



Real assets: Introduction to core commercial real estate

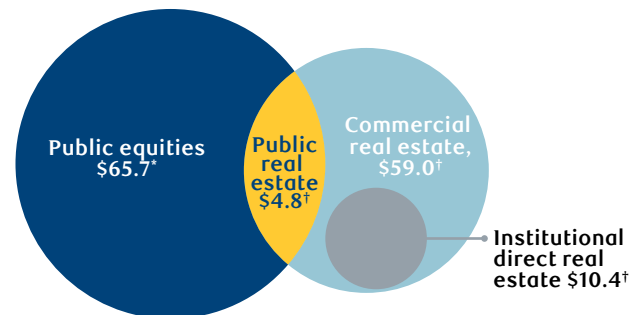
As investors increasingly use alternative investment strategies to complement their traditional asset allocations, exposure to real assets and in particular real estate has grown considerably. In a market environment characterized by an advancing business cycle, allocations to high-quality, core real estate can provide a number of important benefits to portfolios.

Introduction

Commercial real estate is a large part of the global investment universe, with an estimated value of USD\$59 trillion – an amount nearly equal to the value of global equities by market capitalization. Of this, institutional investors own approximately USD\$10.4 trillion globally, of which about USD\$2.9 trillion resides in the U.S. and approximately USD\$320 billion is in Canada. The vast majority of commercial real estate assets are held in direct allocations (where the property is owned either directly or through a private investment fund), while a smaller portion is held through publicly listed real estate investment vehicles such as Real Estate Investment Trusts (REITs).

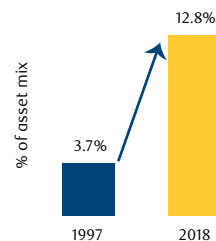
It is a sizeable asset class, and over the past two decades, it has become an increasingly important part of portfolios in Canada and globally. Within these growing allocations, core real estate – which focuses on high-quality, income-producing assets in major cities – is typically the largest component of a real estate portfolio, followed by higher-risk, value-add strategies and increasingly, global real estate allocations.¹ As an example, Canadian institutional allocations to real estate have grown from 3.7% in 1997 to 12.8% at the end of 2018 (see Figure 2), a more than threefold increase over the past 20 years.

Figure 1: Value of commercial real estate market



All figures in U.S. \$trillion. * World Bank, market capitalization of listed domestic companies, December 2018; † LaSalle, Investment Strategy Annual – 2018-2019 Real Estate.

Figure 2: Public pension plan real estate allocations 1997 vs 2018



Source: Pension Investment Association of Canada as at December 31, 2018.

¹ CBRE Global Investor Intentions Survey 2019; RBC Global Asset Management (RBC GAM).

The attributes of domestic core real estate often align well with the strategic objectives of individual investors and there are compelling reasons to consider allocations to domestic core real estate. These include diversification, low correlation to public markets, operating income with long-term domestic inflation-linked characteristics, the potential for attractive risk-adjusted total returns, potential for income tax synergies, and low relative volatility compared to non-domestic real estate markets. Taken together, these qualities may make core real estate an attractive opportunity worthy of consideration in prudently diversified investor portfolios.

What is direct real estate?

At its most basic level, real estate is simply a real asset comprising land or buildings, or both. It includes a wide variety of assets, ranging from single-family homes to large mixed-use residential/commercial development projects. Real estate offers investors two sources of potential returns: income flows, which are similar to bond coupons and are mainly generated from rent payments, and capital appreciation, which is sensitive to broader interest rates and income growth.

Investors can gain access to broader real estate in a number of ways; one can choose to invest:

- in debt components (via mortgages);
- indirectly through a real estate company (via REITs); and
- directly through equity ownership of real estate assets.

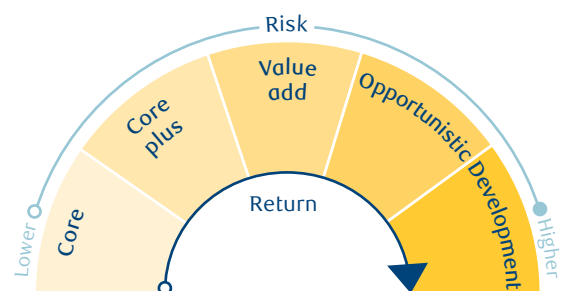
For the purposes of this discussion, we will focus on direct ownership of commercial real estate, which typically comprises one of five income-producing property types: office, retail, industrial, hotels, and multi-residential buildings.

