special client-service obligation on Canadian pension funds because of their largely captive client base. "When you have captive relationships, it is easy to view it as license to behave the way you want to," Uebelein said. "You need to change that attitudinally. You need to meet a higher obligation because they don't have a Plan B."¹⁰⁶

Administration principle 2: Modern technology

Pension administration can be thought of as a combination of services and technology. Increasingly, the technology element of administration—whether built in house, outsourced, or developed through a hybrid model—is essential and should not be overlooked. Strong technology choices can drive down costs, improve client satisfaction, and reduce errors. Poor technology choices can be enormously expensive, confuse clients, and, perhaps most problematically, compromise sensitive member and employer data. The experience of Canadian plans offers two key practical lessons for emerging economy stakeholders to keep in mind.

- **Tie technology to a vision for the administration business.** Ultimately, pension administration technology is meant to serve the business: the clients of the pension plan. This point may seem obvious, but in complex technology products and projects, a

large disconnect often emerges between the technology and its business purpose. One tool that plans can use to avoid this disconnect is to lay out a carefully articulated and thoughtful vision or “target operating model” for the administrative function before undertaking a large technology purchase or build. This vision or model should integrate the technology part of plan administration with the services element and should be geared toward the needs and preferences of the members and employers who are the clients of the plan.

- **Fix administrative mistakes early.** Before entering a reform period (such as at phase 1 in the framework laid out in the previous section), pension organizations often suffer from major administrative problems. When professional management first took over at Ontario Teachers’, Lamoureux said, the staff discovered \$500 million worth of mistakes and a backlog of 10,000 letters.¹⁰⁷ Fixing early administrative problems cost the plan \$360 million, and the work to carry out this fix was done early.¹⁰⁸ Brian Mills, the CEO and superintendent of the Financial Services Commission of Ontario, Ontario’s pension regulator, recalls that similar administrative challenges were present when the Ontario Pension Board (which now manages \$23 billion in assets) began to reform in the late 1980s and early 1990s.¹⁰⁹ There was a backlog of 22,000 cases; no one had checked whether the approximately 40,000 members in the plan were still alive (it turned out that 200 had died yet were still in the plan’s system); there were violations of pension law and major data issues that cost \$13 million to clean up.¹¹⁰ “You have to deal with data issues early,” Mills said. “That means spending the money to invest in systems.”¹¹¹

Administration principle 3: High-quality communications and education

- **Create in-person education teams.** Despite major advances in technology, Canadian pension plans have developed and retained several “high-touch” elements to their pension administration. One such element, which is common in Canadian plans, is teams of member and employer education staff. The chief function of these teams is to run in-person sessions for members and employers to explain the features of the plan, to help guide clients through important decisions that they face with respect to the plan (such as when to retire), and to answer any questions. Recently, these teams have expanded beyond a technical education function to begin educating members and employers about the fundamental value of the plan, and are even recruiting members who are willing to serve as “ambassadors” of the plan. HOOPP, for example, not only engages 11,500 members annually for pension education, but it has also built an ambassador program comprised of over 4,000 plan members.¹¹² OPTrust also recently launched an education program, called “People for Pensions,” that has a similar goal.¹¹³
- **Tailor communications products for different audiences.** Over the years, Canadian plans have moved toward more client-focused communications that are tailored to the needs of different audiences. In addition to their detailed annual reports, which can be over 100 pages long and include detailed technical investment and funding information, plans have begun producing communication products targeted to the needs of members and employers. Plans tend to produce a simple, short, visually

appealing member statement, a summary of the key member-relevant parts of the annual report. Targeted employer communications, including employer newsletters, also have become common.

Plan Design and Funding

Discussion of the Canadian model of pension plan tends to focus more on plan management and governance than on plan design and funding. Indeed, some experts argue that plan design and funding are not truly part of the model. “The Canadian model is about running a pension plan,” actuary Malcolm Hamilton said. “It is not about plan design or funding, which are often outside the control of boards.”¹¹⁴

There are some merits to this point of view, and certainly the plan design and funding models of Canadian public sector plans have evolved over recent years, especially since the global financial crisis, and remain works in progress. However, we include plan design and funding considerations as part of the definition of the Canadian model, and as part of the lessons learned from that model, for two main reasons.

First, although the plan design and funding models of Canadian funds may not be as distinctive as their approaches to investment and governance, they are interrelated with those other features. For example, the defined-benefit nature of most of the underlying plans, with their predictable, locked-in contributions, facilitate the stable, patient capital necessary for the kind of investment programs that the funds carry out.¹¹⁵ Further, the nature of the sponsoring organizations—typically governments, unions, and associations—foster (and may even be necessary pre-conditions for) the scale, joint-governance, joint-risk-sharing, and members-first orientation that are core to the definition of the Canadian model.

Second, the insights shared during our interviews lead us to believe that there are valuable plan design and funding lessons to be learned from both the positive and negative experiences of Canadian pension institutions. The Canadian model has its origins in plan design and funding issues of sustainability and intergenerational equity. These were critical factors undergirding the creation of organizations such as OTPP and CPPIB. Plan design and funding issues are an integral part of the story of how the Canadian model evolved.

Plan design and funding principle 1: Sponsors with scale and mission alignment

As noted earlier, scale confers considerable advantages on a pension organization. It enables more activities on both the investment and administrative side to be brought in house, reducing costs and improving long-term alignment of interests. Scale also enables organizations to make meaningful investments in technology, helping improve both pension administration and investment operations, that smaller organizations would not be able to make. Governance can also benefit from scale, because larger, more sophisticated funds often have an advantage in attracting board members and in ensuring their boards are well supported.

It helps to ensure the fund has sponsoring organizations that have access to pools of membership, capital, or both that will allow the organization to achieve meaningful scale over time. In the context of leading Canadian public funds, this has tended to mean removing pension sponsorship from the ambit of any particular employer and instead vesting that responsibility with larger, aggregating organizations that include

- **Labor unions.** Two of the organizations featured in this case study, OPTrust and HOOPP, have labor-union sponsors. OPTrust has a single labor-union sponsor. In HOOPP’s case, the five sponsors of the plan include four

public sector unions. Other leading Canadian public pension organizations are also jointly sponsored by labor unions, including OTPP, OMERS, and major public sector pension plans in British Columbia. According to Jennifer Brown, a founding trustee of OPTrust and former chief pension officer at OMERS, a union presence is “very important to the health of a pension program,” provided the union is able to carry out its role as sponsor without getting inappropriately involved in the day-to-day management of the operation.¹¹⁶

