

# LONG-TERM STRATEGIC ASSET ALLOCATION

Vjosana Klosi, CFA  
Investment Management Research  
CIBC Asset Management Inc.  
vjosana.klosi@cibc.ca

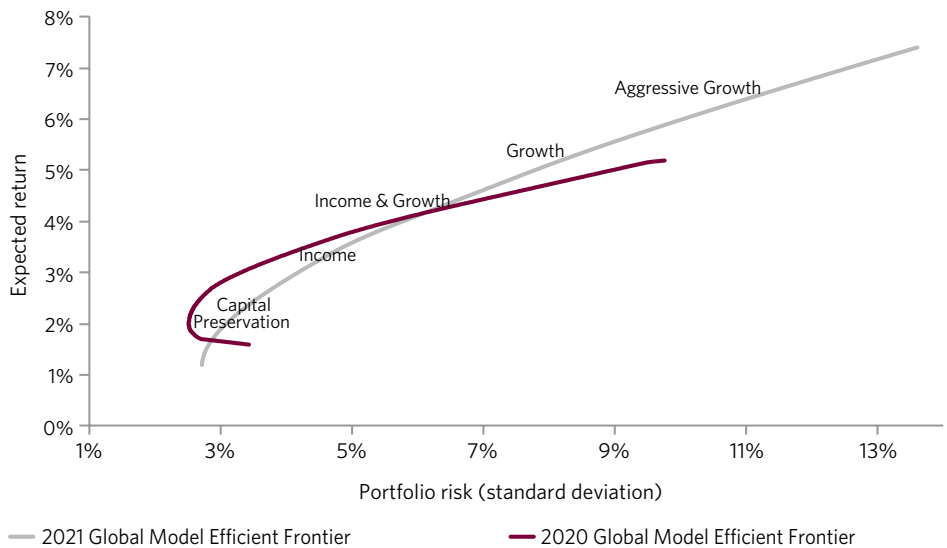
Luc de la Durantaye, CFA  
Asset Allocation and Currency Management  
CIBC Asset Management Inc.  
luc.deladurantaye@cibc.ca

**Objective:** To provide a stable, long-term asset allocation strategy that incorporates individual investor objectives and risk tolerance, ignoring short-term market noise.

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Efficient frontier (2021 forward-looking estimates)



Source: CIBC Asset Management Inc. Data as of December 31, 2020.

## Highlights

- The long-term strategic asset allocation (LTSAA) model incorporates the CIBC Asset Management (CAM) Multi-Asset and Currency Management forward-looking asset class views for the next 10-year period. This is complemented by tactical short-term opportunities aimed at maximizing risk-adjusted return profiles.
- Given current low yields and expectations for a slow long-term policy normalization in developed markets, fixed income securities are expected to produce muted long-term returns. As a result, we've maintained last year's strategic recommendation of 5% reallocation to cash from bonds in most investor profiles.
- We maintain a procyclical growth tilt within our growth profiles, with positive expectations for high quality credit, international equities and real assets. Given the increased valuations within high-yield fixed income combined with an uptick of defaults and underwriting risks, we are recommending a 5% reallocation from high-yield to higher quality, longer maturity bonds for the lower risk profiles, and increased equities for the growth profiles.
- Despite higher volatility, our five investor profiles continued to generate positive performance. Annual returns during 2020 ranged from 7.6% for the most conservative profile (Capital Preservation) to 20.1% for the most aggressive profile (Aggressive Growth).

- Increased monetary stimulus and low or negative yields in most developing countries have lowered long-term expected returns in fixed income assets and increased equity premiums. We continue to recommend diversification to reduce overall portfolio risk and navigate around these concerns. We maintain a broad global asset allocation model within high quality credit, global equities and emerging markets (EM) to further improve risk-adjusted returns for each profile. A higher risk premium has resulted in higher expected returns for the higher risk profiles where the equity risk premium dominates the portfolio's performance (as depicted in the 2021 efficient frontier).
- Diversification within a number of alternative asset classes continues to be an area of focus, with specific recommendations on how to allocate to these within client portfolios. Traditional portfolio recommendations have been augmented with alternative investment allocations to private equity, real assets and liquid alternatives. These can help broaden asset allocation and provide additional sources of diversification. Alternatives can also temper higher expected volatility and lower expected returns by increasing portfolio efficiency given their lower expected correlation to equities.
- A dedicated allocation to global markets within Canadian portfolios increases foreign exchange risk over the short run. However, investing globally has the benefits of increased diversification and better risk-adjusted return profiles. To account for the risks associated with foreign currency exposure, investors with a shorter time horizon should consider global fixed income and equity products hedged to the Canadian dollar.
- Adjusting long-term allocations based on short-term volatility or momentum may prevent investors from reaching their long-term financial goals. Investors should remain diversified and fully invested to reduce unnecessary risks. This can be accomplished by regularly reviewing and rebalancing portfolios to ensure allocations are aligned to meet both risk tolerance and long-term investment objectives.

## Capital market review

Following a plunge into bear market territory in the spring as a global pandemic was declared by the World Health Organization, global markets made a strong recovery despite the lingering economic impact of the COVID-19 virus. This was by far one of the fastest recoveries in history, with the MSCI World Index climbing by 14.5% CAD (16.5% USD) in 2020 to end the year at a record high. All major equity markets had positive performance in Q4 as government economic support encouraged investor optimism in risk assets and growth recovery estimates. Despite ending the year on a positive note, the 2020 "black swan event" resulted in increased volatility across equity markets. A number of other key themes also added to volatility, including uncertainty surrounding the November U.S. Presidential election, deteriorating China-U.S. trade relations, and lingering hurdles to reach a Brexit resolution.

U.S. markets ended the year at a new high, as the S&P 500 Index rebounded to end the year higher by 18.4% USD (16.3% in CAD), while the Nasdaq Composite Index surged 44.9% USD (42.4% CAD) and the Russell 2000 Index of smaller-cap stocks gained 20.0% USD (17.9% CAD). Outperformance was concentrated in the information technology, health care, consumer discretionary and communication services sectors. Information technology stood out with a 43.9% USD (41.4% CAD) return for the year. Momentum-driven names and big tech stocks led equity gains in 2020, including Tesla (743% USD), Zoom Video Communication Inc. (396% USD), PayPal (117% USD), Apple (83% USD), and Amazon (76% USD). Optimism was guided by the belief that liquidity provided by the U.S. Federal Reserve (Fed) and government stimulus should provide sufficient economic support until mass vaccination rollouts in 2021.

The outperformance of the stock markets defied economic data, as it was mainly driven by massive government stimulus packages to help support financial markets, as well as unprecedented, fast-tracked vaccine approval efforts at year end. While U.S. unemployment increased to 6.7%, as of December, government stimulus helped spending rates recover to pre-pandemic levels<sup>1</sup>. At the end of 2020, the U.S. government deficit was projected by the Congressional Budget Office at 16% of GDP. It's expected to remain high, given the Biden administration's proposal for an additional \$3 trillion in tax revenue and \$8 trillion in spending over the next decade. The Fed is expected to increase its holdings of U.S. Treasuries by at least \$80B USD per month and agency mortgage-backed securities by at least \$40B USD per month until further progress has been made toward the Fed's employment targets. The target Fed funds rate remained at 0.00% to 0.25% at the end of 2020.

In Canada, the economy recovered by 8.9% in Q3 and GDP growth is expected to be at 3.5% annualized for 2020, despite ongoing economic restrictions<sup>2</sup>. Consumer fundamentals also improved, aided by accommodative fiscal and monetary measures, increased savings and greater debt servicing ability from ultra-low interest rates. While trailing U.S. and international equities, the S&P/TSX Composite Index ended the year on a positive note, returning 5.6% in 2020. The Canadian equity market's lower relative valuation multiples were impacted by its cyclical sectors such as energy (-26.6%) and health care (-23.0%).

## Equity market performance (% , CAD)

Asset Class	Index	2020	2019	2018	2017	2016
Canadian Equity	S&P/TSX Composite	5.6	22.8	-8.9	9.1	21.1
U.S. Equity	S&P 500	16.3	24.8	4.2	13.8	8.1
Global Equity	MSCI World	14.5	21.9	0.1	15.0	4.4
International Equity	MSCI EAFE	6.4	16.5	-5.6	17.4	-2.0
Emerging Markets	MSCI Emerging Markets	16.6	12.9	-6.5	28.7	7.7
US Small Cap	Russell 2000	17.9	19.2	-3.0	7.1	17.1

Source: Bloomberg, CIBC Asset Management Inc., as of December 31, 2020.

The COVID-19 economic lockdown, together with Russia and Saudi Arabia's oil price wars, led to the plummet of crude oil spot price from \$61.2 on December 31, 2019 to as low as \$6.8 in April 2020. This move negatively impacted the energy sector, which has started to recover along with oil prices as re-openings progress in several major regions. Low interest rates continued to impact earnings within the banking and financial sector. Similar to U.S. markets, the information technology sector posted the strongest returns of 80.7% CAD, primarily driven by shares of e-commerce firm Shopify, which more than doubled in the year. Following the global small-cap equity market, the S&P TSX Canada Small-cap Index had a strong 12.9% rebound in 2020. Performance was especially strong during the last three quarters of 2020, with an 82.4% return.

International equities, as proxied by the MSCI EAFE Index, returned 6.4% CAD (8.3% USD) in 2020 but trailed U.S. markets. Similar to other indices, eurozone equity market performance was varied and volatile, impacted by higher COVID transmission across several regions, as well as ongoing Brexit uncertainties. A European Union recovery fund established in the summer should provide the necessary monetary and fiscal support to mitigate the impact of further lockdowns across the region. The MSCI Europe Index returned 4.1% CAD (-2.8% EUR) for the year. With the exception of utilities, all European sectors underperformed other developed market sectors, given their concentration in more traditional value companies within the financials, materials and industrials. The outperformance of the technology sector and cyclicals is helping to diversify international sector composition, with information technology, health care and consumer discretionary sectors now comprising a larger share of the index. U.K. equity markets and the British Pound lagged other European countries and resulted in the FTSE 100 Index returning -13.0% CAD (-14.2% GBP).

The MSCI Emerging Markets (EM) Index returned 16.6% CAD (18.7% USD) for 2020 despite considerable volatility. EM volatility was impacted by the spread of COVID-19 as well as trade tensions between the U.S. and China, and a collapse in commodity prices. An earlier selloff in Q1 was sparked by the initial virus spread within China, which further reduced already lower relative valuations for EM equities. This set up a considerable reversal, which resulted in EM having the strongest asset class performance in the last three quarters of 2020. In addition to lower valuations, the rebound was aided by rising global liquidity, a change in U.S. Presidential administration, and optimism around a cyclical recovery in 2021. While weak commodity prices impacted major oil exporters such as Brazil and Russia, Asian markets outperformed as economic re-openings were facilitated by earlier control of virus transmission. This led, to a quick return to positive GDP growth and a recovery from currency weakness.

Within fixed income markets, positive January performance quickly reversed in February as uncertainty from the pandemic unfolded. In an effort to restore order to bond markets, major governments slashed already low interest rates. This resulted in government yields plummeting towards zero and into negative territory in several major countries. The U.S. 10-year Treasury yield fell to an all-time low of 0.52% in August. The crisis was accompanied by sudden widening of credit spreads, with global investment-grade and high-yield spreads widening by 280 basis points (bps) and 764 bps respectively. Governments responded with investment grade and high-yield credit purchases, prompting investor flows to follow.

Fixed income markets entered 2021 with optimism backed by vaccine deployment and expectations of a global growth recovery and narrowing credit spreads. Towards the end of the year, the long end of the yield curve steepened due to improving economic growth expectations, with the U.S. 10-year Treasury yield ending the year near 0.9%. The Bloomberg Barclays Global Aggregate Bond Index returned 7.3% CAD (9.2% USD) for the year.