Real estate investment strategies

The real estate universe is comprised of a range of investment strategies from relatively low risk income-based strategies to relatively higher risk, development-focused strategies. In general, they are classified as either core, core plus, value-add, opportunistic, or development.

- **Core strategies** generally focus on high-quality commercial properties in primary markets that are well-leased with a steady income profile and a strong base of core tenants. They typically generate predictable cash flows associated with the rent paid by tenants. While core strategies can include potential capital appreciation (typically averaging the rate of inflation over the long term), between 60% and 80% of core real estate's total return is generally generated by cash flows providing stable income yields. Core strategies tend to have lower levels of risk and predictable income yields with relatively low levels of leverage.
- **Core plus strategies** are an extension of core but typically have some added exposure to higher return value-add or opportunistic strategies, described below.
- **Value-add strategies** seek to enhance asset values through redevelopment, renovation, or enhanced leasing strategies in order to materially reduce vacancy and generally involve taking on additional risk when compared to core.
- **Opportunistic strategies** are one step further out on the risk spectrum and typically involve either material asset re-positioning risk, distressed assets that require significant investment, secondary market risk (small city or tertiary location), and/or higher leverage levels.
- **Development strategies** focus on the construction and development of new buildings from raw land. They are typically high-risk, high-return strategies that perform particularly well in periods of strong growth and high demand.

Figure 3: Illustrative spectrum of real estate investment strategies



Source: RBC GAM.

Core real estate

While all of these strategies may have a place in a diversified real estate portfolio, core real estate in particular can provide an attractive yield enhancement tool, with moderate levels of risk, particularly during periods of uncertainty. Like fixed income, the returns generated by core real estate are typically operating income and yield based, and the core nature of the holdings can help to limit price volatility. When interest rates are low, contractual rent-based returns with identifiable long-term leases can be an attractive source of income within any portfolio. Importantly, Canadian domestic real estate has links to local interest rates and potentially to domestic inflation, which in many ways may make it an attractive complement to fixed income portfolios.

In our view, investors who are seeking to introduce exposure to real estate into their portfolio should consider a core domestic allocation. The following sections elaborate on the benefits an allocation to core domestic real estate can provide within Canadian investment portfolios.

Portfolio diversification

Direct real estate can act as a diversifier in traditional portfolios. Correlations to traditional bond and equity markets are low and range between -0.06 and +0.17 (see Figure 4) as is correlation to REITs at 0.04. While this is to some degree the nature of less frequent valuation, the consistency of returns and stability of the domestic market do provide material correlation benefits to traditional portfolio allocations.

In addition, allocations to direct real estate are attractive when compared to exposure to publicly traded REITs. As the table illustrates, REIT securities have a strong correlation to the underlying equity markets (both domestic and global) and as we will show (see Figure 7), the volatility of REITs is also materially higher, thus reducing the benefits of their inclusion as a substitute for direct real estate in portfolios.

Adjusted historical performance for core Canadian real estate has been attractive over both the long and short term (see Figure 5). Unlike more opportunistic real estate strategies in which capital appreciation is the dominant source of returns, core returns tend to be strongly influenced by current income, with modest capital appreciation over time driven by declining interest rates.

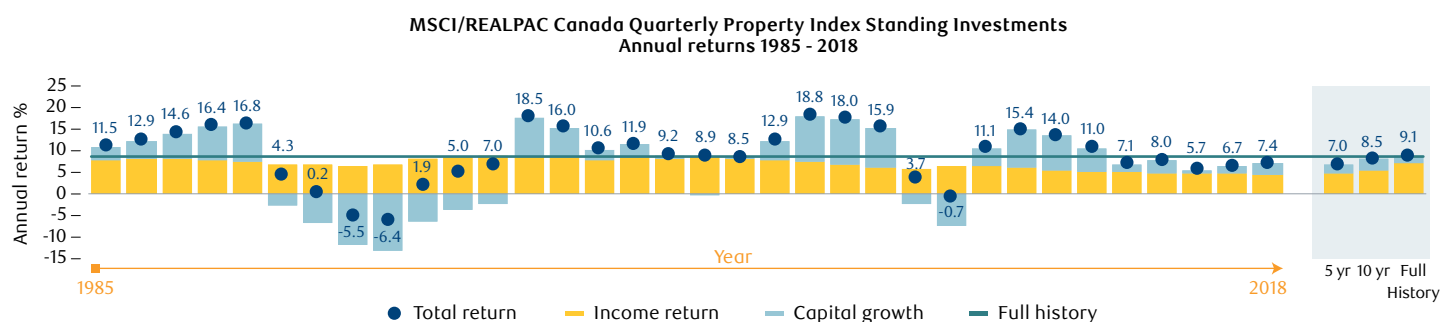
Over the past 10 years, approximately 66% of core real estate returns in Canada have come from current income, averaging approximately 5.6% annually with total returns annualized at 8.5%. The longer 25-year history of Canadian core direct real estate includes the robust yields of the 1980s and early 1990s and is even more attractive as a result, posting total annualized returns of 9.1%. Furthermore, the asset class posted negative returns in only three of those years, highlighting the strong absolute return nature of this asset class and the importance of consistent and predictable income as ballast to more volatile capital returns.