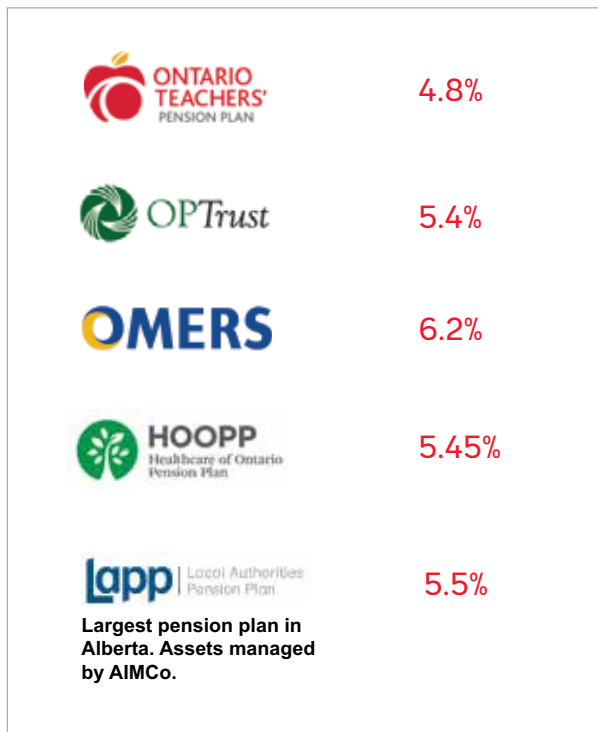
- **Associations.** Industry, professional, or sector associations can play an important role as pension sponsors in offering access to a broad pool of employees and facilitating portability within a sector or field. As noted in the HOOPP case study, HOOPP began as an initiative of the Ontario Hospital Association, which represents the hospital sector and continues to be a sponsor of HOOPP. Other Canadian plans also have involved associations as sponsors. For example, the Association of Municipalities of Ontario, which represents all municipal governments in the province of Ontario other than the city of Toronto, is one of the sponsors of OMERS.
- **Governments.** Most (though not all) of Canada’s leading public pension organizations have involved government as a sponsor or initiator of the organization. CDPQ was established by the government of Québec, which continues to appoint board members to oversee the organization. AIMCo was established by the government of Alberta. OPTrust is cosponsored by the government of Ontario, as is the Ontario Teachers’ Pension Plan. The federal government and the 10 provincial governments together share responsibility for overseeing CPPIB. Other large public pension asset managers, including the British Columbia Investment Management Corporation (bcIMC)

and the Public Service Pension Investments, also were initiated by governments.

- Another advantage of those kinds of sponsoring organizations is portability. Many Canadian public sector plans allow members to keep their pension as they move from employer to employer, so long as they remain within the same province and sector.
- Achieving the effective sponsorship of organizations with this kind of reach was not achieved overnight. Considerable effort was involved on the part of both governments and the sponsoring organizations themselves. Sponsorship lessons include
- **Intensive engagement around the setup of the organization.** One of the preconditions to the setup of OTPP was the considerable engagement between the government and the Ontario Teachers’ Federation, an umbrella group representing the four main teachers’ unions in Ontario.¹¹⁷ The government appointed a special adviser to consult with the key stakeholders, including the labor unions.¹¹⁸ Considerable time and effort were spent working out a joint sponsorship agreement that would serve as a foundational document underlying the plan. Lamoureux credits the leadership of the Ontario Teachers’ Federation for providing the managers space to do what they do best. “They made it clear they wanted us to do a good job,” he said.¹¹⁹
- **Ongoing pension capacity building within the sponsoring organization.** Sponsoring a pension plan is a significant undertaking that requires certain skills, knowledge, and organizational state of mind. Although the arm’s-length aspect of the Canadian pension model is designed to minimize the sponsors’ role in the day-to-day running of the plan, sponsors nevertheless have certain responsibilities that continue even after the plan is set up. Obligations could include to

recruit, select, and educate board members; make decisions around the design, funding, or basic governance model of the plan; communicate with membership about the benefits of the plan; respond to member inquiries about the plan; and interact with government, regulators, and other stakeholders around important issues facing the plan. The union, association, and government sponsors associated with Canadian pension organizations all have taken steps to improve their internal capacity to deal with these kinds of issues, including creating in-house pension specialists and retaining external expertise. Similarly, the professional management of the pension funds invests time in educating and communicating with sponsoring organizations about what the plan's staff is doing, including reinforcing the value of the arm's-length approach.

Figure 5.4: Discount rates of select Canadian pension plans (Rates are in nominal terms, including inflation, based on most recent annual reports)



Plan design and funding principle 2: Realistic assumptions

The assumptions a pension plan makes about expected investment returns, demographics, and working life have a critical effect on the plan's sustainability. One crucial assumption is the discount rate used by the plan. OTPP describes the importance of reasonable discount rates as follows:

The discount rate must be realistic to avoid masking plan funding issues that could impact future generations of retirees and plan members. For example, if the assumption is too high and investments earn less than expected, a funding shortfall could result, requiring younger and future plan members to contribute more to the pension plan, receive lower benefits, or both. If the assumption is too low, current members could pay more than necessary for their pensions or benefits may be reduced more than necessary.¹²⁰

One major difference between Canadian public sector plans and plans in the United States is the discount rates that they use to value their liabilities (figure 5.4). Large Canadian public pension plans tend to use discount rates at least two percentage points lower than those used by U.S. public pension plans.¹²¹

While lower than those of their U.S. counterparts, the discount rates used by Canadian public pension plans are higher than those used in other contexts, such as U.S. corporate pension plans (which tend to use a lower, corporate bond rate to set their discount rates) and the Netherlands, which has moved to a system in which the Dutch central bank sets discount rates for all plans. Some commentators have argued that Canadian public sector plans should be lower still, mimicking the approach in the U.S. private sector.¹²² To date, Canadian pension law and regulation have tended to defer to the professional standards and judgment of the actuarial profession in setting discount rates rather than prescribing a rate that plans must use. Some pension regulators in Canada have been using moral suasion to influence

pension plans to reduce their discount rates to more conservative levels.

Getting to a realistic, but not overly prescriptive, discount rate is easier said than done. Plans often sustain stakeholder pressure to deal with pension problems simply by raising the discount rate, making unrealistic assumptions about future returns rather than dealing with the issue through increased contributions, reduced benefits, risk sharing, or other more concrete ways of tackling the challenge. Unrealistic assumptions have been used as superficial solutions to pension sustainability challenges by both management and labor, and in both the public and private sectors, as has been well documented in the U.S. context.¹²³ The arm's-length governance structure of Canadian pension plans helps here. Independent boards, supported by the right management and outside professional advice, are arguably less likely to make unrealistic assumptions than pension oversight bodies that are more closely tied to the sponsoring organizations, whether labor or management. In addition to the basic governance structure, Canadian pension organizations have used some more specific tactics to achieve more realistic discount rates and assumptions:

- **A single discount rate set by the board, based on a single actuarial opinion.** Part of the independence of the Canadian model of plan has to do with the discount rate. According to OPTrust's O'Reilly, the lack of political interference in setting actuarial assumptions is one of the key characteristics of the Canadian model.¹²⁴ The way most Canadian plans ensure independence is to have a single discount rate for the plan that is informed by independent actuarial advice and set by the plan's board. Where the public asset manager is not responsible for plan funding, including actuarial assumptions, one option is to set up an independent office of the chief actuary, the model used for the Canada Pension Plan.

- **“Investing” in more cautious assumptions over time.** In some cases, Canadian plans have chosen to use pension surplus not to decrease contributions or increase benefits, but to lower the discount rate and therefore make the assumptions underlying the plan more conservative and to adapt them to current market trends and interest rates. OPTrust, for instance, has done this a number of times, including in 2016.¹²⁵ In other words, maintaining a realistic discount rate is an ongoing process that requires continuous engagement of plan board members.