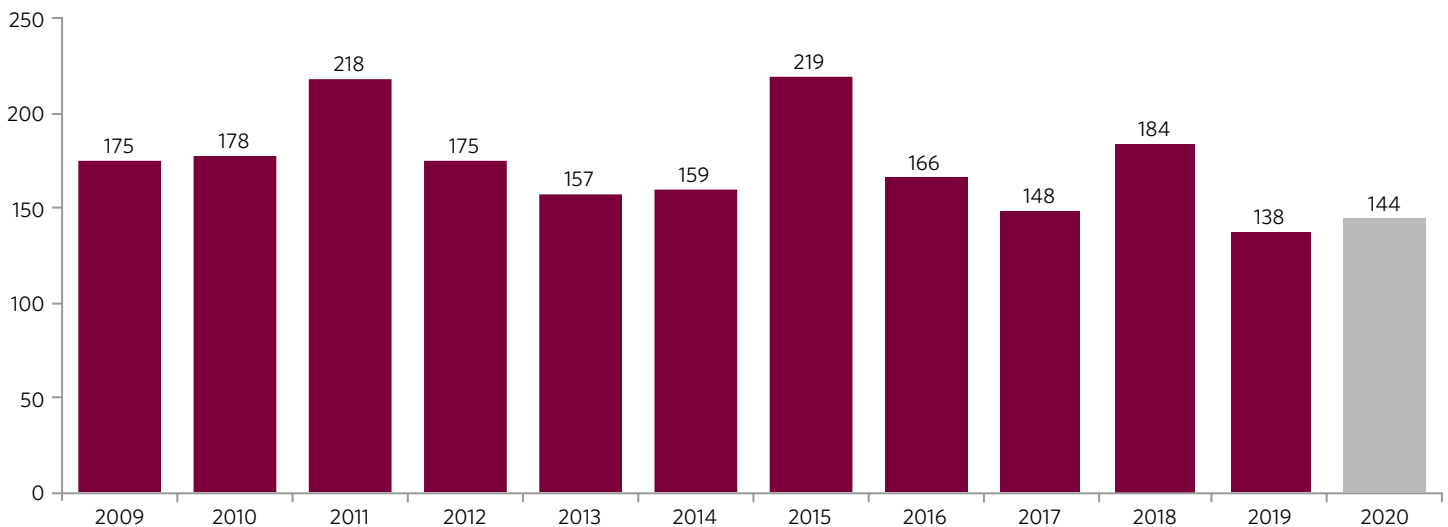
**Bond market performance (% , CAD)**

Asset Class	Index	2020	2019	2018	2017	2016
<b>Canadian Bonds</b>	FTSE Canada Universe Bond	8.7	6.9	1.4	2.5	1.7
<b>Canadian Government Bonds</b>	FTSE Canada All Government Bond	8.7	6.4	1.5	2.2	0.9
<b>Canadian Corporate Bonds</b>	FTSE Canada All Corporate Bond	8.7	8.1	1.1	3.4	3.7
<b>U.S. Bonds</b>	Barclays U.S. Aggregate Bond	5.6	3.2	9.0	-3.3	-0.9
<b>Global Bonds</b>	Barclays Global Aggregate Bond	7.3	1.4	7.7	0.4	-1.5
<b>U.S. High Yield</b>	Bank of America Merrill Lynch U.S. High Yield Master II	4.3	8.6	6.5	0.4	13.4
<b>Canadian Cash</b>	FTSE Canada 91 Day T-Bill	0.9	1.6	1.4	0.6	0.5

Source: FTSE Russell, Bloomberg, CIBC Asset Management Inc. Data as of December 31, 2020.

The Bank of Canada (BoC) followed other central banks in launching emergency market support. The BoC supported the growing fiscal deficit in March by pledging to buy up to 40% of provincial money market securities and purchasing \$5 billion a week of Government of Canada bonds. Towards the end of the year, more positive economic news and reduced market uncertainty led the BoC to scale back provincial money market purchases. However the BoC maintained monetary stimulus by leaving its key interest rate target unchanged at 0.25%.

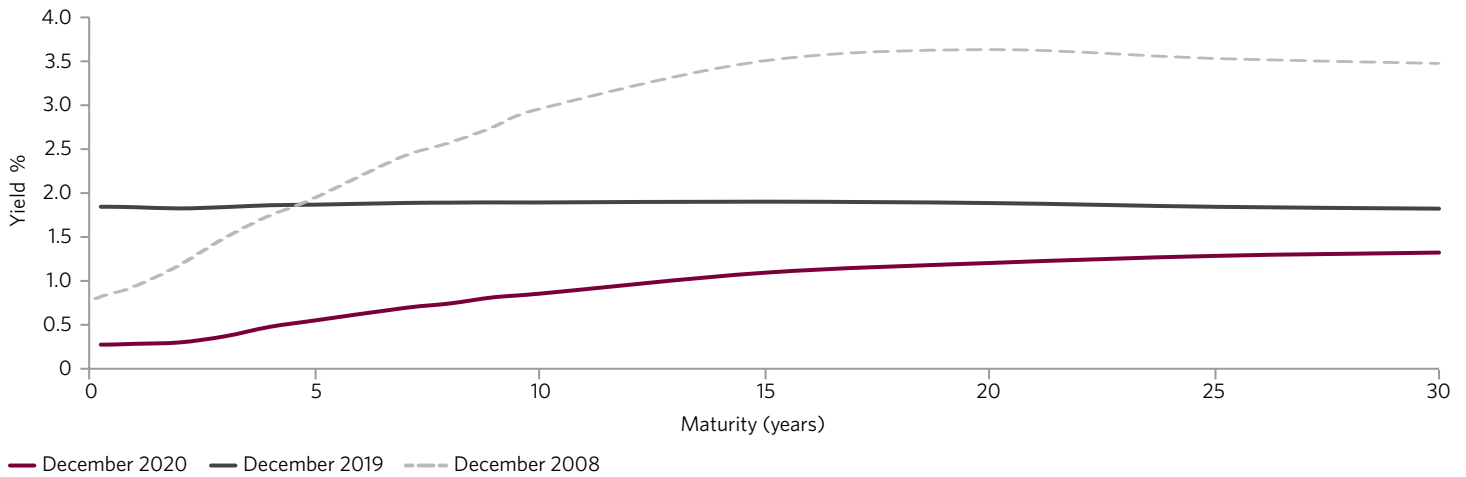
Low rates provided a tailwind for government bond performance. Despite considerable volatility in March, the FTSE Canada All Government Bond Index ended the year with a strong return of 8.7%. Investment grade Canadian corporate bonds were able to recover quickly from their losses earlier in the year and outperformed toward year end amid rapidly narrowing credit spreads. Despite rising sentiment for risk assets, high-yield bonds underperformed relative to their investment-grade counterparts. Canadian corporate credit spreads increased slightly for the year, with Canadian 10-year BBB-rated credit spreads increasing by 6 bps year-over-year to end the year at 1.44%.

**End-of-year Canadian BBB credit spreads**

Source: Bloomberg, CIBC Asset Management Inc., as of December 31, 2020.

In Canada, the yield curve steepened. Ten-year Government of Canada yields ended the year at 0.7% , a decrease of 105 bps year-over-year. On the short end of the curve, two-year yields decreased from 1.82% to 0.29%, a decrease of 153 bps. Overall, short-term bonds underperformed long-term bonds, which were also helped by the rising price of longer-dated corporate bonds as credit spreads narrowed. The FTSE Canada Short Term Bond Index returned 5.3%, while the FTSE Canada Long Term Bond Index returned 11.9% in 2020.

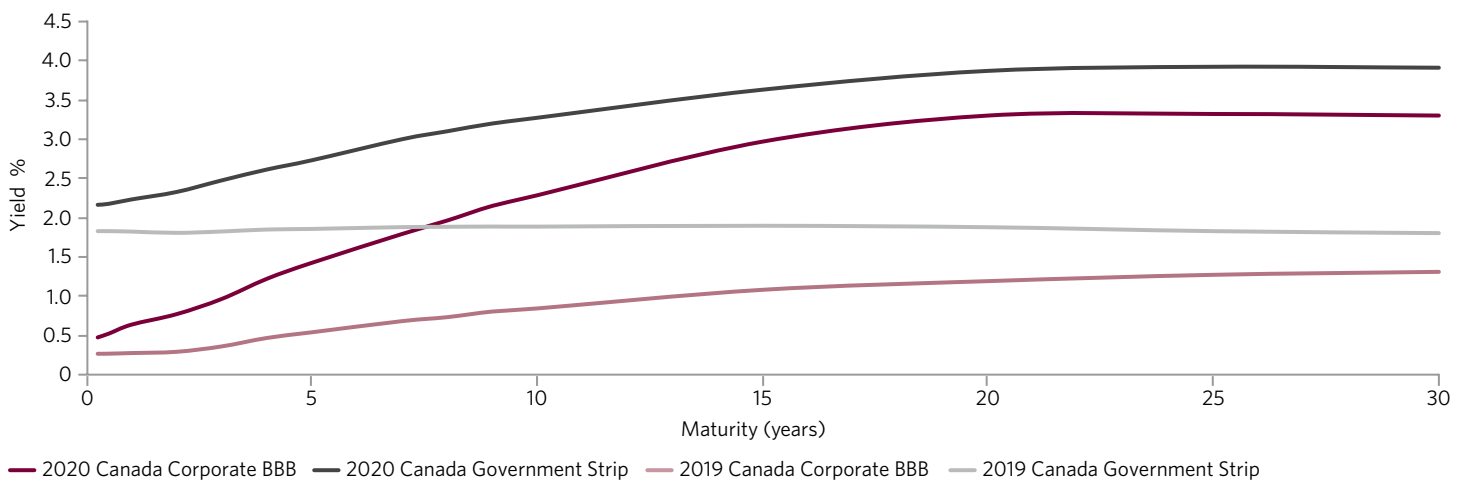
**Year end Canadian sovereign yield curve**



Source: Bloomberg, CIBC Asset Management Inc., as of December 31, 2020.

U.S. bonds, as represented by the Bloomberg Barclays U.S. Aggregate Bond Index, gained 7.5% USD in 2020 but only 5.6% CAD as a result of the decline in the U.S. dollar in 2020. Government issues underperformed corporates but fared better than high-yield bonds. The Bloomberg Barclays U.S. Government Index rose 8.9% USD, while the Bloomberg Barclays U.S. Corporate Index and the Bank of America Merrill Lynch U.S. High-Yield Master II Index were up 9.9% and 6.2% respectively (USD). The long term segment was the best-performing asset class in U.S fixed income, with the Barclays U.S. Treasury 7-10 Year Index (10.0% USD) outperforming the broader benchmark. U.S. high-yield spreads<sup>3</sup> ended the year at 3.73% (versus 3.51% at the beginning of the year) and down from 8.6% at the end of March. Increased valuations for the asset class combined with increased default rates in the U.S. have increased uncertainty for non-investment-grade credit.

**Canadian government yield curve changes**



Source: Bloomberg, CIBC Asset Management Inc., as of December 31, 2020.

## Investor profile performance

Using the returns of major asset class indices as proxies, balanced investors in our five investor profiles enjoyed strong performance in 2020. The methodology for these investor profiles is explained in subsequent asset allocation sections.

### Calendar year investor profile performance<sup>4</sup> (% , CAD)

Profiles	2020	2019	2018	2017	2016	2015
Capital Preservation	6.6	7.6	1.6	3.1	4.3	4.0
Income	7.4	10.1	1.0	4.5	5.8	4.7
Income & Growth	7.7	13.7	0.3	6.2	7.3	5.2
Growth	9.1	16.2	0.0	8.8	7.9	7.2
Aggressive Growth	11.0	20.1	-1.2	11.6	9.1	9.6

Source: Bloomberg, CIBC Asset Management Inc. Data as of December 31, 2020.