Figure 4: Correlations to other asset classes

	Canadian bonds	Canadian equities	Global equities	Canadian REITs
Canadian bonds	1.00			
Canadian equities	-0.14	1.00		
Global equities	-0.12	0.72	1.00	
Canadian REITs	0.13	0.71	0.51	1.00
Direct real estate	-0.06	0.13	0.17	0.04

Source: RBC GAM, Bloomberg. Correlations to Universe Bonds from January 2001-December 2018; Correlations to Global and Canadian Equities from January 1990-December 2018. Indices: Canadian Bonds: FTSE Canada Universe Bond Index; Canadian Equities: S&P/TSX Composite Index; Global Equities: MSCI World Index (CAD); Canadian REITs: S&P/TSX Canadian REIT Index. Direct Real Estate: MSCI/REALPAC Property Index - Total Return.

Figure 5: Attractive return profile



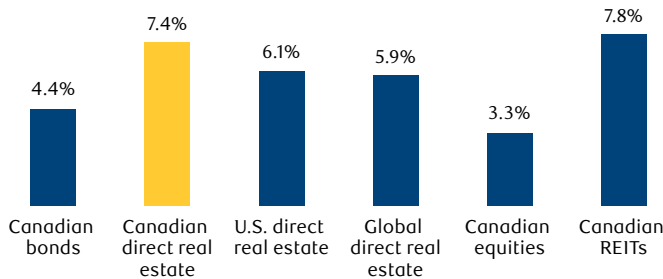
Source: The MSCI/REALPAC Canada Quarterly Property Index Standing Investments; co-published by REALPAC & MSCI.

Risk: volatility & drawdown

In comparison to other developed markets, return volatility in the core Canadian real estate market has been relatively muted at 2.9% annually since the end of 2007. Moreover, while returns across these asset classes over this period have been broadly similar (see Figure 6), the maximum drawdown experience in Canada has been materially better compared to both U.S. and global core direct real estate markets (-5.7% vs -25.4% and -22.2% respectively). When compared to public markets, the results are even more pronounced, as both Canadian equities and REITs have displayed significantly more volatility and drawdown risk since December 2007 (see Figures 7 and 8). Interestingly, since December 2007, Canadian core real estate has displayed almost half the levels of volatility experienced in the U.S. private markets, and significantly less than publicly listed real estate investments (see Figure 7).

Figure 6: Annualized performance, local currency

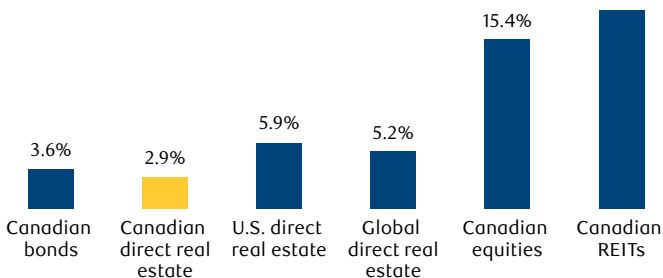
(Dec. 2007 - Dec. 2018)



Source: Bloomberg, MSCI, RBC GAM. Data from December 2007 to December 2018; Canadian Bonds = FTSE Canada Universe Bond Index; Canadian Direct Real Estate = MSCI/REALPAC Canada Property Fund Index, unlevered (Standing Investments); U.S. Direct Real Estate = MSCI/PREA U.S. ACOE Quarterly Property Fund Index (unlevered); Global Direct Real Estate = MSCI Global Property Fund Index (unlevered); Canadian Equities = S&P/TSX Capped Composite Index; Canadian REITs = S&P/TSX Capped REIT Index.