Plan design and funding principle 3: Risk sharing and prudent funding

Major Canadian public pension funds have, on the whole, managed to achieve reasonable funding levels. Many of Canada's largest public pension plans are fully funded or in surplus on a regulatory basis. According to the Office of the Chief Actuary, the Canada Pension Plan is expected to be able to meet its obligations, at current contribution rates, for the next 75 years, despite the increases in benefit obligations projected to result from an aging population.¹²⁶ Most Canadian pension leaders acknowledge that plan sustainability remains a challenge, especially in light of maturing plan demographics and lower expected returns. Interviewees also acknowledged that mistakes have been made along the way. O'Reilly, for example, highlighted the contribution holidays and benefit improvements that many plans undertook during the late 1990s as examples of mistakes.¹²⁷ Overall, however, it can be argued that the Canadian model of investment plan has managed the sustainability challenge well, including weathering with global financial crisis without any fundamental changes to the plan design model.

Large Canadian plans use a variety of tools to stay on the path toward sustainability:

- **Risk sharing.** Although large Canadian public pension plans are generally regarded as defined-benefit plans, the majority have some element of risk sharing. Members bear some of the downside risk if a plan is underfunded and also some of the benefit if a plan is overfunded. This structure helps lead to a sense of shared responsibility for keeping the plan on a sustainable footing. The risk-sharing structure, said Dan Anderson, vice-chair of HOOPP, “has allowed us to avoid getting into disputes about surplus and other traditional pension conflicts.”¹²⁸ To deal with their underfunding in the wake of the financial crisis, the sponsors of many Canadian plans agreed to raise contribution rates (for both employers and employees), reduce benefits (for example, by making indexation contingent), or both.
- **Removal of pensions from collective bargaining.** In the jointly sponsored model, used by plans such as OTPP, HOOPP, OPTrust, OMERS, and British Columbia’s major public sector pension plans, employer- and employee-side sponsors are jointly responsible for the key terms of the plan, including the contribution rates and benefit levels. This means that such plan design decisions are made at a pension-specific table—generally either a sponsors’ committee (in the case of OTPP) or the board of trustees itself (in the case of HOOPP). “The model work[s] well when sponsors don’t try and use the pension plan as a bargaining chip or bring other bargaining issues to the table,” said Bill Foster, former Chief Administrative Officer at OPTrust and one of the first employees of OTPP. “It is often best if the sponsor representatives dealing with pension issues are not the same people as those who are dealing with bargaining.”¹²⁹
- **Funding policies.** Another common feature of Canadian public plans is a well-defined funding policy that spells out in advance the process for

dealing with surpluses and deficits. The purpose of a funding policy is to provide a framework for funding decisions, taking into account factors that are relevant to the plan and the sponsor. A clear, comprehensive, and well-documented funding policy can help pension plans make funding decisions on a systematic rather than ad hoc manner, and impose a measure of financial discipline on plan decision making. Funding policies often spell out a decision-making process for when the plan is at certain levels of over- or underfunding.

Regulatory and Public Policy Environment

Regulatory and public policy principle 1: Trust and autonomy

Canadian pension policy and regulation have evolved alongside Canada’s more sophisticated pension organizations. The process can be seen as part of an ongoing dialogue between governments and regulators, on the one hand, and public pension organizations, on the other hand. These public policy changes occurred gradually, over a 20- to 30-year period. It could be argued that the changes were based, in part, on the successful track record of the funds, thus allowing them to earn the trust of policy makers and regulators that would result in greater autonomy.

Mills, of the Financial Services Commission of Ontario, attributes part of the greater autonomy granted to plans to the nature of their advocacy. Mills noted: “When the plans would identify restrictions in the rules that impeded them from acting how they wanted or needed to, they would propose concrete changes and tended to think in terms of regulatory and policy considerations.”¹³⁰

Some of the key pension-related regulatory and public-policy developments since the early 1990s that are relevant to large Canadian public pension funds include

- **The relaxation of quantitative investment limits**, including the Foreign Property Rule, and the 5 percent, 15 percent, and 25 percent quantitative limits. The Foreign Property Rule, which was eliminated in 2005, restricted fund's ownership of foreign property (including shares or debt issued by nonresident entities) to 30 percent of the plan's assets.¹³¹ The 5 percent, 15 percent, and 25 percent limits, eliminated in 2010, applied to resource and real property investments. These changes have tended to allow Canadian pension funds to invest a broader portion of their assets outside of Canada.¹³² They have also allowed funds to play a more active role as asset owners (by allowing them to hold greater ownership shares in their investments) and to invest more freely in a diversity of asset classes. In 2015, CDPQ began to play a much more active role in infrastructure projects in Québec and abroad, through the creation of its CDPQ Infra subsidiary. Another relaxation of investment restrictions that occurred over the years applies specifically to CPPIB. In the first few years of CPPIB's existence, legislation precluded the organization from investing actively within Canada. This restriction was later removed as the board became convinced, and helped persuade the government, that it could add value through active management.¹³³
- **The spread and formal recognition of the jointly sponsored pension plan model** (a model followed by HOOPP, OPTrust, OTPP, and OMERS, as well as by British Columbia's major public sector pension plans). Originally restricted to Ontario, the model has now expanded to other provinces. In a recent round of pension reform, Ontario created a separate, less onerous funding regime for jointly sponsored plans, on the basis of recommendations of an expert commission on pensions,¹³⁴ and in recognition of the additional member protection and oversight that can come

with having joint sponsorship and governance of a pension plan, shared between employer and employee representatives.

- **The growing adoption of pooled investment management**, in which a single public asset manager invests assets on behalf of multiple public pension clients. This model began in the 1970s when CDPQ began managing assets for public pension and insurance funds other than its original depositor, the Québec Pension Plan. The model has since been adopted within the federal government (PSPIB, founded 1999), British Columbia (bcIMC, founded 1999), Alberta (AIMCo, founded 2008), and Ontario (Investment Management Corporation of Ontario, created by legislation in 2016 to manage assets on behalf of smaller Ontario public pension funds and other public entities).
- **Changes to allow for the growth of existing public pension organizations.** This has included rules to facilitate the merger or consolidation of plans. It has also included rules that allow certain public pension organizations to provide services, such as third-party asset management, to others beyond the existing membership of the plan.¹³⁵

Regulatory and public policy principle 2: Robust regulatory regime

The regulatory and public policy story behind the evolution of the Canadian model is not just one of increasing regulatory “laissez-faire.” To the contrary, the presence of a robust regulatory and legislative framework, including the way this framework has evolved, is arguably one of the reasons the Canadian model evolved the way it did.

- **Subject public sector pensions to a similar regulatory regime as private sector pensions.** Unlike in some other countries, including the United States, public sector pensions in

Canada tend to be subject to the same or similar regulatory regime as private sector pensions. There are some exceptions to this rule: Canadian federal public service pensions are not subject to the federal Pension Benefits Standards Act but rather to a separate legislative framework;¹³⁶ the funding regimes that apply to private sector plans often differ from those that apply to public sector plans; and public sector plans use different accounting standards than private sector plans.¹³⁷ However, most Canadian public sector pensions are subject to the same pension standards legislation and investment rules as private sector pensions. Holding public sector plans to similar standards as private sector plans can help subject public sector plans to a higher degree of scrutiny and transparency. It also brings public sector plans into the same regulatory community as private sector plans, arguably encouraging greater dialogue and sharing of best practices between the public and private sectors. The United Kingdom is an example of a jurisdiction that has recently subjected public sector pension plans to greater regulatory scrutiny.