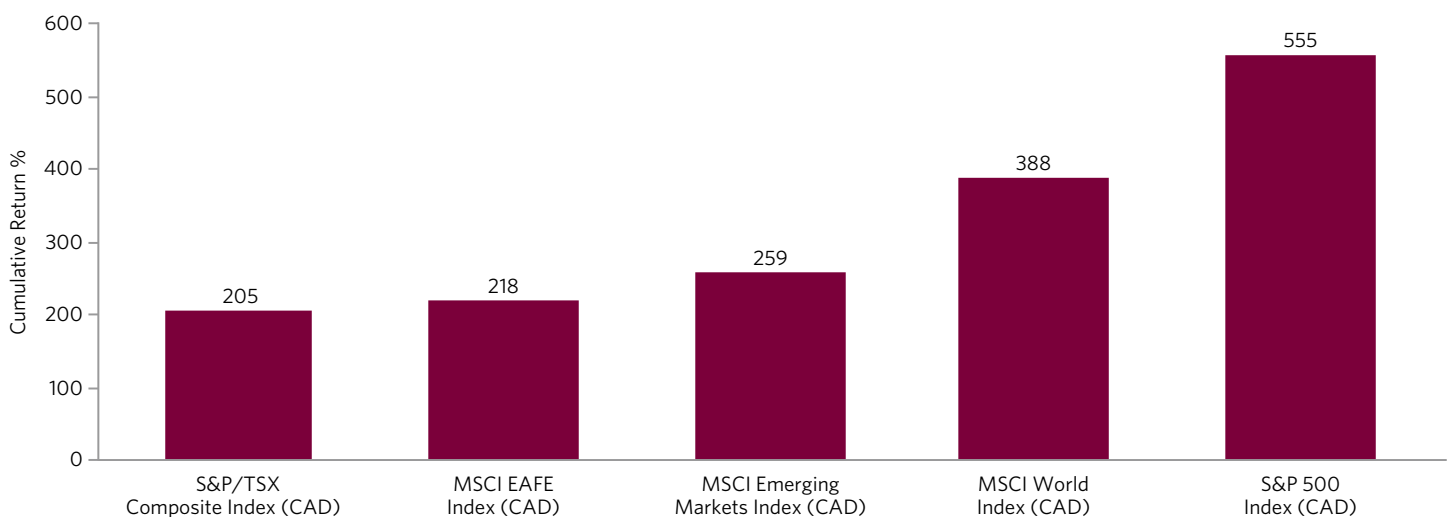
## Strategic asset allocation

There are a number of asset classes available to investors, but choosing the right combination of assets to include in a portfolio to meet specific investor objectives can be difficult. Below we outline a number of ways that strategic asset allocation can add value to long-term returns and help investors meet their long-term goals.

### Home country bias<sup>5</sup>

Many Canadian investors have a home country bias. This means that the proportion of domestic equities held by most Canadians is materially higher than Canada's weight in global equity indices. Home country bias is very pronounced in Canada, second only to Australia. Canadian investors allocate about 50% of their equity holdings to domestic equities, although Canada makes up only 3% of the MSCI ACWI Index. This exposes Canadian investors to uncompensated portfolio risk—for example, it creates undue concentration in three highly correlated sectors. Canada's top three equity sectors—financials, energy, and industrials—make up nearly two-thirds of the S&P/TSX Composite Index. As shown in the table below, the performance of the Canadian stock market has lagged the main global indices since the beginning of the bull market (March 2009).

### Canadian equities vs. developed markets cumulative performance (March 1, 2009-December 31, 2020)



Source: Bloomberg, CIBC Asset Management Inc. Data as of December 31, 2020.

## Diversification by asset class

In the long run, investors who don't take advantage of a broad opportunity set of asset classes, but remain invested in one or two asset classes can miss the benefits of portfolio efficiency (return per unit of risk). This efficiency can be achieved with more diversified asset allocation. While many conservative investors prefer the safety of cash over other asset classes, proper diversification over the long term has been shown to outperform most individual asset classes on a risk-adjusted basis. Investing in a balanced mix of asset classes will also ensure at least some participation in the highest-performing asset classes at any given time.

### Annual returns for major asset classes

2020	2019	2018	2017	2016	2015	2014
Emerging Market Equities 16.6%	U.S. Equity 24.8%	Global Fixed Income 7.7%	Emerging Market Equities 28.7%	Canadian Equity 21.1%	Emerging Market Fixed Income 22.1%	Real Assets 24.6%
U.S. Equity 16.3%	Canadian Equity 22.8%	U.S. High Yield 6.5%	International Equities 17.4%	U.S. High Yield 13.4%	U.S. Equity 21.6%	U.S. Equity 23.9%
Canadian Fixed Income 8.7%	Real Assets 18.1%	U.S. Equity 4.2%	U.S. Equity 13.8%	U.S. Equity 8.1%	International Equities 4.1%	Emerging Market Fixed Income 15.7%
Global Fixed Income 7.3%	International Equities 16.5%	Emerging Market Fixed Income 3.25%	Canadian Equity 9.1%	Emerging Market Equities 7.7%	Global Fixed Income 16.2%	U.S. High Yield 11.7%
International Equities 6.4%	Emerging Market Equities 12.9%	Real Assets 1.9%	Real Assets 5.6%	Emerging Market Fixed Income 5.8%	U.S. High Yield 14.4%	Canadian Equity 10.6%
Canadian Equity 5.6%	U.S. High Yield 8.6%	Canadian Fixed Income 1.4%	Canadian Fixed Income 2.5%	Real Assets 5.3%	Real Assets 10.4%	Global Fixed Income 9.7%
Emerging Market Fixed Income 5.2%	Emerging Market Fixed Income 6.9%	International Equities -5.5%	Emerging Market Fixed Income 1.2%	Canadian Fixed Income 1.7%	Canadian Fixed Income 3.5%	Canadian Fixed Income 8.8%
U.S. High Yield 4.3%	Canadian Fixed Income 6.9%	Emerging Market Equities -6.5%	U.S. High Yield 0.4%	Global Fixed Income -1.4%	Emerging Market Equities 2.4%	Emerging Market Equities 7.9%
Real Assets -7.7%	Global Fixed Income 1.4%	Canadian Equity -8.9%	Global Fixed Income 0.4%	International Equities -2.0%	Canadian Equity -8.3%	International Equities 4.1%

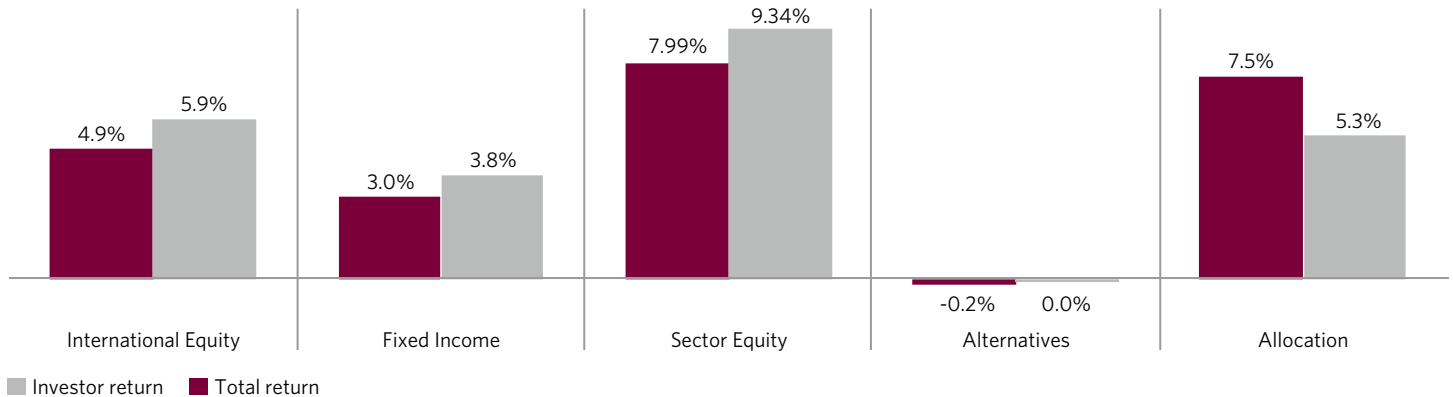
Source: Bloomberg, CIBC Asset Management Inc. Data as of December 31, 2020.

## Investor behaviour gap

Behavioural finance studies show that investors tend to be influenced by emotions and trends. They tend to chase performance in select asset classes, industries or geographies, rather than stick to a long-term asset allocation approach. This type of behaviour results in underperformance over the long term when compared to a more diversified and regularly rebalanced asset allocation.

As illustrated in the table on the next page, the investor return gap, a measure of the gap between the returns that the average investor in stand-alone funds receives and average official fund returns, is negative for most stand-alone funds. In general, the gap widens around dramatic market reversals, such as those seen in 2008 and the end of 2018. This is because there is increased selling near the bottom and investors tend to miss out on subsequent dramatic rebounds. Sticking to a long-term strategic asset mix with regular rebalancing and contributions (as in the case of allocation funds) has resulted in positive investor gaps over the past ten years.

## The investor return gap (%)



Source: Morningstar Study: "Mind the Gap 2020." August 18, 2020. Data as of December 31, 2020.

## Strategic asset allocation methodology

Our asset allocation recommendation is based on a two-step process. First, we establish a global asset allocation model based on traditional asset classes: Canadian money market, Canadian equities, global equities, Canadian fixed income, global fixed income and high-yield bonds<sup>6</sup>.

Second, we extend the global model to include a broader asset mix, which is expected to improve the portfolio's risk-adjusted returns. This includes allocations to real assets, emerging market equities and debt, floating rate loans, and multi-sector fixed income as well as alternative assets such as absolute return and private assets strategies. Our recommendations to fund these allocations involve moving assets from prior allocations to bonds and equities. The inclusion of these asset classes causes the efficient frontier to shift up and to the left, with higher long-term expected return and less risk (as measured by standard deviation).

### High Yield Bonds

As a hybrid asset class with both debt and equity characteristics, high-yield debt provides diversification benefits to a balanced portfolio. High-yield debt offers additional credit spread (versus investment-grade issuers) to compensate investors for the additional risk when investing in these securities. High-yield credit spreads, which are a function of the issuer's credit quality, are positive and increase in times of crisis due to deteriorating issuer fundamentals, which are reflected in both spreads and equity prices. As such, high-yield debt does not generally provide all of the much-needed diversification benefits of bonds during bear markets and should not be considered a direct replacement for traditional bonds.

In addition to credit performance, high-yield debt provides diversification through shorter duration (i.e. lower interest rate sensitivity) on average versus traditional bonds. As an example, the average duration of U.S. high-yield bonds is 4.2 years, considerably shorter than global bonds with a duration of 7 years<sup>7</sup>. The lower the duration of the asset class, the lower its sensitivity to interest rate movements; consequently, high-yield debt should provide less sensitivity than government bonds in a rising-rate environment.

Current valuations for credit products remain a concern despite current consensus views for a normal, procyclical environment on the back of a synchronous economic recovery. Credit spreads have tightened meaningfully since March, while U.S. high-yield and leveraged loan default rates jumped to 8.7% in August 2020. According to Moody's Investors Service, they may average 10.6% during 2020Q4. While credit spreads have narrowed considerably, rising defaults and weakness in underwriting could lead to lower recovery rates.

### Floating Rate Loans

Floating rate loans are debt instruments with a variable interest rate component and a relatively high fixed credit spread. The variable component is reset on a scheduled and frequent basis based on market rates. When interest rates rise, the interest paid by a floating-rate loan will also rise. Thus, floating rate loans provide protection against rising interest rates. The debt of these companies is typically rated below investment-grade, providing a credit risk similar to high-yield. However, floating rate loans represent a senior/secured claim against the company and holders of the loans have first claim on the company's assets in the event of default. From a diversification viewpoint, floating rate loans have low-to-negative correlation to traditional investment-grade fixed income and equity asset classes. Consequently, inclusion can lead to improved portfolio profiles.

## Multi-Sector Fixed Income<sup>8,9</sup>

The multi-sector fixed income (MSFI) component incorporates a wide range of fixed income securities, with the goal of minimizing risk while producing sufficient yield to meet return objectives. A multi-sector portfolio is positioned to add value through tactical allocations to a number of fixed income instruments. These include global government and agency bonds, money markets, corporate investment-grade and high-yield debt, asset and mortgage backed securities and local and U.S. dollar-denominated emerging market debt. Within the higher yielding asset classes, pockets of opportunities exist within MBS, which did not receive any explicit Fed support, thus resulting in lower relative valuations versus other sectors. Tactical allocation to these undervalued credit assets can potentially provide diversification relative to individual asset classes like high-yield or emerging market debt (EMD).

## Emerging Markets Equities

Emerging market equities are a growing asset class that is slowly becoming a feature of investors' asset allocation mix. Emerging markets make up 55% of the world's GDP, as compared to 37% for developed markets, and this trend is expected to continue due to higher growth rates for emerging economies. Emerging market growth prospects exceed those of advanced economies for the foreseeable future, partly because they are supported by a slow convergence of living standards towards those of advanced economies. As the middle class expands, companies can benefit from growing consumer purchasing power and shifts in spending patterns. A combination of improved living standards through increases in wages, access to higher quality education and improved technology are changing economic patterns, with service-oriented industries comprising a growing segment of emerging economies. Higher expected returns for emerging markets are accompanied by increased risk versus developed countries. While volatility is a concern for the asset class, it's expected to be a declining trend, mainly supported by a stronger reliance on domestic production, lower current account vulnerability and moderating inflation levels.