Figure 7: Annualized volatility, local currency

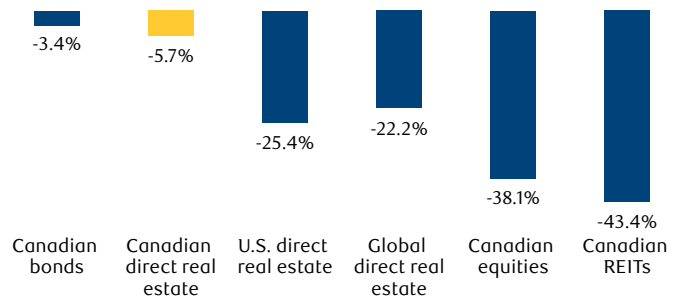
(Dec. 2007 - Dec. 2018)



Source: RBC GAM, NCREIF, MSCI.

Figure 8: Maximum drawdown

(Dec. 2007 - Dec. 2018)



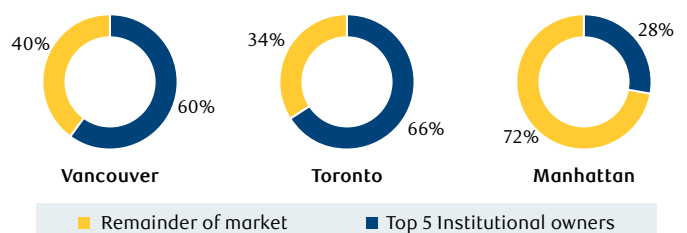
Source: RBC GAM, NCREIF, MSCI.

Stability within the Canadian market has been supported by, among other things, the overall strength of the Canadian financial system, which provided a cushion to volatility in the 2008 crisis; overall stability in the Canadian economy driven by robust immigration, attractive demographics, and strong employment growth; and the concentration of institutional ownership unique to the Canadian market.

That preponderance of institutional investment in Canadian core commercial real estate lends stability to this market in comparison to other geographies. In core Canadian primary markets such as Toronto and Vancouver, Canadian institutional investors own a large proportion of the total commercial downtown office properties inventory (see Figure 9). These investors tend to be conservative, long-term investors in search of yield to supplement long-term investment objectives, meaning that these properties rarely change hands. This drives stability in the markets, leading to relatively low levels of volatility and making it difficult for new entrants to access the market.

Figure 9: Strong institutional ownership

% of square footage ownership of downtown office inventory.



Source: CBRE Research, January 2019.

Inflation

Given that the income component of real estate returns has an indirect link to rising prices, and because real estate values – as a real asset – will have some indirect link to inflation, investors often look to real estate as an asset class that can, over the long term, provide some hedge against inflation. Contractual tenant rental income is typically structured to increase, often in line with inflation expectations over time, and as leases mature they are often renewed at higher rates. In this respect, core assets tend to provide the strongest link to inflation when compared to more opportunistic strategies, and domestic exposure is critical to ensure a match to local price movements. Strategies that are more reliant on capital gains (such as value-add, opportunistic, and development) may experience significantly more return volatility, with higher expected returns but less correlation to long-term price metrics.

Canadian real estate: current state

While the objective of this discussion is more broadly asset class driven, we would be remiss in omitting a short word on the more recent fundamentals of the Canadian real estate market in what has certainly become a less predictable investment environment.

While domestic real estate prices have risen strongly over the past decade, global asset prices have generally risen as fast or faster – it has certainly been a bull market for most asset classes. And while prices everywhere are high, in our view the Canadian real estate market remains attractive relative to its global peers. Although risks are growing at this later stage in the business cycle, the defensive nature of the high-quality component of the domestic core market is still supported by strong long-term fundamentals. While yields in primary Canadian centers such as Vancouver and Toronto may appear stretched, they remain modestly attractive relative to international comparisons – as shown in Figure 10, income yields in Toronto, Vancouver, and Montreal office markets remain higher than those of their global counterparts.

Moreover, valuations are supported by strong population and GDP growth – key factors that drive future demand and that have been supportive of the Canadian economy over the past 10 years (see Figures 11 and 12). While economies have begun to slow, strong prospects for demographics in Canada, along with low levels of relative inventory growth and the evolution of new opportunities in office, retail, industrial, and residential demand all provide support for the longer term. Some volatility is to be expected as we move through the later stages of a business cycle, but we believe that a focus on high-quality, core real estate in cities with strong demographics and underlying fundamental support should provide an offset in times of economic and market stress.