- **Harness the momentum from reforms to the regulatory system to make changes to public pension arrangements.** Some cite the reforms to the regulatory regime governing pension plans in Ontario in the late 1980s as one of the catalysts for the reforms that were made to public sector plans in that province.¹³⁸ In 1987, Ontario passed a series of reforms to the Pension Benefits Act, the key piece of legislation governing pension plans in Ontario and the piece of legislation that often sets the standard for pension legislation across the country. This pension reform effort directed the government's attention to pension issues, which may have facilitated its later focus on reforming its larger public sector plans. It also caused the government, as sponsor of a number of public pension plans, to have to make

some changes to the plans to bring them into compliance with the new regulatory regime. More recently, a wave of reforms in Canadian pension standards legislation that began around the time of the global financial crisis has been followed by—and arguably led to—a broader series of reforms to public pension institutions, including the proposed creation of the Ontario Retirement Pension Plan, enhancements to the CPP, and the creation of a new public pooled asset manager in Ontario, the Investment Management Corporation of Ontario.

Regulatory and public policy principle 3: Good governance

Good governance can serve not only to increase the performance of pension arrangements. It can also help supplement the regulatory regime. For the kinds of Canadian pension funds profiled as part of this study, governance is arguably part and parcel of the regulatory regime, if looked at broadly. The governance models of legislated pension arrangements (including AIMCo, CDPQ, CPPIB, and OTPP) is often codified in the enabling legislation of these organizations, including rules around board appointments and composition, transparency and accountability, and roles and responsibilities.

Like other pension regulatory systems based on principles of trust law, Canadian pension regulation places significant emphasis on fiduciary standards, including the “prudent person rule.” Because regulators have limited capacity to enforce these principles given the number of plans they oversee, much of the responsibility for discharging the fiduciary duty falls to pension boards of trustees. More effective boards, therefore, can help regulators do their job and lessen the need for prescriptive, rules-based regulation.¹³⁹ This, in turn, can have positive effects on the pension fund's ability to innovate, invest in new asset classes, and explore new investment strategies.

To help realize these lessons, stakeholders can consider two key approaches that have been used in the Canadian context:

- **Governments should pay considerable attention to governance during the setup phase or early reform phase of pension organizations.** In the case of many leading Canadian pension funds, government officials invested considerable time and energy getting the governance model right. In the case of OTPP, considerable emphasis was placed on the creation of a sponsorship agreement between the teachers' unions and the Ontario government.¹⁴⁰ In the case of CPPIB, the government spent significant time crafting the Canada Pension Plan Investment Board Act.¹⁴¹ Former Bank of Canada governor David Dodge, who helped lead the drafting of the CPPIB enabling legislation as deputy minister of finance at the time, described the process as “building a structure that creates trust.” “Where trust is lacking,” Dodge said, “it can lead to prescriptive rules. We [in Canada] have done a good job of avoiding such prescriptive
- rules.”¹⁴² Paying close attention to governance, here, means a combination of rules, structure, agreements, and legislation, on the one hand, and getting the people right, on the other hand.
- **Regulatory incentives to improve governance should be put into place.** One of the main incentives that has been created in Canada is the funding regime for jointly sponsored pension plans, the structure used by both HOOPP and OPTrust, as well as plans such as OTPP and OMERS. In Ontario, where plans transition to joint governance and risk sharing, they are subject to a less onerous funding regime and are required to fund only on a “going concern” basis (assuming the sponsoring organization[s] remain in operation), whereas most plans that do not use this structure are required to fund on a “solvency” basis (ensuring the plan has sufficient funds even if the sponsoring entity shuts down). This differential funding regime provides a significant financial incentive for plans to make the transition to what is considered to be a more robust governance model.



Section 6

The Future of the Canadian Model: Challenges and Opportunities Ahead

During our interviews with Canadian pension leaders, we covered not only the history of the Canadian model leading up to today, but also the future of the Canadian model. What are the main challenges Canadian pension organizations will face over the coming 5 to 10 years? How are they thinking about addressing these challenges? This forward-looking view is relevant to emerging economy stakeholders for two reasons. First, it can help them anticipate the kinds of challenges they may face in the future as they build their retirement systems. Second, the challenges offer some insight into how Canadian pension organizations are navigating some of the same external macro forces that pension stakeholders face in emerging economies today, regardless of where they are on their own evolutionary journeys.

Challenge 1: Lower expected returns and interest rates

Pension funding is adversely affected by the combination of lower return expectations from traditional asset classes and low interest rates, both of which many expect to last for some time. This problem is hardly unique to Canada but rather is central to the conversation among pension stakeholders around the world. Return expectations from a conventional 60 percent equities/40 percent fixed-income portfolio have decreased substantially, leading institutional investors to look for new ways to deliver risk-adjusted returns. Many Canadian plans have shifted assets substantially into less liquid, and in some cases riskier, asset classes such as infrastructure, real estate, and private equity. Some, including HOOPP, have looked to their fixed-income portfolios to generate more value. Some organizations have revised their assumptions downward, lowering discount rates. A number of funds, including CDPQ and OPTrust, are increasingly looking to emerging markets as a source of long-term growth.

Challenge 2: Demographics and the changing workforce

Two membership-related realities represent potential risks to the sustainability of Canadian pension plans. First, plans are becoming more mature, particularly as the baby boom generation reaches retirement age. For some plans, the ratio of contributing members to retired members has decreased substantially. For instance, OTPP and OPTrust each have a maturity ratio (the ratio of the

number of active members to the number of retired members) of 1.3:1. At OTPP, the average member is expected to receive 31 years of pension payments, compared with 26 years of contributions.¹⁴³

Plans have used a number of tools to mitigate the funding risks associated with rising maturity, including raising contribution rates, reducing early retirement provisions, making indexation contingent, and seeking to merge with other plans with more favorable demographics. Second, plans are also grappling with structural workforce changes for the sectors that they cover. HOOPP, for example, while having a higher maturity ratio (2.2:1), is adjusting to a health care system in which more and more care is delivered outside the hospital setting, the plan's traditional membership base. To adjust to this new reality, the plan has expanded to cover workers outside hospitals and has removed eligibility requirements for part-time workers, although some health care workers remain outside the plan. Special challenges can arise for public pension plans when public service delivery is pushed from traditional bureaucracies to lower-cost channels such as nonprofits or private entities whose workforce is often less stable and in more precarious, lower-wage jobs—and is therefore less well suited to the plan design of the traditional public sector defined-benefit plan.

Challenge 3: Pension inequality

A common challenge raised during our interviews was the growing gap between the pension “haves”—mainly public sector workers with a solid, well-funded, well-performing defined-benefit pension

plan—and “have-nots”—mainly private sector or self-employed workers who very often have a lower-quality plan or no retirement plan at all. In Canada, as in other jurisdictions, many private firms have shifted their retirement arrangements from defined-benefit to defined-contribution in recent years. Some public pension leaders are concerned that this growing gap is fueling a simmering “pension envy” that could lead to policy action to undermine the high-quality pensions that exist, rather than action to boost the retirement security of the pension have-nots. Others argue that the gap is fueling a demand by the unpensioned for retirement vehicles that have the characteristics of high-quality pension plans. The risk of such envy is arguably linked to a broader sense of economic and financial insecurity in western societies, stemming from growing income and wealth inequality and the scarcity, both actual and perceived, of stable, high-quality jobs that provide a middle-class income and decent benefits.