## Emerging Market Debt

Because of higher perceived or actual risk, emerging market debt (EMD), can offer higher yields, and exposure to rapid growth, at lower volatility than emerging market equities. As emerging markets expand, so do the opportunity set of debt investments. While many emerging market investments are impacted by local macroeconomic risks, the credit quality of EMD is gradually improving. The debt markets in developing countries have room for significant growth, as indicated by the growing economic impact of these countries globally.

In addition to attractive yields and higher potential returns, EMD also offers diversification benefits due to a lower correlation with other fixed income asset classes.

Over the next 10 years, CAM forecasts, EMD will likely be the best-performing asset class within the fixed income universe. A cyclical recovery, positive long-term growth prospects, improved expected U.S. trade relations under the Biden administration and higher U.S. 10-year yields provide a positive environment for higher yielding EMD going forward. Despite the positive growth prospects, active management will be important in the asset class because of considerable divergence in performance between regions. Risks to this outlook include depreciating emerging market currencies from regions with rising trade deficits and, regions that have been more heavily impacted by the pandemic. Furthermore, default risk exists in select countries. This could result in debt renegotiations and considerable currency depreciation which would last longer and impede the financial performance of the impacted regions.

## Addition of alternative investments

In the search for diversified sources of return, investors are increasingly turning to alternative asset classes. Alternative asset classes are expected to grow robustly over the near term and become an important component of portfolios. Alternatives have been shown to improve the efficiency of balanced portfolios by increasing overall returns in the case of private assets, or by managing downside risk, in the case of liquid alternatives.

## Real Assets<sup>10</sup>

Real asset strategies can improve diversification through exposure to both infrastructure and real estate assets. As a result of performance pattern diversification, the addition of real estate investment trust (REIT) and infrastructure to balanced portfolios broadens the asset mix and potentially improves risk-adjusted returns.

Infrastructure investments provide the benefits of stable cash flows, based on essential services with relatively low competition, and long-term returns that are highly correlated to economic growth. Infrastructure has a low, but positive, correlation to debt and is also positively correlated to equities. The COVID-19 pandemic had a mixed impact on the performance of infrastructure, with transportation sectors such as toll roads, rails and airports negatively impacted, while utilities, renewables and logistics were only marginally impacted.

In the long run, a procyclical growth environment will positively impact more cyclical sectors, regulated sectors will be positively impacted by increased demand for assets with long-dated contractual agreements that can offer portfolio diversification in a low yield environment. Infrastructure assets will benefit from solid demand in the U.S., supported by the Biden administration's fiscal policies. Globally, the Organisation for Economic Co-operation and Development (OECD) estimates between \$3 trillion and \$6 trillion USD in new infrastructure investments will be required through 2030. In addition to traditional assets, the trend towards environmental, social and governance (ESG) investing within infrastructure and renewable energy provides further support for growth in this asset class.

Investment in real estate also provides the benefits of potential growth and higher dividend income streams. Dividends in real estate typically come in the form of relatively stable rents paid to REITs companies. Investments in real estate remain well diversified across real estate sectors and countries. In multi-asset portfolios, REITs act as diversifiers to broad equity markets due to their low correlation with equities. Notwithstanding, REITs can experience severe downturns, such as occurred during the 2008 financial crisis. In the current environment, REITs provide an attractive return premium, as their valuations have moved closer to fair value, while low borrowing costs are expected to boost profitability.

The pandemic crisis impacted sectors within real estate in distinct ways: Growth in ecommerce negatively impacted retail holdings but has expanded opportunities for warehouses, logistics and data centers. The work-from-home theme will continue to impact the office sector, partly offset by demand from technology sector tenants. While these trends and the recent pandemic have altered working practices and sector composition within the asset class, projections for performance of the overall asset class remain compelling.

## Private Assets

The recent search for yield and the demand for alternatives to traditional publicly-traded equities has led to considerable growth in private investments. Private assets' net asset value has grown more than sevenfold since 2002, and twice as fast as global public equities<sup>11</sup>. The larger the pool of investments, the more diverse the revenue streams resulting from various sources of growth, innovation, and corporate restructuring within private investments. Private equity firms take advantage of growth opportunities in emerging themes such as disruptive technology, e-commerce, sustainable investing, as well as

emerging market investments with relatively small public markets. Despite increased valuation multiples stemming from increased demand for alternative investing, private equity is expected to continue to provide growth opportunities.

Liquidity risk is the main difference between public and private investments, and this is believed to be a main contributor to higher relative returns. As such, investors need to fully understand the unique liquidity features and constraints of these less liquid assets. Private investments are most suitable for long-term investors, as access to the funds may not always be possible or may be subject to early redemption penalties or fees. Liquidity demand is often more pronounced at times of market declines, which in turn increases the correlation between public and private investments. The idiosyncratic nature of a relatively concentrated portfolio, and the private valuation of these assets (as compared to valuation in a publicly-traded market) may increase investment risks. Leveraging experienced and specialized private investment managers remains key to managing risk within the asset class.

## Liquid Alternatives

Liquid alternatives use a combination of traditional asset classes, derivatives, and leverage to create a risk profile that strives to be more efficient than asset classes with comparable returns. The underlying securities are much more frequently priced versus private investments. In addition, the additional liquidity they provide makes them a good complement to private investments. It is worth noting that since the financial crisis, average hedge fund performance has lagged public equities. With monetary stimulus boosting the performance for the majority of asset classes/securities, concentration in riskier assets has been more rewarded than the approach taken by hedge funds to manage overall volatility.

Liquid alternatives can be grouped into the following asset classes: long-short equity, managed futures, global macro, distressed securities, arbitrage (convertibles, bonds, mergers, structured products) and multi-asset strategies. Hedge funds provide diverse risk/return profiles by having reduced constraints, and a number of uncorrelated strategies that can help hedge against market volatility.

The CIBC Multi-Asset Absolute Return Strategy (MAARS)<sup>12</sup> is an absolute return strategy that differs from traditional asset classes that are benchmarked to indices where performance can be highly correlated. The addition of a benchmark-agnostic absolute return strategy can potentially reduce the equity risk

of balanced portfolios and achieve a smoother investment experience. They also provide greater liquidity versus other alternative investments.

The MAARS strategy can add value to a balanced portfolio by 1) seeking an absolute positive return over a cash benchmark regardless of the global macro environment and equity market cycle, and 2) lowering potential risk by managing volatility relative to equities. It can achieve this through diversification to securities outside of traditional stock and bond markets. These may include options, currencies, commodities and factor-based strategies, as well as short exposure to various asset classes.

## Long-term capital market assumptions

The strategic allocation methodology is based on forward-looking estimates for 10-year returns. We believe that longer-term, forward-looking estimates best capture the current and potential global economic and financial environment. CAM's Multi-Asset and Currency Management Team's 10-year forward looking returns were incorporated into our asset allocation models. This process is described as follows:

### Expected return and risk methodology

We use a macroeconomic textbook framework to make our projections, where GDP growth is a function of labour and capital inputs, as well as total factor productivity. A key feature of our approach is that we augment the textbook specification to take into account the negative impact of monetary policy renormalization in a context of elevated indebtedness across major economies.

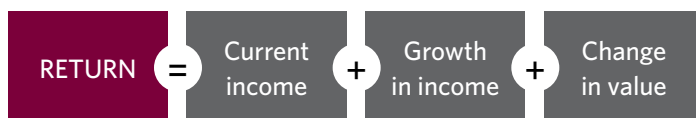
The most important views stated in CAM's projections are:

- The global economy is expected to grow above potential (by 1.1%) to 4.2% in the next decade, fueled by promising COVID-19 vaccination progress, fiscal support, and an unprecedented willingness by the Fed and most other central banks to generate and tolerate higher inflation.
- The high level of debt is coming together with the need to secure a broad recovery from the pandemic and the adoption (explicit or implicit) of a new average inflation target framework by major central banks. These factors should keep interest rates and real yields low to negative at least for the early part of our ten-year forecast horizon.

- Fixed Income: Government bonds in advanced economies will deliver low returns, owing to low starting yields and expectations for a low policy rate. Longer-term bonds are not expected to provide a duration risk premium, resulting in anemic future expected returns. Emerging market sovereign bonds are expected to offer a meaningful risk premium, while high-yield performance is restrained by tight credit spreads which have a negative impact on valuation.
- Equities: While equities will benefit the most from low rates and above trend economic growth, their starting valuation remain a headwind for future returns, particularly within the U.S. Gradual declines of potential GDP growth across the globe also exert downward pressures on long-term fair values of P/E ratios.
- While emerging Asian equity markets remain the most appealing over the long-term, the anticipated macroeconomic environment should also be supportive of Canadian equities and global infrastructure.

### Long-term capital market expected returns

For the asset classes we cover, we calculate expected returns based on the following approach<sup>13</sup>.



#### Where:

- [Current Income] is the coupon yield (fixed income), or the dividend yield (equity).
- [Growth in Income] refers to earnings growth. This only applies for equity.
- [Change in Value] is the impact of varying interest rates (for fixed income), or cyclically-adjusted P/E ratios converging towards their long-term equilibrium value (for equity).

### Expected volatilities and correlations

In estimating expected volatilities and correlations, we select a time period that will produce stable estimates and capture multiple economic cycles. We believe that too long a time period may not capture structural changes to asset classes. Conversely, too short a time frame may not capture idiosyncrasies of the asset class over a full business cycle. As such, we have used 14 years of historical data, extending from last year's estimate that used 13 years. This period covers both recession and growth periods and spans a full business cycle, appropriate for estimating volatility and correlation parameters.

## 2021 expected long-term asset class returns and risk

Our forecasts are shown in the following long-term expected returns and risk table:

### Expected long-term asset class risk and returns (% , CAD)

Expected Return/Risk	Global Equity	Int'l Equity	U.S. Equity	Cdn Equity	Real Estate Equity	Infrastr. Equity	EM Equity	Global Fixed Income	Cdn Fixed Income	Money Market	U.S. H-Y Debt	EM Debt	MAARS Proxy (alt.)	Private Equity (alt.)
Expected return 2020	4.7	4.8	3.2	5.3	NA	NA	11.1	0.8	1.6	2.1	5.1	6.4	7.1	7.7
Expected returns 2021	5.2	5.8	3.8	7.4	4.8	6.1	9.9	0.7	0.8	1.3	2.5	6.3	6.3	8.4
Expected risk	11.7	13.0	11.7	13.6	16.4	10.4	16.1	8.8	3.7	0.4	8.5	16.1	5.8	20.0

Source: CIBC Asset Management Inc. Data as of December 31, 2020.

## Strategic asset allocation process

The asset allocation process is built on the principle that each combination of stocks, bonds and cash will provide a different expected risk and return level. In this step, we determine an optimal allocation for each asset class, based on our long-term expectations of return and risk.

For every level of risk, a portfolio is constructed and optimized with the combination of cash, bonds and equities that results in the highest expected return. In this way, the optimization process eliminates portfolio combinations that have a lower expected return with the same level of risk. The remaining portfolios are the most efficient given our long-term expectations. These portfolios form the efficient frontier, which we have plotted for both Canadian-only and Canadian-plus-global investments.

The efficient frontier (page 1) is then divided into five segments, corresponding to our investor profiles. Our five investor profiles are intended to serve as guidelines for clients, covering a variety of investor and risk profiles. Ranked from most conservative to the most aggressive, these are: Capital Preservation, Income, Income and Growth, Growth and Aggressive Growth. Our asset allocation recommendations blend equity, bond and cash weightings for each profile.

Lastly apply a qualitative assessment to the optimization outcomes with the goal of creating portfolios which are optimally diversified. The qualitative framework is an overlay on the quantitative outcome that insures the elimination of corner solutions and reduces an overconcentration in a few asset classes with highest risk adjusted returns.

## 2021 recommendations

The asset allocation chart illustrates recommended global strategic allocations based on the broader asset classes. The expected returns are lower versus last year for the lower risk profiles, but improve for the higher risk profiles due to decreased expected returns for fixed income asset classes and higher expected returns for equities. Lower fixed income returns are impacted by valuation associated with monetary policy normalization through higher interest rates. Expected volatility is marginally higher year-over-year as greater volatility in 2020 increased the overall volatility projections.

Within equities, we continue to recommend a balanced and diversified approach between Canadian and global markets. Despite being subdued on a historical basis, forecasted returns have incrementally improved. The unprecedented global stimulus has resulted in corporate earnings recoveries, particularly in the U.S., Japan and emerging markets (EM), however valuations continue to be a headwind for future returns.