Figure 10: Prime office yields in Canada remain attractive

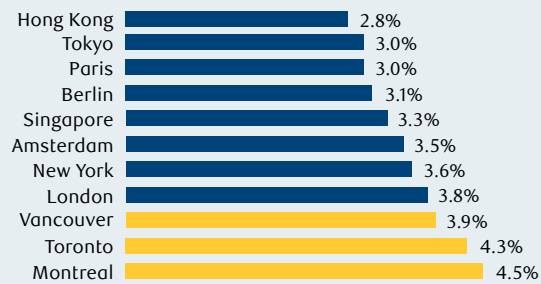


Figure 11: Population growth - G7 Countries (Dec. 2007 - Dec. 2018)

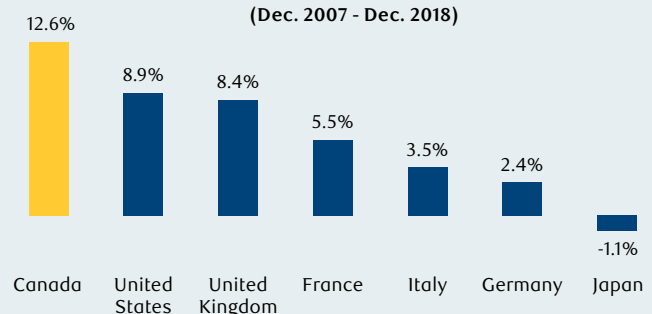
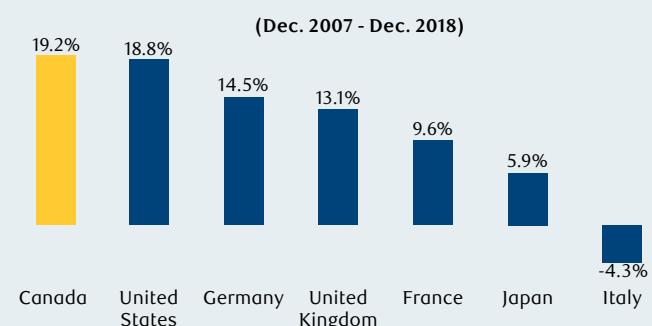


Figure 12: GDP growth - G7 Countries (Dec. 2007 - Dec. 2018)



Source: CBRE Real Estate Investment in an Unpredictable Environment, February 2019; CBRE Research, CBRE Econometrics Advisors, Oxford Economics, March 2019

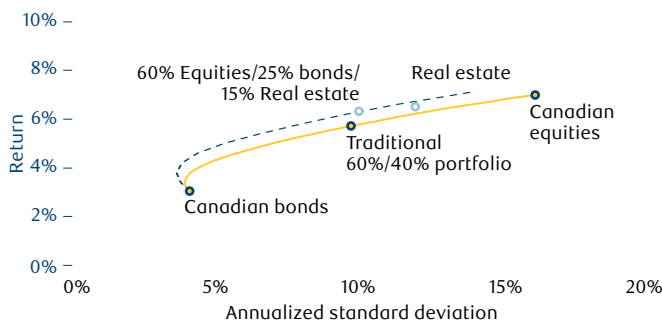
Portfolio implementation

As investors have progressed from the traditional 60/40 benchmark to a more diversified approach, allocations to real estate have formed an increasing part of their asset mix. In the examples below we demonstrate the impact that adding core real estate can have on a portfolio's risk and return profile.

Efficient frontier: volatility

Figure 13 illustrates the potential effect of a 15% allocation to core domestic real estate sourced from an existing fixed income allocation in a traditional 60/40 portfolio. As can be seen, the efficient frontier shifts up and to the left, indicating that adding the asset class enhances the portfolio's expected risk-return profile – where risk is defined as standard deviation. In this case, the new portfolio's expected return is improved with a modest increase to expected volatility (standard deviation).