To date, the primary response to pension inequality has been government policy action, including Ontario’s initiative to create an Ontario Retirement Pension Plan (a government-sponsored pension plan for all workers without a workplace pension plan that was meant to be based on the Canadian pension model), and the agreement in 2016 to enhance CPP benefits—a change that was supported by labor leaders and a number of leaders in the pension community. Another response by some Canadian pension leaders has been to explore ways to offer the services of public pension organizations to more people, including by expanding membership eligibility (such as to part-time workers), encouraging consolidation of smaller plans into larger public sector plans, offering third-party asset management services, and developing alternative plan designs that would allow different kinds of workers to join the plan. Further, policy makers and regulators have, over the past several years, taken steps intended to preserve defined-benefit plans in the private sector, including easing funding requirements and encouraging risk sharing.¹⁴⁴

Challenge 4: Complexity and other challenges of growth

While the increased scale of pension organizations confers many advantages, growth also presents challenges. “We are a high-growth organization,” HOOPP CEO Jim Keohane said. “Our compound rate of return [for the past 20 years] has been 9 to 10 percent which is faster than most corporate entities. Managing the growth is a challenge.”¹⁴⁵ Although greater scale can unlock access to some kinds of deals and investment strategies, other strategies are not scalable, and finding attractive investments to meet allocations in a rapidly growing fund can be a challenge. Moving into new asset classes, sectors, and geographies in search for these investments can add layers of complexity for pension organizations with in-house, direct-investment models that may require changes in governance, processes, and capability. Claude Lamoureux identifies complexity as one of the future challenges facing Canadian pension funds: “You can’t be good at everything. You need other partners, including people with operational expertise and people who can sit on the boards of the companies that plans buy. These aren’t necessarily the same people who made the investments in the first place.”¹⁴⁶ Jean Michel from CDPQ talks about the challenge of growth from the point of view of emerging markets: “We need to be [in those geographies] in private placement, which means we need a structure with multiple offices around the world. How do we manage this organization, that will grow with multiple offices, while keeping it efficient with proper governance?”¹⁴⁷

Challenge 5: Value-for-money scrutiny

Like the financial services industry generally, particularly since the global financial crisis, Canadian funds are likely to face an increased need to demonstrate value for money to their stakeholders. The rise to prominence of passive investment

management, and increased flows of both retail and institutional assets into market-tracking vehicles, is likely to lead to an ongoing onus on investors who employ active management to show an incremental payoff from the additional costs associated with an active approach. While the scale, in-house teams, and patient capital of Canadian pension funds enable them to deliver active management much more cost-effectively than plans serving the retail market, Canadian pension funds are not immune to the ongoing active-versus-passive debate, as pension fund CEOs such as AIMCo's Kevin Uebelein have pointed out. A number of other broader societal forces increase the likelihood that Canadian pension funds will face ongoing value-for-money scrutiny: the rising expectations of transparency of major institutions among members of the public; ongoing fiscal challenges facing provincial and federal governments in light of slower growth and cost pressures in areas such as health care; and the increased prominence and success, both domestically and globally, of Canadian pension institutions.

Challenge 6: Regulatory environment

Canada's regulatory environment has played an important role in enabling the success of the Canadian pension model, as previously described. Looking ahead, two distinct but related regulatory challenges could influence the future of the Canadian pension model.

The first challenge that pension leaders identify is the need for greater regulatory capacity and coordination in the pension space. Canada's pension regulation remains somewhat fragmented, divided between the federal and provincial levels, and some experts and industry leaders have argued that existing regulators are not equipped to keep up with changes in financial markets, in the increasing sophistication of pension organizations, and in opportunities for innovation and improvement

of the overall retirement system. The Canadian Association of Pension Supervisory Authorities, composed of federal, provincial, and territorial representation, recognizes these challenges and recently issued a new strategic plan with a focus on harmonization of rules. Ontario, which regulates more pension plans than any other Canadian jurisdiction, is in the midst of updating its financial services and pension regulator, the Financial Services Commission of Ontario. The government is creating a new regulator, the Financial Services Regulatory Authority, that will be independent of the government and have rule-making powers. It is hoped this new regulator will be empowered to be more proactive, flexible, and innovative.¹⁴⁸

The second regulatory challenge relates to changes to the global financial regulatory environment in the wake of the global financial crisis. The broader financial system, both domestically and globally, has been subject to an intensive round of re-regulation and regulatory restructuring since the crisis. This has included the creation of new regulatory bodies (such as the Financial Stability Board), new bodies of complex rules (such as Basel III and Dodd-Frank), and ongoing work both domestically (such as by the Bank of Canada¹⁴⁹ and through the federal Capital Markets Stability Act) and internationally (as by the Financial Stability Board) to examine the role and appropriate regulation of pension funds and asset managers from the point of view of financial stability and macroprudential regulation. The combination of these changes has created a variety of implications for public pension organizations, from increased compliance costs to investment opportunities and ongoing regulatory risks.

Challenge 7: Preparation for the next crisis

Canadian pension funds were, on the whole, able to weather the global financial crisis. Preparing for the next major market downturn or financial crisis figures prominently on the lists of top challenges

for Canadian pension fund leaders. An important part of this preparation has to do with portfolio construction and testing. “We have designed our portfolio so that we should do better than average [in the next recession],” CDPQ chair Robert Tessier said, “but the true test of this will be when that recession happens.”¹⁵⁰ Commenting on CDPQ’s performance in the last years, Michael Sabia said, “While not immunizing our portfolio against market movements, our strategy makes it more resilient in turbulent times.” Another important element of crisis preparation is ongoing communication with governments, plan sponsors, and other key stakeholders. Such proactive communication, relationship building, and expectations management can help avoid knee-jerk political reactions and other moves that could undermine the independence and governance of Canadian pension organizations. Reflecting on the impact of past crises on CDPQ, Senior Vice President Maxime Aucoin highlighted the importance of maintaining an open line of communication with stakeholders before a crisis hits: “In the past, we have had periods of instability during down markets. We are doing our best to avoid this kind of a problem in the future, managing expectations and proactively working to preserve trust.”¹⁵¹

Opportunities for Partnerships with Emerging Economies to Enhance Retirement Security

In addition to helping outline the challenges facing Canadian pension plans, the interviews and other research involved in the preparation of this report have also revealed an important opportunity for collaboration. Many Canadian pension funds are actively working to increase their allocations to emerging markets, and their leaders believe that local knowledge and partnerships are critical to their investment success in those markets. Although some of the funds are establishing offices in emerging

economies, it is not practical for the funds to have a physical presence in every emerging economy in which they wish to deploy capital. Hence finding trusted local partners is critical.