CAM's long term growth estimates are also higher for emerging economies (+7.3%) vs. Canada (+4.6%) and the U.S. (+4.3%). Canadian equities remain attractive relative to other developed countries based on valuations, above-average dividend yields and positive growth expectations. Should a reversion or rotation back into value-oriented equities continue, Canadian equities stand to benefit given their concentration in traditional value sectors such as financials and energy. As such, we are maintaining the overweight to Canadian equities, but are cautious about the increased risk from being overly concentrated in a relatively narrow subset of sectors.

U.S. equities continue to be the most overvalued asset class within developed equities and relative to their long-term cyclically adjusted price-to-earnings (CAPE) fair value. Lowered expectations for U.S. equities are counterbalanced by increased emerging market equity projections, as those markets remain undervalued relative to long-term CAPE fair value. Outflows from EM equities during the COVID crisis provided an opportunity for additions to the asset class at lower valuations.

We expect higher returns for cash versus long-term bonds. As a result of its risk-free status and improved yields in recent years, cash is currently the most attractive risk-adjusted asset class within a balanced portfolio. Traditional bonds are not expected to provide much term premium or yield enhancement

over short-term bonds. However, traditional bonds do provide a shock absorber to equity drawdowns, and some upside in the event yields compress further from the current low levels. We maintain last year's recommendation, which saw a 5% reallocation from longer duration global and Canadian bonds in most risk profiles, into cash or short-term equivalents.

Within fixed income, relatively riskier assets such as high-yield, floating rate loans and emerging market debt offer higher yields and shorter duration. However, low credit spreads relative to history, and rising U.S. default rates and default forecasts by rating agencies makes high-yield bonds less appealing. As such we are recommending reductions in U.S. high-yield bond allocations.

### 2021 asset allocation for Canadian investors (% , CAD)

Profiles	Global Equities	Cdn Equities	Global Bonds	Cdn Bonds	U.S. High Yield	Canadian Cash	Expected Return <sup>14</sup>	Expected Std. Dev.
Capital Preservation	5	15	20	30	5	25	2.2	3.3
Income	10	20	20 (+5)	25	10 (-5)	15	2.8	4.3
Income & Growth	25	30 (+5)	10	15	10 (-5)	10	4.1	6.7
Growth	40	30 (+5)	10	5	10 (-5)	5	4.7	8.2
Aggressive Growth	60	30 (+5)	0	0	10 (-5)	0	5.6	10.6

Source: CIBC Asset Management Inc. Data as of December 31, 2020.

For clients investing in Canadian asset classes only, we maintain the same allocation as last year. Given reduced Canadian bond return expectations, reallocations are recommended to cash equivalents. In addition, equity allocations have been increased in higher-risk profiles as follows:

### Recommended asset allocation using domestic only assets (%)

Profiles	Exp. Return	Exp. Volatility	Cdn. Equity	Cdn. Bonds	Cdn. Cash
Capital Preservation	2.4	3.4	18	60	22
Income	2.7	4.5	30	60	10
Income & Growth	3.5	6.1	50	45	5
Growth	4.2	7.6	70	25	5
Aggressive Growth	4.7	9.6	85	15	0

Source: CIBC Asset Management Inc. Data as of December 31, 2020.

## 2021 asset allocation including diversifiers

In the search for yield, investors are looking at a number of different asset classes to meet their long-term investment objectives. We believe increased diversification is the key to lowering risk while maintaining long-term return targets. In this section, we provide guidance on reallocating traditional asset classes into a number of diversifying investments, to minimize concentration in one particular asset class and associated risks. The overarching themes that led to the following recommendations are summarized as follows:

1. We favour a modest overweight to riskier assets by proposing a decreased allocation to traditional fixed income asset class in favour of private assets, emerging market debt and real assets.

2. Traditional fixed income asset classes within developed markets are expected to provide lower-than-historical returns as a result of low starting yields, putting into question the role of fixed income products. As we're invested for the long run, we believe that proper diversification is important in providing robust portfolios under a range of economic scenarios including economic slowdown or rising credit risk. As such we believe that government bonds should continue to be a core asset in balanced portfolios.
3. Given the low yields seen in global fixed income markets, the insurance provided from investing in bonds comes at a cost. In this backdrop, a dedicated allocation to real assets which exhibit some fixed income characteristics can be beneficial. Allocations to real assets can be made through proportional reallocations from fixed income and equities that result in no net addition to portfolio risk. Allocations to infrastructure, in particular are beneficial based on supportive fiscal policies and increased focus on renewable energy infrastructure that results in compelling value with growth potential.
4. Despite a risk-on outlook, we remain cautious about high-yield credit given their higher valuations and increased default risk. We advise complementing allocations to U.S. high-yield with exposures to multi-sector fixed income products as there are undervalued areas within MBS and EM credit that provide additional yield and can benefit from regional economic recoveries.
5. Absolute return strategies have been added to this year's global strategic mix, as they represent a return stream that is expected to be uncorrelated with global macro events that can impact global equities. This is expected to provide stable returns in environments where long-term expected returns are low and accompanied by increasing volatility.
5. Within equities we prefer a diversified approach across countries, including the U.S., Canada, as well as international and emerging markets. This allows for better style neutrality and reduced risk through measured exposure to both value (Canada and international) and more growth-oriented markets (U.S. and EM) without trying to time regional or style rotations.
6. Low growth levels versus historical standards have put downside pressure on equity returns in the long run. For investors looking for portfolio growth, private assets can provide an expected return premium over public equities, albeit at increased risk.

## 2021 Asset allocation recommendation with diversified asset classes

Asset Allocation (%)	Expected Standard Dev.	Expected Return	Int'l Equity	U.S. Equity	Cdn Equity	Global Fixed Income	Cdn Fixed Income	Money Market Fixed	U.S. High-Yield	EM Market Bonds	Infra.-structure	MAARs Proxy	EM Equity	Private Equity
Income	5.0	3.6	10	8	15	10	25	10	7	3	7	5	0	0
Income & Growth	6.4	4.4	10	13	15	5	15	10	5	3	7	5	7	5
Growth	7.8	5.3	12	15	18	5	5	3	5	5	7	5	10	10
Aggressive Growth	8.8	5.6	15	20	20	5	0	0	5	5	5	0	15	10

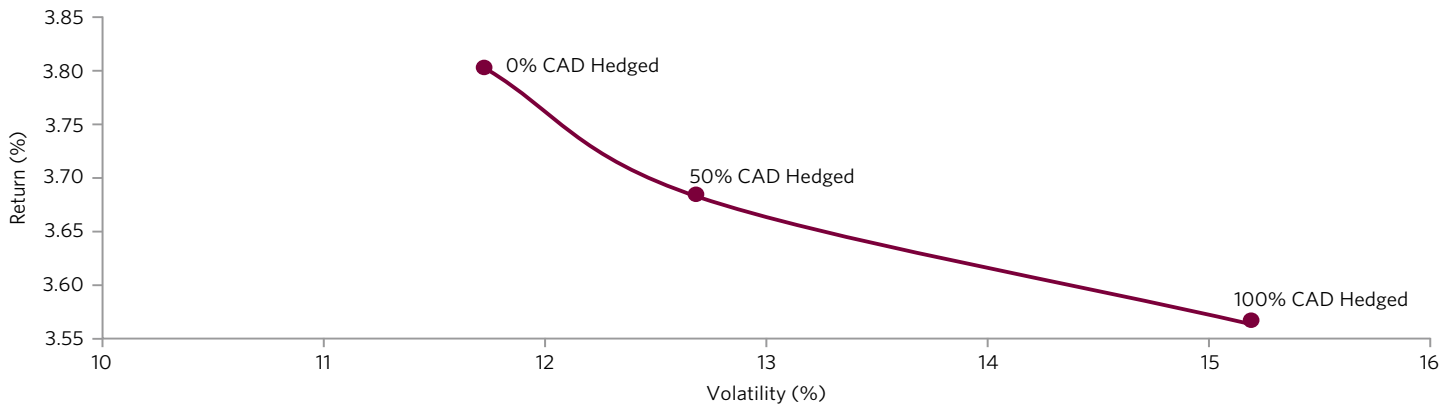
Source: CIBC Asset Management Inc. Data as of December 31, 2020.

## Currency impact for Canadian investors

Currency exposure can introduce foreign exchange fluctuations to portfolio returns in the short run. Examples of this were observed when the Canadian dollar traded above par with the U.S. dollar in late 2007 and again in 2011, only to steadily retreat in the following time periods. However, over a longer time frame, foreign exchange exposure becomes less of a concern, and represents a small risk relative to the benefits of global diversification.

Before looking at the impact on diversified portfolios, Canadian investors must understand the benefits of being partially or fully hedged to the Canadian dollar. The loonie is positively correlated to the Canadian market, which adds to portfolio risk, while the U.S. dollar is considered a low-risk currency because it has traditionally performed well in times of equity drawdowns. As such, a hedge of USD exposure to Canadian dollar is generally projected to increase the overall risk of U.S. investments. In addition, current hedging costs of 0.24% would be subtracted from the overall return when hedging. This is calculated using the following December 31, 2020 data: 10-year U.S. Government Bond Yield (0.90%) - 10-year Canadian Government Bond Yield (0.66%). This currency hedging cost suggests that hedging be implemented only by those investors worried about a potential short-term USD depreciation of more than 0.24%. The following table shows the expected returns and risk for three portfolios, with hedging portions varying from 0%, 50% and 100%.

**Efficient frontier for Canadian investors (%)**



Sources: Bloomberg, CIBC Asset Management Inc. Data as of December 31, 2020.

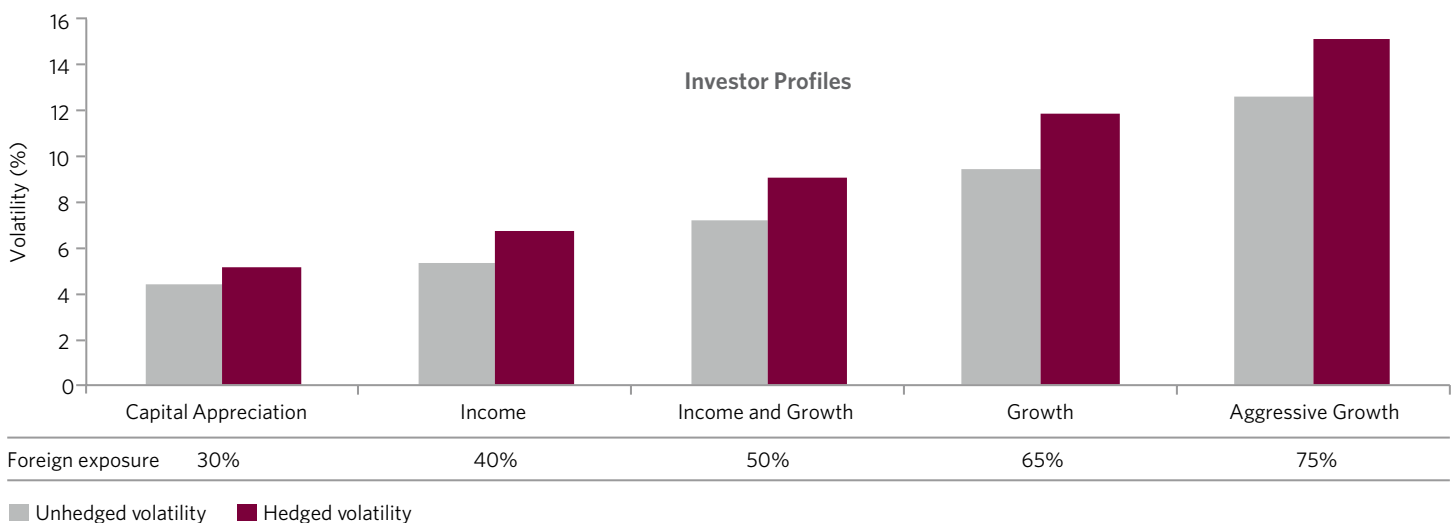
Profiles	Interest rate differential (%)	Expected estimated returns (%)	Volatility (%)	Correlation with USD (%)
S&P 500 Index (0% Unhedged)	0.2	3.8	11.7	-0.01
S&P 500 Index (50% Hedged to CAD)	0.2	3.7	12.7	-0.38
S&P 500 Index (100% Hedged to CAD)	0.2	3.6	15.2	-0.63
USD	0.2	NA	9.8	NA

Sources: Bloomberg, CIBC Asset Management Inc. Data as of December 31, 2020.