Figure 13: Efficient frontier

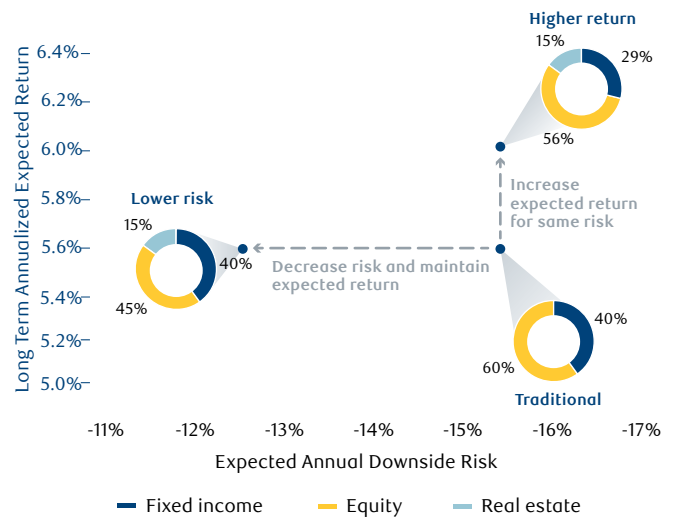


Source: RBC GAM, Bloomberg; based on forward expectations for returns and volatility; NCREIF Real Estate Index - volatility adjusted. Refer to appendix for modeling assumptions and disclosures. Hypothetical performance analyses are for illustrative purposes only and there is no guarantee that hypothetical returns or projections will be realized.

Downside risk: drawdown

Similarly, Figure 14 illustrates the impact on downside risk that an allocation to direct real estate can have on a traditional public market-only portfolio. In this example, adding that same 15% allocation to real estate improves the portfolio's expected drawdown risk to its expected return profile by providing exposure to non-traditional risk factors (real estate). It can be used to lower the risk of material drawdown by sourcing the allocation from equities, while maintaining expected returns or to increase return potential without incurring additional drawdown risk by sourcing the allocation primarily from fixed income.

Figure 14 : Drawdown risk



Source: RBC GAM, Bloomberg; based on forward expectations for returns and volatility; NCREIF Real Estate Index - volatility adjusted. Refer to appendix for modeling assumptions and disclosures. Hypothetical performance analyses are for illustrative purposes only and there is no guarantee that hypothetical returns or projections will be realized.

Summary

Allocations to direct real estate are becoming an ever-increasing component of investor portfolios in Canada and globally. While valuations have risen over the course of the last decade, the portfolio construction attributes of adding allocations to this private market asset class remain positive and opportunity continues to exist.

In our view, Canadian investors should consider core domestic commercial real estate within their asset mix given its potential for low correlations, low levels of volatility, potential inflation hedging characteristics, and attractive total returns. Ultimately, the diversification and total return benefits associated with this asset class can make a material difference in helping investors achieve their investment objectives.

Appendix: Modelling assumptions

Capital market assumptions

Asset classes	Representative data series	Expected long term annualized return	Expected annual volatility	Expected annual downside risk
Cash	FTSE Canada 30 Day T-Bill Index	2.1%	0.4%	1.3%
Canadian bonds	FTSE Canada Universe Bond Index	3.0%	4.1%	-6.8%
Canadian equities	S&P/TSX Composite Index	7.0%	16.2%	-28.8%
Global equities	MSCI World Index (CAD)	6.8%	13.9%	-25.6%
Real estate ²	NCREIF Real Estate Index - adjusted	6.5%	12.0%	-17.6%

Assumptions represent the views of RBC GAM for the purposes of illustrating and understanding the potential risk-reward trade-off of different portfolio decisions. Investors should be aware of the limitations using forward-looking assumptions in that there is absolutely no guarantee that future performance will occur according to any ex-ante expectation.

² Expected long-term annualized return net of 0.85% fee.

Illustrative portfolio assumptions

Modeled expectations	Traditional portfolio	Lower risk portfolio	Higher return portfolio
Long-term annualized return	5.6%	5.6%	6.1%
Annual downside risk ³	-15.5%	-12.7%	-15.5%
Annual volatility	8.3%	6.6%	8.0%
Sharpe ratio	0.43	0.54	0.50

Asset Mix

	Traditional portfolio	Lower risk portfolio	Higher return portfolio
Fixed income	40%	40%	29%
Canadian bonds	40%	40%	29%
Equity	60%	45%	56%
Canadian equities	20%	15%	19%
Global equities	40%	30%	37%
Alternatives	0%	15%	15%
Real estate	0%	15%	15%

Hypothetical performance analyses are for illustrative purposes only and there is no guarantee that hypothetical returns or projections will be realized.

³ CVaR 95 which represents the expected average loss during the worst 5% of capital market outcomes.

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