Stakeholders working on pension, retirement security, and institutional investing issues in emerging economies are looking to models like the Canadian one as a path toward improving pension plan performance. These stakeholders—including governments, regulators, Social Security administrators, pension plans, and the private firms that serve pension organizations—have significant desire to learn from the Canadian experience and to incorporate those lessons, in a practical way, into their work on both a short- and long-term basis.

Deeper collaboration between Canadian pension funds and pension stakeholders in emerging economies could be of mutual benefit. It could allow Canadian funds to build local knowledge and partnerships to assist them in investing in emerging economies. And it could enable emerging economy stakeholders to incorporate the most relevant, practical lessons from the Canadian experience into a program for reform and continuous improvement.

Collaboration could be structured in a number of ways:

- **Exchanges or secondments** of pension professionals between Canadian pension organizations and those in emerging economies. Such exchanges could provide valuable international experience to Canadian pension professionals, while offering meaningful knowledge exchange and transfer for emerging economy pension organizations.
- **Participation in capacity-building projects**, including those sponsored by the World Bank, in which Canadian pension professionals could contribute to modules on certain subjects, from investments to administration, governance, plan design, and funding.

- **Longer-term, more formal partnerships** between Canadian pension organizations, government bodies, or both and pension organizations, government bodies, or both in emerging economies. CPPIB recently signed a Memorandum of Understanding with the National Development and Reform Commission of China, in which CPPIB will “share its experiences and leverage its advantages to offer intellectual support to the NDRC in formulating policies related to China’s aging population, including providing joint training, workshops and research on pension reform and attracting international capital for the senior care industry.”¹⁵²
- **Investments in emerging market assets in conjunction with local partners or with assistance from the World Bank or other international financial institutions.** For example, CDPQ has already made direct investments with local partners in a number of emerging markets, with a particular focus on infrastructure opportunities.



Appendix A

List of Interviewees



Keith Ambachtsheer, president, KPA Advisory Services; director emeritus, International Centre for Pension Management, Rotman School of Management, University of Toronto

Dan Anderson, trustee and vice-chair, HOOPP

Maxime Aucoin, senior vice president, total portfolio, CDPQ

Kathy Bouey, former deputy minister, Ontario government; served as civil service lead during reforms to Ontario Teachers' Pension Plan and the Ontario Public Service Pension Plan

Chris Brown, president and CEO, Alberta Local Authorities Pension Plan Corporation

Jennifer Brown, former chief pension officer, OMERS; former trustee, OPTrust

Gail Cook-Bennett, founding chair, CPPIB; former board member, Ontario Teachers' Pension Plan

David Dodge, former governor of the Bank of Canada; former deputy minister, Department of Finance Canada

Lowell Epp, assistant deputy minister, Alberta Treasury Board and Finance

Bill Foster, former chief administrative officer, OPTrust; former senior staff member, Ontario Teachers' Pension Plan

Malcolm Hamilton, retired senior actuary, Mercer

Jim Keohane, president and CEO, HOOPP

Claude Lamoureux, former CEO, Ontario Teachers' Pension Plan

Dale MacMaster, chief investment officer, AIMCo

Jean Michel, executive vice president, depositors and total portfolio, CDPQ

Brian Mills, CEO and superintendent, Financial Services Commission of Ontario

Michael Nobrega, former CEO, OMERS

Hugh O'Reilly, president and CEO, OPTrust

Marlene Puffer, trustee and chair of asset-liability management committee, HOOPP

Malcolm Rowan, author, *In Whose Interest?*, report of the Task Force on the Investment of Public Sector Pension Fund.

Kevin Smith, former trustee, HOOPP

Macky Tall, executive vice president, infrastructure, CDPQ; CEO, CDPQ Infra

Robert Tessier, chairman of the board, CDPQ

Kevin Uebelein, CEO, AIMCo

Lester Wong, deputy superintendent of pensions, Financial Services Commission of Ontario



Endnotes

1. For a complete list of interviewees, please see appendix A.
2. See Keith Ambachtsheer, “The ‘Canada Model’ for Pension Fund Management: Past, Present, and Future,” *The Ambachtsheer Letter*, August 1, 2017. Ambachtsheer benchmarks the performance of eight large Canadian public pension funds against that of 132 other pension funds and other long-horizon investment funds.
3. See the *Economist*, “Maple Revolutionaries: Canada’s Public Pension Funds Are Changing the Deal-Making Landscape,” March 3, 2012.
4. See Chris Taylor, “These Canadians Own Your Town,” *Fortune*, December 2, 2015.
5. See Mary Childs and John Authers, “Canada Quietly Treads Radical Path on Pensions,” *Financial Times*, August 24, 2016.
6. See Boston Consulting Group, “Measuring the Impact of Canadian Pension Funds,” October 2015.
7. Unless otherwise noted, all currency figures in this report are in Canadian-dollar terms.
8. See Boston Consulting Group, “Measuring the Impact of Canadian Pension Funds,” October 2015.
9. See Keith Ambachtsheer, “The ‘Canada Model’ for Pension Fund Management: Past, Present, and Future,” *The Ambachtsheer Letter*, August 1, 2017. Ambachtsheer benchmarks the performance of eight large Canadian public pension funds against that of 132 other pension funds and other long-horizon investment funds.
10. See, for example, William Price, John Ashcroft, and Michael Hafeman, “Outcome Based Assessments for Private Pensions: A Handbook” (working paper, World Bank, Washington, D.C., June 2016); Aleksandar Andonov, Rob Bauer, and Martijn Cremers, “Pension Fund Asset Allocation and Liability Discount Rates” (ICPM sponsored research paper, International Centre for Pension Management, Toronto, March 2016); Gordon L. Clark and Roger Urwin, “Making Pension Boards Work: The Critical Role of Leadership,” *Rotman International Journal of Pension Management* 1, no. 1 (Fall 2008); Wilson Sy, “Superannuation Fund Governance: An Interpretation” (working paper, Australian Prudential Regulatory Authority, Sydney, July 15, 2008); Keith Ambachtsheer, Ronald Capelle, and Hubert Lum, “Pension Fund Governance Today: Strength, Weaknesses, and Opportunities for Improvement” (ICPM working paper, International Centre for Pension Management, Toronto, 2006).
11. See Terrie Miller and Chris Flynn, “Internal Management Does Better after Costs,” *CEM Insights*, CEM Benchmarking, Toronto, October 2010.
12. See, for example, Fiona Stewart, Romain Despalins, and Inna Remizova, “Pension Funds, Capital Markets, and the Power of Diversification” (World Bank, Washington, D.C. July 2017).
13. See I. J. Alexander Dyck and Lukasz Pomorski, “Is Bigger Better? Size and Performance in Pension Plan Management” (Rotman School of Management Working Paper 1690724, University of Toronto, 2011).
14. In particular, readers are encouraged to study the work of Toronto-based academic and consultant Keith Ambachtsheer, as well as the literature produced by the International Centre on Pension Management at the University of Toronto (including the *Rotman International Journal of Pension Management*), of which Ambachtsheer was the founding director. Ambachtsheer’s books include *Pension Funds and*

the Bottom Line: Managing the Corporate Pension Fund as a Financial Business (1986); *Pension Fund Excellence: Creating Value for Stakeholders* (1998) (with D. Don Ezra); *Pension Revolution: A Solution to the Pensions Crisis* (2007); and *The Future of Pension Management: Integrating Design, Governance, and Investing* (2016).