When determining our long-term asset allocation profiles, we factored in foreign exchange risk with respect to the risk and return objective of each investor profile. Foreign exposure increases for riskier profiles, as these investors will typically have longer time horizons, lower liquidity requirements and higher risk tolerance. Conversely, an investor with lower risk tolerance will likely have higher short-term liquidity requirements and more sensitivity to foreign exchange volatility. These investors will also typically have less foreign content and therefore less exposure to currency fluctuations.

In the long run, the inclusion of additional currencies in balanced portfolios has resulted in the diversification benefit of reduced volatility. Historical data shows a positive correlation between Canadian equities and Canadian currency because they are still both highly influenced by oil prices. However, there is a lower correlation between domestic asset classes and unhedged global assets. The effect of lower correlations, as shown in the next exhibit, is improved diversification and reduced volatility in all five investor profiles.

**Historical volatility for unhedged and hedged portfolios (January 1, 1991-December 31, 2020)**

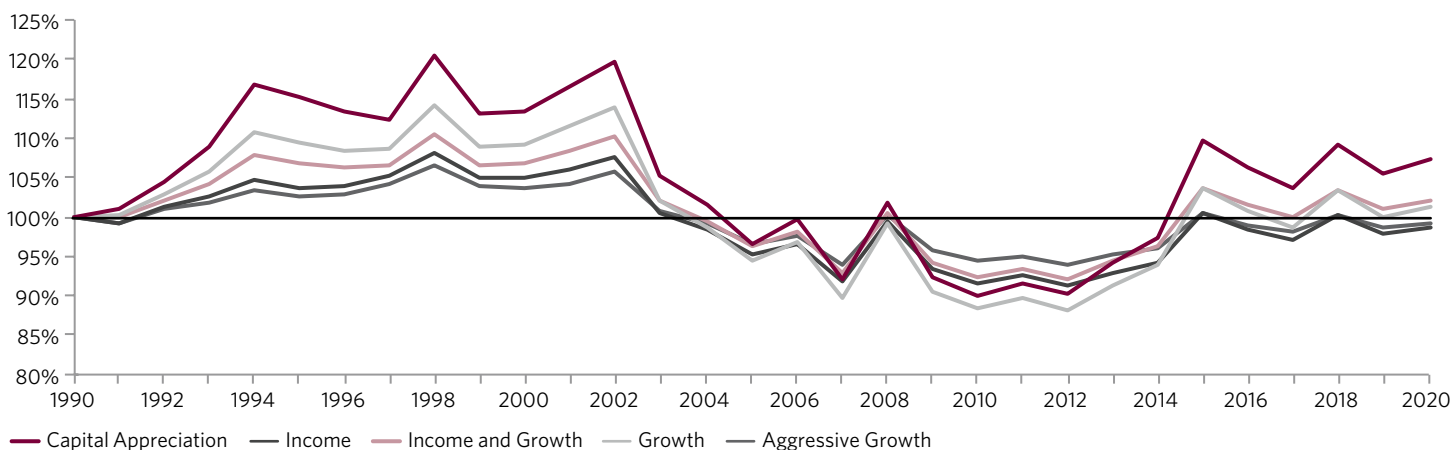


Source: CIBC Asset Management Inc. for model portfolio weights; Bloomberg for index returns as proxies for asset class performance. Data as of December 31, 2020.

The impact of a hedged investment on total returns is also a key consideration. Currency fluctuations in any one year could materially impact returns in the short run and highlights that lower-risk portfolios could potentially benefit from hedging, given their shorter investment horizons. Generally, in years when the Canadian dollar appreciates, hedging enhances non-domestic returns; otherwise, hedging impedes returns. In 2018, for example, the Canadian dollar depreciated 7.7% against the U.S. dollar, and hedged portfolios underperformed unhedged portfolios by 2.2% for the Capital Preservation profile, and by 6.0% for the Aggressive Growth profile; In 2019, on the other hand, the Canadian dollar appreciated 5.3% against the U.S. dollar, and hedged portfolios underperformed unhedged portfolios by 1.7% for the Capital Preservation profile, and by 3.8% for the Aggressive Growth profile.

To hedge or not to hedge depends on risk tolerance, investment horizon and currency outlook. We recommend that clients with short-term requirements use hedged products for non-domestic investments to lessen the impact of currency fluctuations. However, over the long run, an unhedged portfolio has historically provided better risk-adjusted returns.

**Cumulative Excess Return of Unhedged vs. Hedged Proxy Portfolios (January 1, 1991-December 31, 2020)**



Source: CIBC Asset Management Inc. for model portfolio weights; Bloomberg for index returns as proxies for asset class performance. Data as of December 31, 2020.

## Finding the optimal profile

Investors’ goals and risk tolerance, time horizon, financial situation, income needs, liquidity, tax considerations, unique circumstances and attitude toward global investing are variables that need to be considered when determining an appropriate investment profile. It’s also necessary to determine long-term return objectives. Importantly, risk tolerance should not be based on the last 12 months of performance and volatility, but instead on longer periods that better coincide with the investor’s time horizon. Investors need to be comfortable with the volatility of their asset allocation in every type of market through a full market cycle.

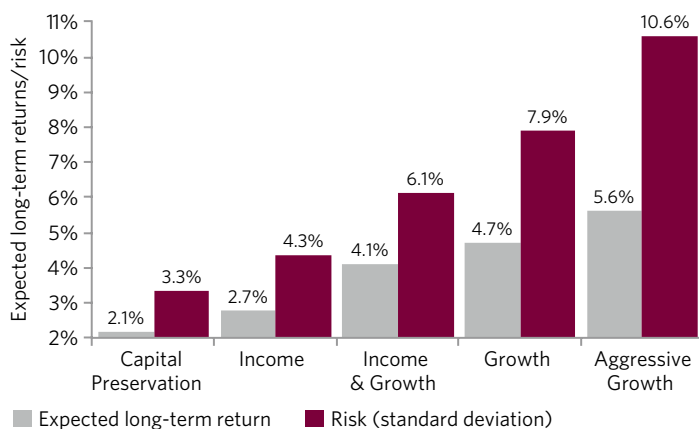
The search for an optimal investor profile begins with a risk/return analysis. Risk and return characteristics must be viewed in tandem, as each provides an essential piece of the asset allocation puzzle. The expected return must be sufficient to achieve the investor’s long-term goals, while the risk must be tolerable.

The risk measures discussed throughout this paper can help investors decide on the suitability of each profile. Historically, over the long-term, equities have outperformed bonds and

bonds have outperformed cash; but outperformance comes with the cost of higher risk as measured by volatility (i.e. standard deviation).

Regardless of the measurement used to quantify risk, higher returns are typically accompanied by higher risk. The five investor profiles, ranging from Capital Preservation to Aggressive Growth, have incrementally higher levels of expected return and volatility, as shown below.

**Investor profile expected returns and risk<sup>14</sup>**



Source: CIBC Asset Management Inc. Data as of December 31, 2020.

The following tables summarize the historical and expected returns for the five investor risk profiles. The ranges of performance illustrate the short-term volatility risk and benefits of remaining invested for the long run. The longer the investment horizon, the lower the likelihood of experiencing negative average returns.

### Investor profile allocations and returns (% , 1950-2020)

Profiles	Global Equities	Canadian Equities	Global Bonds	Canadian Bonds	U.S. High Yield	Cash	Expected Return	Expected Std. Dev.	Historical Return <sup>15</sup>	Historical Std. Dev.
Capital Preservation	5	15	20	30	5	25	2.2	3.3	7.2	4.1
Income	10	20	20	25	10	15	2.8	4.3	7.9	5.4
Income & Growth	25	30	10	15	10	10	4.1	6.7	9.1	7.9
Growth	40	30	10	5	10	5	4.7	8.2	9.8	9.4
Aggressive Growth	60	30	0	0	10	0	5.6	10.6	10.7	11.7

Source: CIBC Asset Management Inc. Data as of December 31, 2020.

### Annualized return variability 1950-2020 (% , not annualized if less than 1 year)

Profiles	Monthly best	Monthly worst	3 month best	3 month worst	6 month best	6 month worst	1 year best	1 year worst	3 years best	3 years worst	5 years best	5 years worst	10 years best	10 years worst	% neg. month
Capital Preservation	6.1	-4.1	14.8	-5.5	23.3	-8.4	35.1	-8.8	21.3	1.1	19.1	2.8	14.4	3.9	28.9
Income	7.3	-6.0	16.5	-10.0	25.8	-12.1	40.8	-14.8	23.3	-0.3	21.4	2.0	15.7	3.5	31.7
Income & Growth	10.7	-8.5	17.7	-15.5	30.0	-20.6	49.5	-23.6	27.3	-5.2	25.4	0.3	18.1	2.4	32.5
Growth	12.6	-11.7	19.0	-18.6	31.3	-25.3	51.8	-29.1	31.9	-8.8	28.6	-1.2	20.1	0.9	34.4
Aggressive Growth	15.4	-15.9	24.1	-23.7	37.2	-32.4	56.7	-36.1	37.9	-13.7	32.7	-3.1	22.3	-0.8	35.4

Source: CIBC Asset Management Inc. Data as of December 31, 2020.

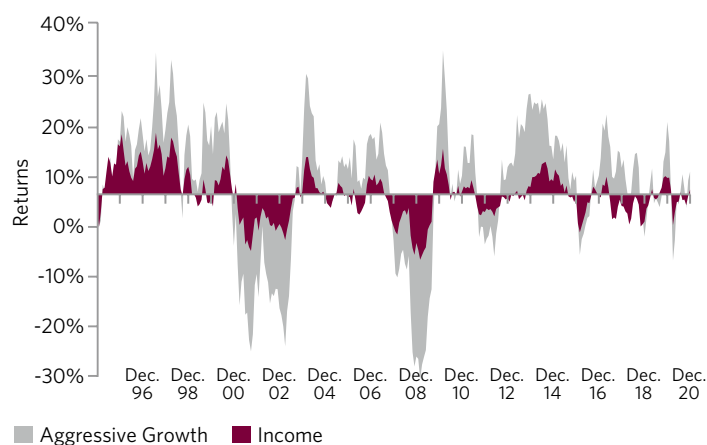
## Risk analysis of investor profiles

Different measurements may be used to quantify risk. Although there is no preferred method, combining various risk measurements provides a more comprehensive analysis of the risk characteristics of an investment portfolio.

Standard deviation is one of the most commonly used risk measurements in investment theory, as it measures the variability around historical or expected returns. The lower the observed standard deviation, the lower the risk.

The variability chart demonstrates the risk for two investor profiles over the past 25 years. The historical 25-year annual standard deviation for the Aggressive Growth portfolio is 12.9% and 5.3% for the Income portfolio. Clearly, the returns are more variable for the Aggressive Growth profile. However, with a starting investment of \$1000 25 years ago, the Aggressive Growth investor would have grown the investment to \$6432 (annualized 7.7% return) by the end of 2020. This is materially higher than the Income investor, who would have grown the same starting investment to \$4316 (annualized 6.0% return).

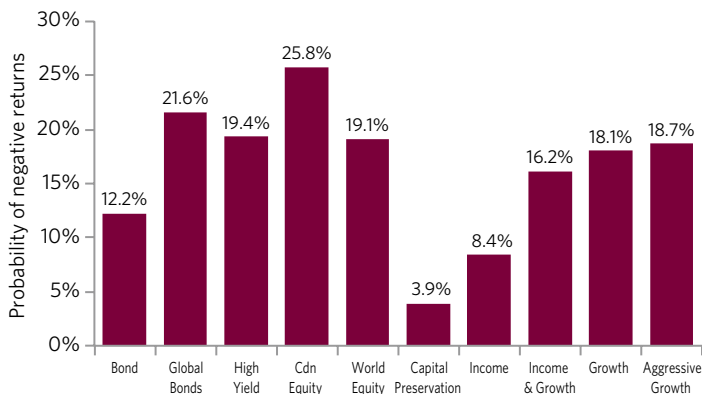
### Variability in one year historical returns for the income and aggressive growth profiles (December 1, 1994-December 31, 2020)



Source: CIBC Asset Management Inc., Bloomberg. Data as of December 31, 2020.

Another measurement to quantify risk is the probability of negative returns over a specific period. As shown in the chart below, the Capital Preservation portfolio has only a 3.9% chance of losing money over a one-year period, while the Growth portfolio has a much higher chance, at 18.1%.