15. See PricewaterhouseCoopers, Société coopérative, “Global Pension Funds: Best Practices in Pension Funds Investment Process” (report, PwC Luxembourg, 2016).
16. See, for example, Jack Mintz, “Summary Report on Retirement Income Adequacy Research” (Summary report of the Research Working Group on Retirement Income Adequacy, Department of Finance, Canada, 2009); Bob Baldwin, “Research Study on the Canadian Retirement Income System” (prepared for the Ontario Ministry of Finance, 2009); Michael Wolfson, “Projecting the Adequacy of Canadians’ Retirement Incomes: Current Prospects and Possible Reform Options” (IRPP Study 17, Institute for Research on Public Policy, Montreal, 2011). For a helpful overview of relevant recent studies, see Bob Baldwin, “Assessing the Retirement Income Prospects of Canada’s Future Elderly: A Review of Five Studies” (C. D. Howe Institute Commentary 456, C. D. Howe Institute, Toronto, 2016).
17. See *In Whose Interest?* (report from the Task Force on the Investment of Public Sector Pension Funds, Ontario, 1987).
18. See interview with Kathy Bouey.
19. See David Slater, *A Fresh Start: Report to the Treasurer of Ontario, the Chairman of Management Board of Cabinet, and the Minister of Education on Teachers’ and Public Servants’ Pensions* (Toronto, Queen’s Printer for Ontario, 1988).
20. See interview with Claude Lamoureux.
21. Ibid.
22. Significant documentation exists on the OTPP story. For more detailed accounts, see for example, Claude Lamoureux, “Effective Pension Governance: The Ontario Teachers’ Story,” *Rotman International Journal of Pension Management* 1, no. 1 (Fall 2008); John Lorinc, “Pension Envy,” *Walrus*, September 26, 2013; INSEAD case study, “Going Direct: The Case of Teacher’ Private Capital” (2013); Keith Ambachtsheer and D. Don Ezra, *Pension Fund Excellence: Creating Value for Stakeholders* (New York: John Wiley & Sons, 1998), chapter 13; Andrew Rozanov, “Public Sector Investment Funds: How the Best-in-Breed Evolved,” (Program on Public Pension and Sovereign Funds Working Paper 1, Columbia University, New York, February 2017).
23. Bruce Little, *Fixing the Future: How Canada’s Usually Fractious Governments Worked Together to Rescue the Canada Pension Plan* (Toronto: Rotman-UTP Publishing, 2008).
24. Under the Canadian parliamentary system, the governor in council is the governor general of Canada acting on the advice of the cabinet of the government of Canada.
25. Since the inception of CPPIB, such a nominating committee has made recommendations to the minister in every instance in which directors are appointed to the board of CPPIB. Before making any

recommendation to the federal Cabinet, the federal minister of finance receives advice regarding the appointment of directors from other appropriate provincial ministers from the participating provinces and an external nominating committee comprising a representative designated by the federal minister of finance and a representative of each participating province designated by the appropriate provincial minister for that province. The federal minister of finance consults with the appropriate provincial ministers of the participating provinces before making any recommendation to the governor in council. In addition, before making any recommendation, the federal minister of finance must have regard to the desirability of having directors who are representative of the various regions of Canada and of having a sufficient number of directors with proven financial ability or relevant work experience such that CPPIB will be able to achieve its objects.

26. Interview with Gail Cook-Bennett.
27. Ibid.
28. See, “Our History,” CPPIB website, <http://www.cppib.com/en/who-we-are/our-history/>.
29. See CPP Investment Board, “Canada Pension Plan Investment Board Signs Memorandum of Understanding with National Development and Reform Commission of the People’s Republic of China,” news release, September 22, 2016.
30. For more detailed accounts, see Little, *Fixing the Future*, chapter 17; Harvard Business Review case study, “The Canada Pension Plan Investment Board: October 2012” (Harvard Business School, Cambridge, MA, 2014); Richard Ivey School of Business case study, “The Canada Pension Plan Investment Board: Governance” (2010); Rozanov, “Public Sector Investment Funds: How the Best-in-Breed Evolved.”
31. CDPQ accounts for the vast majority of these 6 million members because it serves as the asset manager for the Québec Pension Plan, Québec’s social security system.
32. See “Investment Philosophy,” AIMCo website, <http://www.aimco.alberta.ca/How-We-Think/Investment-Philosophy>.
33. See Act Respecting the Caisse de dépôt et placement du Québec, R.S.Q. 1977, c. C-2, s. 4.1.
34. Boston Consulting Group, “Measuring the Impact.”
35. Interview with Kevin Uebelein; presentation by Kevin Uebelein to the C.D. Howe Institute, Toronto, shared with the authors.
36. Interviews with Chris Brown and Kevin Uebelein. [[AQ: OK?]]
37. Interview with Kevin Uebelein.
38. Interview with Dale MacMaster.
39. Ibid.
40. Interview with Lowell Epp.
41. Interview with Kevin Uebelein.

42. Interview with Lowell Epp.
43. Interview with Kevin Uebelein.
44. Interview with Robert Tessier.
45. Correspondence with CDPQ management team.
46. Interview with Macky Tall.
47. Interview with Jean Michel.
48. Ibid.
49. Correspondence with CDPQ management.
50. Interview with Dan Anderson.
51. Ibid.
52. See interviews with Dan Anderson, Jim Keohane, and Kevin Smith.
53. Interview with Jim Keohane.
54. Interview with Dan Anderson.
55. Interview with Kevin Smith.
56. Ibid.
57. Interview with Jim Keohane.
58. Ibid.
59. Interview with Marlene Puffer.
60. See HOOPP 2016 annual report.
61. Interview with Hugh O'Reilly.
62. Ibid.
63. Interview with Hugh O'Reilly.
64. See OPTrust 2016 *Funded Status Report*.
65. OPTrust, "How OPTrust Thinks about Investing" (2017, internal OPTrust document).
66. On the importance of integrating key elements of pension management, see Keith Ambachtsheer, *The Future of Pension Management: Integrating Design, Governance, and Investing* (New York: John Wiley & Sons, 2016).
67. Interview with Keith Ambachtsheer.

68. See “Plan Governance,” Ontario Teachers’ Pension Plan website (accessed April 2017), <https://www.otpp.com/corporate/plan-governance>. According to the site, “At the heart of our model is a strong, independent Board that ensures Ontario Teachers’ is run like a business.”
69. Interview with Keith Ambachtsheer.
70. Interview with David Dodge.
71. See, for example, Canada Pension Plan Investment Board Act (SC 1997, c. 40); Teachers’ Pension Act (RSO 1990, c. T.1); Alberta Investment Management Corporation (AIMCo) Act (SA 2007, c. A-26.5); Act respecting the Caisse de dépôt et placement du Québec (CQLR, c. C-2).
72. Changes to the Canada Pension Plan actually require a greater degree of consent than do changes to the Canadian constitution, which requires the consent of the federal government plus two-thirds of the provinces representing 50 percent of the Canadian population.
73. Interview with David Dodge.
74. Interview with Claude Lamoureux.
75. Ibid.
76. Ibid.
77. Interview with Keith Ambachtsheer.
78. Interview with Kathy Bouey.
79. Interview with Gail Cook-Bennett.
80. Ibid.
81. Interview with Claude Lamoureux.
82. Interview with Jean Michel and Maxime Aucoin.
83. Interview with Dale MacMaster.
84. See, for example, Miller and Flynn, “Internal Management Does Better after Costs.”
85. In recent testimony before a Canadian parliamentary committee, CPPIB CEO Mark Machin stated that, since 2006, CPPIB has created \$17.1 billion of additional value relative to a passively invested alternative portfolio (Standing Committee on Finance, November 1, 2016). According to pension expert Keith Ambachtsheer, OTPP has outperformed its benchmark by an average of a net 2.2 percent per year over the course of the past 25 years, amounting to \$36 billion in value added. See Keith Ambachtsheer, “An Open Letter to Andrew Coyne” (May 25, 2016), available at www.kpa-advisory.com.
86. See Ambachtsheer, “The ‘Canada Model.’”
87. For an overview of significant transactions and assets owned by the largest 10 Canadian pension funds, see Boston Consulting Group, “Measuring the Impact.”