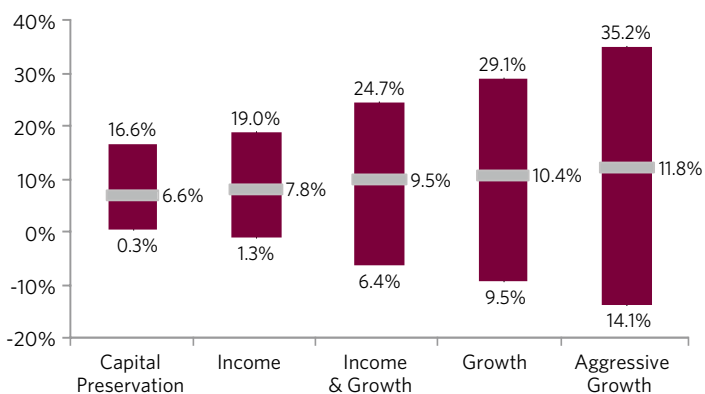
**Probability of negative annual returns in a one-year period (1950 - 2020)**



Source: CIBC Asset Management Inc., Bloomberg. Data as of December 31, 2020.

One problem with the “probability of negative returns” as a measurement of risk is that it doesn’t address the magnitude of potential loss. A particular investment may have a small chance of experiencing a loss, but if the loss occurs it may be larger than the investor can tolerate. Return percentile is another risk measurement that combines the probability of loss occurrence with the magnitude of the corresponding return. The 5th percentile shows the lowest 5% for returns. The table below shows the 5th, 50th and 95th annual return percentiles for the five investor profiles from January 1950 through December 2020.

**5th, 50th and 95th annual return percentiles (1950 - 2020)**



Source: CIBC Asset Management Inc., Bloomberg. Data as of December 31, 2020.

Another risk-assessment approach is to test the length of time it took each profile to traverse from peak to trough and back to the original peak again during the prior 70 years. Impressively, the most conservative Capital Preservation profile only required one year to recover once in the last 70 years. Conversely, the Aggressive Growth profile endured ten periods that required more than a year to recover and three periods required more than three years to regain its previous peak. The maximum period observed for the Aggressive Growth profile to recover was 73 months, after the dot.com bubble of 2000. Once again, this demonstrates the importance of time horizon when determining an appropriate investor profile.

**Frequency of extended recovery periods (1950 - 2020)**

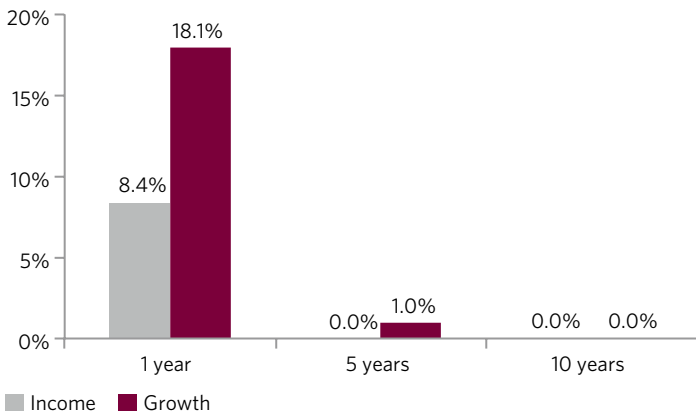
Asset Allocation	3 or more years to recover	2 to 3 years to recover	1 to 2 years to recover
Capital Preservation	0	0	1
Income	0	1	5
Income & Growth	1	2	7
Growth	2	1	6
Aggressive Growth	3	2	5

Source: CIBC Asset Management Inc. Data as of December 31, 2020.

## Remain diversified and fully invested

Investors are advised to set long-term financial goals and maintain a disciplined asset allocation approach. This helps them meet their long-term goals in accordance with their risk profiles. Timing the markets typically prevents investors from achieving their long-term goals, as risk decreases over a longer time horizon. This should encourage investors to be patient, as the probability of realizing a loss diminishes over time. Based on the past 70 years, the probability of a negative return for the Income profile or the Growth profile is 8.4% and 18.1% respectively, on a one-year basis. This decreases to 0.0% and 1.0%, respectively, on a five-year basis and 0% for both profiles over a ten-year period.

**Percentage of negative annualized returns for the Income and Growth profiles (1950 - 2020)**



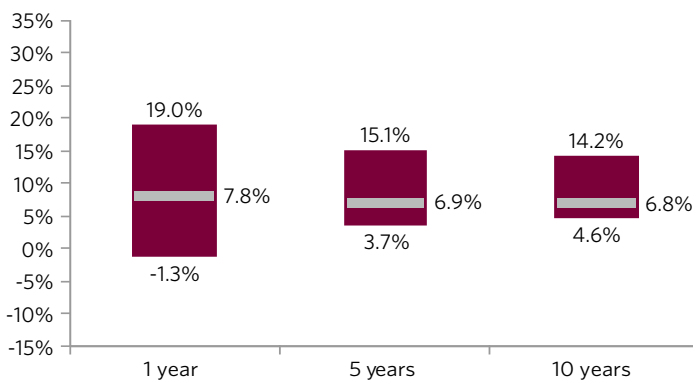
Source: CIBC Asset Management Inc. Data as of December 31, 2020.

Investing is a long journey that requires careful planning and disciplined implementation to reduce the potential for emotional and inefficient responses to volatility. Investors should not allow short-term market movements to alter their approach.

In any short-term period, investors may face higher volatility and negative returns. However, this should not discourage them from investing—volatility tends to decrease in the long run and returns tend to revert to a narrower band around a long-term average.

Supported by this data, investors should establish a link between time horizon and their risk profile. For example, investors with a five-year time horizon may be comfortable investing in the Income portfolio.

**5th, 50th & 95th annualized return percentile over time (1950 - 2020)**



Source: CIBC Asset Management Inc., Bloomberg. Data as of December 31, 2020.

Based on the past 70 years of historical returns, the Income portfolio has a 50% chance of achieving an annualized return of 6.9% or better over a five-year period. It has only a 5% chance of an annualized return of less than 3.7% over a five-year

period. We can compare that to the current expected returns for Canadian money markets at 1.3%. The probability over a one-year period of achieving an annualized return less than 1.3% is 14.5%. In other words, over the last 70 years, the return for the Income portfolio (over one year) was greater than the current Canadian money market expected return 86% of the time. If we extend the measurement to a five-year holding period—over the past 70 years (769 observation periods), the Income portfolio had 4 occurrences where the annualized return was lower than 1.3% (two occurrences in the 2008/9 financial crisis and two occurrences in the 1973/1974 stock market crash).

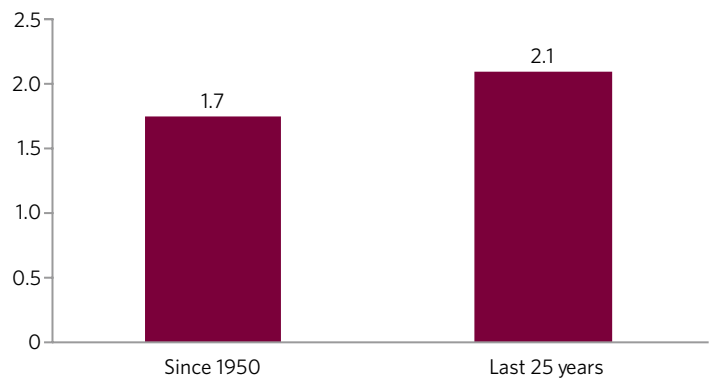
These statistics should be a point of consideration for risk-averse investors with a five-year time horizon who have all their money in saving accounts or cash. Many risk-averse investors believe that cash is a safer investment than the Income portfolio in a five-year period. This may not be the case, particularly when taking historical probabilities and opportunity costs (upside volatility) into account.

**Equities produce the best returns over the long-term**

In periods of strong equity market returns, investors can be tempted to establish or maintain very high allocations to equities in an effort to capture further gains. However, investors may not account for the fact that the higher potential returns of equities come with higher risk. Conversely, in periods of weak equity market returns, investors can be tempted to sell equities to reduce the risk of further losses. In all scenarios, investors should heed the long history of capital markets and maintain a disciplined, long-term asset allocation approach, taking into account their time horizon, liquidity needs and risk tolerance.

**Bonds mitigate risk during equity drawdowns (1950 - 2020)**

Average monthly return (bps) of Canadian bonds per 100 bps of TSX sell off

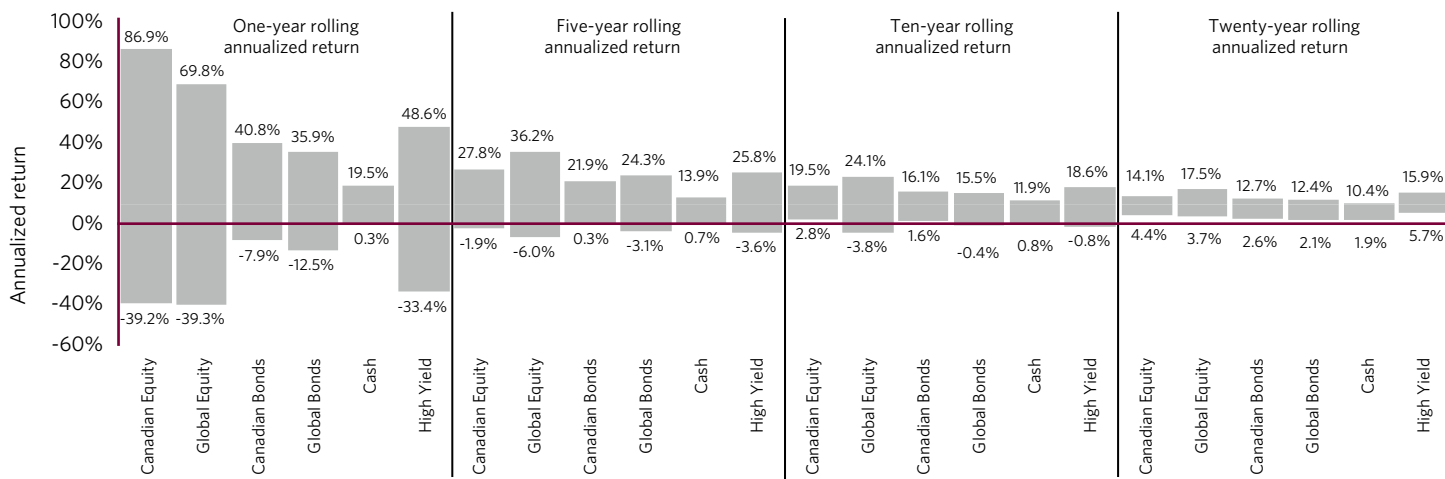


Source: CIBC Asset Management Inc., Bloomberg. Data as of December 31, 2020.

Most investors would agree that, in the short-term, equities are more volatile than bonds and cash. In general, investors with very short-term goals may be better served by guaranteed investments. A well-diversified portfolio should include an allocation to bonds, as they continue to be an effective shock absorber and offer stability relative to a portfolio's equity holdings.

However, over the long-run, equities have been the superior asset class for investment growth. The worst 20-year period for Canadian equities annualized return is 4.4%, accounting for the period that includes the peak of the pandemic March 2020. Over this same period, Canadian equities have outperformed Canadian bonds 72% of the time on a 10-year rolling basis and 81% of the time on a 20-year rolling basis.

**Worst and best annualized asset class returns (1950 - 2020)**



Source: CIBC Asset Management Inc., Bloomberg. Data as of December 31, 2020.

## Conclusion

After a very volatile start to the year, markets bounced back in 2020 to post some of the strongest returns of the near decade-long expansion. Looking forward, increased volatility and looming event risk will continue to dominate market performance, which has a powerful impact on investor sentiment. Similarly, behavioral psychology has shown that investors will often want to increase equity weightings at or near market peaks and reduce or eliminate equities near a market trough. Long-term experience has shown that discipline is paramount in difficult market environments and diversification can be a powerful tool to manage volatility. Although equities have historically provided higher returns than bonds, bonds remain an important part of a well-diversified portfolio, as they can help offset the risks inherent in equity returns.

Long-term strategic asset allocation has allowed investors to reduce their large exposure to familiar asset classes and home country investments and take advantage of enhanced

return opportunities by investing in a diversified asset mix. Diversification also helps to ensure at least some market participation in the most attractive asset classes at any given time.

Our research suggests that a balanced global portfolio's risk/return profile can also be improved by the addition of a number of asset classes including: global debt, high-yield debt, multi-sector fixed income strategies, global real assets, emerging debt and emerging market equities, as well as alternatives such as private equity and absolute return strategies are also worth considering, due to their low correlation to traditional global asset classes.

Currency risk is one of the main risks that Canadian investors face when adding foreign investments. To mitigate this risk, hedged portfolio products can provide the added benefits of exposure to global growth, with limited currency risk for investors with short time horizons. Over the long term, however, investors can achieve higher risk-adjusted returns using the additional diversification provided by adding unhedged currency risk.

# Tactical asset allocation opportunities

Luc de la Durantaye, CFA

## Global Outlook

### The road back to normal

White-knuckled global investors can breathe a little easier as we enter a new year. Developments in the fight against COVID-19 have been very encouraging, with the global distribution of vaccines starting in late 2020 and expected to accelerate sharply in early 2021. If everything goes according to plan, this should allow for a relatively faster return to normal, with the world economy completing its recovery phase in early 2021 and returning to expansion mode over the second half of the year.

The dominant risk is that global growth could surprise on the strong side in 2021. The year is starting with consumers sitting on a record amount of cash after being forced to hold back on their spending for nearly a year because of the pandemic. To be sure, there's a lot of pent-up demand out there. The day the battle against COVID-19 is won could very well mark the beginning of a particularly intense consumer spending spree around the developed world.

The relevant question for global investors is not whether world growth will become a reality. The global economy will be sizzling hot in 2021. Our forecast calls for the highest yearly global growth on record, with world real GDP growth projected at +7.1%. The relevant question now is whether the global economy could be too strong for comfort, with monetary authorities deciding to start draining liquidity from the system. In our opinion, this is unlikely to happen. Faster economic growth and higher inflation are both required for governments to get their fiscal houses in order and monetary authorities are fully aware of this. As such, they will keep the global monetary policy stance ultra-accommodative through their joint policy actions. In the new policy regime, this means keeping policy rates near zero while heavily monetizing new government debt issuance. It's just too soon to take away the punch bowl.

## Alternative scenarios

In this scenario (Sluggish Global Recovery), the global distribution of the vaccine unfolds too slowly. The pandemic continues to intensify and spread, while policy response is largely inadequate. Cyclical and risky assets would face a significant correction. In addition, while the Chinese economic recovery remains on track, it comes with more limited spillovers for the rest of the world. The equity market is disappointed by the sluggish rebound and equities and commodity prices severely correct. Given that much of the global bond market is already in negative yield territory, only a few countries would have room for declining bond yields. Safe-haven assets like gold would surge.

The best-case scenario (Speedy Return to Normal) calls for herd immunity to be reached faster than in the baseline scenario. Low risk aversion allows life to return to normal faster than anticipated and the world economy gets an extra boost from the consumer. The global yield curve remains very low and is inconsistent with a stronger-than-expected upturn in the economic cycle. Near 0% bond yields can only be justified by the very accommodative central bank policies. Facing rising inflation expectations, the bond market would start to test the central banks' commitment. The equity market would continue to rally, and the sectors most dependent on reopening the economy would strongly outperform.

## Equity Market outlook

The equity market is a forecasting machine and investors, sensing better days ahead, aren't waiting to buy. To assess how much of the good news is already priced-in, we look at consensus earnings estimates. Undeniably, the consensus is upbeat and expects a sharp recovery in earnings. However, in terms of valuation, the price being paid for expected earnings is still reasonable.

If the reopening of the economy benefits all equities, some will still benefit more than others. Sectors and countries that have been harder hit by the pandemic stand to gain more from the recovery, except for certain industries that have been permanently damaged. In particular, small cap companies should outperform large caps.

## Fixed Income

We're recommending a pro-cyclical stance in global bond portfolios, underweighting developed market (DM) bonds and overweighting emerging market (EM) bonds. Our upbeat forecast on commodities and our bearish secular view on the USD point towards improving economic performance for most EM countries. This positive economic momentum, combined with mild inflationary pressure, is usually good for bond investors. In addition, the valuation of EM bonds (local currency) remains compelling, but we're less enthusiastic about EM bonds denominated in USD.

## Currencies

### U.S. dollar

Further U.S. dollar weakness is expected in 2021. The greenback typically underperforms in global economic recovery phases and, with the Fed's policy rate anchored near zero, the U.S. dollar no longer has an interest rate advantage. The adoption of the new Average Inflation Targeting (AIT) policy framework by the Federal Reserve should also put downward pressure on the U.S. dollar.

### Canadian dollar

Valuation is still not an obstacle for further appreciation of the Canadian dollar. At current levels, the Canadian dollar qualifies as undervalued, as fair value has moved from less than 80 cents to 85 cents. Looking forward, global demand for oil is expected to increase as the world economy strengthens. This implies more upside for oil prices, a positive for the CAD.

### Euro

The euro decisively broke out above 1.18 in mid-November 2020 and ended the year on a high note. We see more upside in 2021. Fluctuations in the EURUSD bilateral exchange rate will likely be increasingly dictated by supportive fundamental determinants. The EURUSD exchange rate is projected to trade between 1.18 and 1.25.

### Japanese Yen

The Bank of Japan's policy regime of full government debt monetization, yield curve control and heavy purchases of private sector debt securities, will likely continue to produce lower-than-usual volatility in Japanese financial markets. This should limit the Japanese yen's upside against the U.S. dollar in 2021. The USDJPY bilateral exchange rate is expected to fluctuate between 100 and 107 over the next 12 months.

## Regional economic outlook

### United States

The early 2020 U.S. recession was like no other, with a very severe and very rapid contraction in economic activity. This resulted from effective lockdown measures and mobility restrictions put in place to slow the pandemic. However, the speed of recovery in consumer spending was just as impressive. This speedy recovery occurred because the disposable income of U.S. households continued expanding thanks to generous government transfers to households and small businesses (i.e. helicopter money). It was also because consumers were forced to reduce their spending owing to the economic shutdown.

Looking ahead, the 2021 positive income shock could very well be just as big as the one in 2020. It will include more helicopter money from the government and a sharp increase in worker compensation on top of the excess savings already in hand. Under these conditions, U.S. real GDP growth is expected to be stronger than generally projected (+6.2% vs. +3.6% for consensus) with a much more pronounced acceleration in inflation over the first half of 2021.

### Europe

Given the second COVID-19 wave hitting Europe, the projected V-shaped recovery in the eurozone is likely to be somewhat flatter than projected a few months ago. However, the eurozone economy remains in recovery mode. The big difference for eurozone economies now is exports to China, which are strongly recovering. This is particularly important for Germany, because the multi-year growth slowdown in German exports to China largely explains the difficulties for German manufacturing since late 2017. This is all changing. The big drag on German growth experienced in 2019 and early 2020 has now turned into a substantial boost.

In light of the developments on the monetary policy front, and accounting for the still-to come fiscal impulse associated with the EU recovery fund, our forecast calls for +5.8% average real GDP growth in the eurozone.

### China

The strong momentum of the Chinese economy has continued and has been broadening, finally reaching the consumer. We expect that consumer to play a prominent role in the economic expansion, leading the handoff from stimulus-led growth to self-sustained organic growth.

Two important factors will support the consumer. First, the savings rate is elevated, meaning that lots of firepower is available. The removal of a previously large international tourism current account deficit (almost 5% of GDP) and months of precautionary savings have boosted the savings rate. The recent pick-up of consumption indicators shows a consumer that is now confident and finally willing to consume.

Second, external demand should remain strong, despite a stronger currency, which is an indirect tailwind for employment and consumption. Pandemic-related global demand for personal protective equipment, electronics (the result of work-from-home), and online shopping (an abundance of Made in China products) could be receding tailwinds. However, we expect the strong global recovery should keep Chinese export growth elevated.

### Canada

Three things happened in Canada last year. First, fiscal authorities cushioned the hit on Canadian households and small businesses considerably by quickly providing generous government transfers. Second, total worker compensation quickly recovered because of the very unusual employment growth mix (i.e. job cuts for low-wage workers, full employment recovery for high-wage workers). Finally, a good chunk of the money earned in 2020 was saved because of forced consumer retrenchment. All this readily explains the speedy recovery in Canadian consumer spending over the second half of 2020 and, looking into 2021, the Canadian consumer is likely to remain Canada's growth engine.

<sup>1</sup>The World Bank Group flagship report Global Economic Prospects, January 2021

<sup>2</sup>"Foreign Investments in Canadian Securities", STATCAN, <https://www150.statcan.gc.ca/n1/daily-quotidien/191115/cg-a001-eng.htm>

<sup>3</sup>Canadian High-yield credit spread is the difference between the yield of the Bank of America Merrill Lynch Canada High-yield Index and that of the Bank of America Merrill Lynch Canadian Government Index. The US High-yield Spread is the difference between the yield of the Bank of America Merrill Lynch High-yield Master II Index and that of the Bank of America Merrill Lynch US Treasury Master Index.

<sup>4</sup>Rebalanced on a calendar year end basis using Strategic Asset Allocation recommendations based on IMR Long Term Strategic Asset Allocation papers (2012-2020).

<sup>5</sup>"Making Canadian Portfolios Strong and Free of Home Country Bias", CIBC Asset Management Inc.

<sup>6</sup>Proxy indices for these asset classes are: FTSE TMX Canada 91 Day T-Bills Index for cash; FTSE TMX Bond Universe Index for Canadian bonds since inception (1990), prior to 1990, All Government Canadian Bonds with 10yr + maturity; Barclay's Global Aggregate Bond Index for global bonds since inception (1990). 1986 to 1990 JP Morgan Global Government Bond Ex Canada, 1960 to 1985 U.S. Intermediate Government (%Total Return) in Canadian Dollars, 1950 to 1960 U.S. Intermediate Government (%Total Return) - Currency Prorated; Merrill Lynch U.S. High-yield Master II Index for U.S. high-yield bonds since inception (1986). Prior to 1986, U.S. high-yield asset class returns were approximated with a 20/80 blend of the S&P 500 Index with either U.S. government bonds (1950 to 1975) or the Barclays Global Aggregate Debt Index (1975 to 1986). S&P/TSX Composite Index for Canadian Stock returns since inception (1956), prior to 1956 data was from the Montreal Exchange and Toronto Stock Exchange Market Review (1950 to 1955); MSCI World Index for Global Stocks since inception (1982), 1950-1982 Global Financial Data C\$ World.

<sup>7</sup>High-yield is represented by the Bank of America Merrill Lynch US High-yield Master II Index, Global Bonds is represented by the Bloomberg Barclays Global Aggregate Index. Duration as of December 31<sup>st</sup>, 2020

<sup>8</sup>See IMR's paper "Is Your Portfolio Yield-Starved? Take a Bite of Multi-Sector Fixed Income", April 2016, CIBC Asset Management

<sup>9</sup>Multi-sector fixed income returns were approximated through a blend of the Barclay's Aggregate Bond Index (50%), BoA Merrill Lynch U.S. High-yield Index (25%) and the J.P. Morgan Emerging Markets Bond Index (25%). Floating rate loans are approximated by the Credit Suisse Leveraged Loan Index and U.S. high-yield debt by the BoA Merrill Lynch U.S. High-yield II Index.

<sup>10</sup>Real Assets returns is approximated through a blend of 40% Real Estate Equities (FTSE EPRA/NAREIT Developed Real Estate Index), 50% Infrastructure Equities (Dow Jones Brookfield Global Infrastructure Index) and 10% Real Asset Debt (70% Bank of America Merrill Lynch Global High-yield Index + 30% Bank of America Merrill Lynch Global Corporate Index)

<sup>11</sup>"McKinsey and Company, 2019, "Private Markets Come of Age, McKinsey Global Private Markets Review 2019"

<sup>12</sup>Absolute Return Strategy returns is approximated by using the MAARs Proxy index and an expected return of 5% above Canadian cash. MAARs Proxy is simulated performance history calculated using the following methodology: Most strategies encompassed by the Representative Account have been managed by the Multi-Asset and Currency team for at least 10 years. Most strategies encompassed by the Representative Account are linked to a representative CIBC Asset Management account. For strategies where no representative account exists, an external strategy or model simulation has been used.

<sup>13</sup>A more detailed explanation can be found in "Long Term Capital Market Returns", Éric Morin, February 2020

<sup>14</sup>Expected Returns and Expected Standard Deviations for the component asset classes are based on 10-year forecast returns as explained in Long-Term Capital Markets Assumptions section of the paper.

<sup>15</sup>Historical performance for each risk profile is based on historical returns for the component asset classes based on proxy indices<sup>6</sup> monthly rebalanced to the 2020 Long Term strategic global allocation recommendation.

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