88. Interview with Kevin Uebelein.
89. Interview with Jim Keohane.
90. See “Comparative Advantages,” CPPIB website, <http://www.cppib.com/en/how-we-invest/compare-overview/>.
91. Interview with Jean Michel and Maxime Aucoin.
92. See Boston Consulting Group, “Measuring the Impact.”
93. Interview with Claude Lamoureux.
94. Interview with Hugh O’Reilly.
95. Interview with Jim Keohane.
96. Interview with Michael Nobrega.
97. Boston Consulting Group, “Measuring the Impact.”
98. Ibid.
99. Interview with Jean Michel and Maxime Aucoin.
100. Interviews with Malcolm Hamilton, Gail Cook-Bennett, and Michael Nobrega.
101. Interview with Jim Keohane.
102. Interview with Marlene Puffer.
103. Interview with Jean Michel.
104. Interview with Claude Lamoureux.
105. Interview with Kathy Bouey.
106. Interview with Kevin Uebelein.
107. Interview with Claude Lamoureux.
108. Ibid.
109. Interview with Brian Mills. Mills was seconded from the government to work on the set-up of the Ontario Pension Board, where he later became vice president of administration.
110. Ibid.
111. Ibid.
112. Discussions with HOOPP’s Strategy and Stakeholder Relations team.
113. See the People for Pensions website, <http://www.peopleforpensions.com/>.
114. Interview with Malcolm Hamilton.

115. For example, in the interview with David Dodge, Dodge said, “The defined nature of the benefit is an important part of the model because it gives you contribution certainty and pooling.”
116. Interview with Jennifer Brown.
117. Interviews with Kathy Bouey and Claude Lamoureux.
118. See Slater, *A Fresh Start*.
119. Interview with Claude Lamoureux.
120. “Discount Rate,” Ontario Teachers’ Pension Plan website (accessed April 2017), <https://www.otpp.com/corporate/plan-funding/funding-valuations/discount-rate>.
121. A Society of Actuaries report found that the median discount rate for a U.S. state or city public pension plan in 2014 was 7.6 percent. See Lisa Schilling, “U.S. Pension Plan Discount Rate Comparison 2009–2014” (article by the Society of Actuaries, Schaumburg, IL, September 2016).
122. Interview with Malcolm Hamilton. Also, see William B. P. Robson and Alexandre Laurin, “Ottawa’s Hidden Deficit: The Widening Gap between Federal Government Pension Liabilities and Assets,” (C. D. Howe Institute Commentarie 406, C. D. Howe Institute, Toronto, 2014).
123. See, for example, Warren Buffett, “Chairman’s Letter,” *2007 Berkshire Hathaway Annual Report*, 18, which calculates that, of the S&P companies that have pension plans, the average investment return assumption is 8 percent.
124. Interview with Hugh O’Reilly.
125. Interview with Bill Foster; OPTrust 2016 annual report.
126. Office of the Chief Actuary, *27th Actuarial Report on the Canada Pension Plan* (Ottawa: Office of the Superintendent of the of Financial Institutions Canada, September 2016).
127. Interview with Hugh O’Reilly.
128. Interview with Dan Anderson.
129. Interview with Bill Foster.
130. Interview with Brian Mills.
131. Department of Finance Canada, “Pension Plan Investment in Canada: The 30 Per Cent Rule,” 2016.
132. Ontario also recently announced its intention to eliminate the restriction on a pension plan’s ability to own more than 30 percent of a publicly traded company.
133. Interview with Gail Cook-Bennett.
134. See Ontario Expert Commission on Pensions, *A Fine Balance: Safe Pensions, Affordable Plans, Fair Rules* (Toronto: Queen’s Printer for Ontario, 2008).
135. Ontario granted this ability to OTPP and OMERS in 2009. Some other plans are able to provide these services without any change in law because they are not creatures of legislation.

136. See Public Service Superannuation Act, R.S.C., 1985, c. P-36.
137. Some Canadian commentators have argued that the standards governing public sector plans are materially—and unjustifiably—different from those governing private sector plans. Malcolm Hamilton, for example, a respected actuary and the former actuary for OTPP, has argued that public sector plans should be required to use the same accounting standards as plans in the private sector, effectively the corporate bond rate. Interview with Malcolm Hamilton. Also, Malcolm Hamilton, “Evaluating Public-Sector Pensions: How Much Do They Really Cost?” (C. D. Howe Institute Commentary 403, C. D. Howe Institute, Toronto, March 2014).
138. Interviews with Kathy Bouey and Bill Foster. It should be noted, however, as is mentioned in the earlier section of the report on the origins of the Canadian model, that the main motivation for reforming Ontario’s public sector plans appears to have been fiscally driven—a desire to eliminate the large funding shortfall. Interview with Brian Mills.
139. For a helpful discussion of the symbiosis between governance and regulation, see the report of the Ontario Expert Commission on Pensions, *A Fine Balance*, chapter 8.
140. Interview with Kathy Bouey.
141. Interviews with David Dodge and Gail Cook-Bennett.
142. Interview with David Dodge.
143. “Funding Considerations,” Ontario Teachers’ Pension Plan website, <https://www.otpp.com/corporate/plan-funding/funding-considerations>.
144. For example, Ontario recently announced a new funding framework for single-employer defined-benefit pension plans. This framework reduces requirements for plans to fund on a solvency basis.
145. Interview with Jim Keohane.
146. Interview with Claude Lamoureux.
147. Interview with Jean Michel and Maxime Aucoin.
148. See George Cooke, James Daw, and Lawrence Ritchie, “Review of the Mandates of the Financial Services Commission of Ontario, Financial Services Tribunal, and the Deposit Insurance Corporation of Ontario” (Final report, Ontario Ministry of Finance, Toronto, March 2016), <http://www.fin.gov.on.ca/en/consultations/fsco-dico/mandate-review-final-report.html>.
149. See, for example, Guillaume Bédard-Page et al., “Large Canadian Public Pension Funds: A Financial System Perspective,” *Financial System Review*, Bank of Canada, June 2016.
150. Interview with Robert Tessier.
151. Interview with Jean Michel and Maxime Aucoin.
152. CPP Investment Board, “Investment Board Signs Memorandum of Understanding.”

