ALTERNATIVES: HOW MUCH TO ALLOCATE?

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By Michael Sager and Mac Miao[1]

1. Summary

- Investors seek to achieve a range of, often competing, performance objectives, including high returns, capital protection, and income generation.
- The best way to maximize ability to achieve these various objectives is by adopting a well-diversified portfolio with exposure to many diversified sources of return.
- Traditional Balanced portfolios are not particularly diversified, and often concentrate upon a narrow set of risks and opportunities. Meager forward-looking return expectations suggest excessive risk concentration will hamper achievement of performance objectives, and leave investors vulnerable to market volatility.
- Alternatives provide investors with exposure to a broader set of risks and returns, complementing allocations to traditional asset classes such as equity.
- Our illustrative analysis demonstrates how an allocation to alternatives can help improve portfolio diversification, boost long-term return and income expectations, and mitigate the negative short-term impact of episodic equity market stress.

2. Introduction

Investment portfolios often encompass competing objectives. Efforts to increase expected portfolio returns will often be accompanied by an increase in portfolio risk, and perhaps a reduction in liquidity. Protection strategies that seek to mitigate the risk of capital drawdowns can often be implemented only at the cost of some give-up in expected returns. And investment constraints, including maximum allocation limits and liquidity constraints, inhibit efficient portfolio construction and the achievement of strategic investment goals.

The increasing complexity of satisfying competing performance objectives requires that investors ensure portfolios are well-balanced, and exposed to a broad set of complementary risks and opportunities.

Alternatives represent an important component of this search for portfolio balance, alongside traditional assets such as equities and bonds. The descriptor 'alternatives' encompasses a broad range of asset classes and strategies, as well as distinct risks, and sources of diversification, income, and expected return.

Portfolio construction key tenets

Three pillars underpin our approach to portfolio construction: investor goals, objectives and risk tolerance; asset risk characteristics and long-term expected returns; and portfolio performance evaluation. We discuss each one in turn, with a focus on the additive role of alternatives.

Investor goals & risk tolerance

Investor goals and risk tolerance lie at the core of rigorous portfolio construction, and influence asset allocation in important ways. Investors who have near-term cash flow commitments, or who prioritize capital preservation, are unlikely to tolerate substantial illiquidity. Investors who desire long-term capital gains will likely allocate more to growth-oriented equities, as well as higher yielding segments of fixed income and an array of alternative asset classes and strategies. They will also hold less cash.

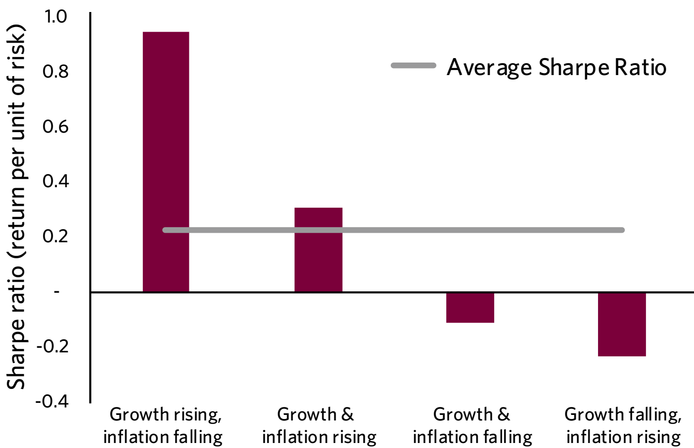
Asset risk characteristics

Rigorous portfolio construction requires a thorough understanding of what you own, and of the risks and cash flows to which you are exposed. Risk characteristics often vary in significant ways across asset classes and strategies, including traditional solutions such as equities and bonds, and alternatives. Understanding these differences, and the optimal combination of assets and strategies to maximize the likelihood of achieving your investment objectives is essential.

Traditional Balanced portfolios typically focus on a narrow set of assets and strategies, and by extension a narrow set of risks and cash flows. They are concentrated portfolios, dominated by public equity risk; in turn, the performance of public equities is conditional on the strength of economic growth (Figure 1).

The best way to make a Balanced portfolio less concentrated is to add assets and strategies that provide exposure to a more diversified set of risks and opportunities. A Balanced portfolio typically captures just three or four different, or independent, sources of risk and return (Figure 2).

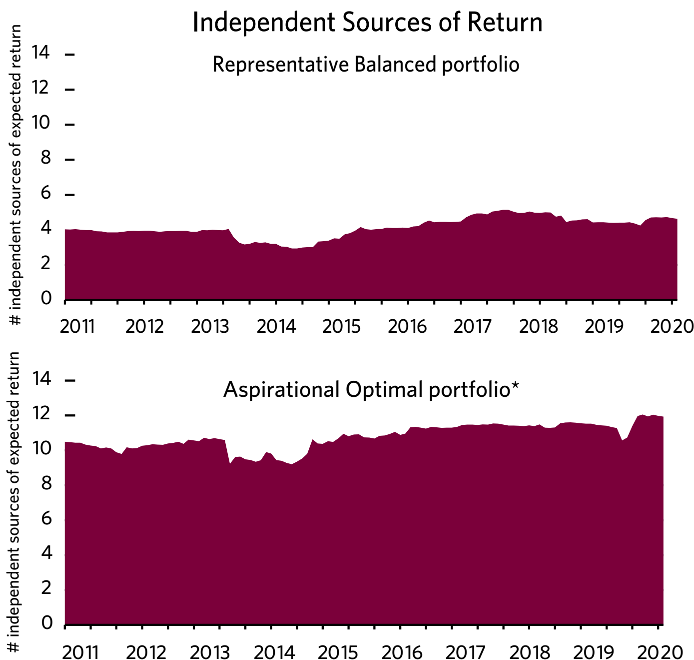
Figure 1 - Balanced portfolio performance tends to be best in periods of good economic growth, and less attractive otherwise



Source: The information was prepared by CIBC Asset Management Inc. using the following third-party service providers' data: Bloomberg Finance L.P., Refinitiv Datastream. Data sample: January 2006 – September 2020. Weights of each asset class in 60/40 Balanced portfolio are: 20% Canadian Equity (S&P/TSX Composite Index), 40% US Equity (S&P 500 Index), 10% US Core Bond (Bloomberg Barclays U.S. Aggregate Bond Index), 30% Canada Core Bond (FTSE Canada Universe Bond Index). Performance reported net of cash. Inflation measured using % y/y in US CPI; growth measured using % y/y in US Real GDP growth. Inflation & growth rising (falling) measured as quarterly observation higher (lower) than trailing 4-quarter average of respective series.

An Optimal portfolio will likely capture ten or more diversifying sources of return, including from alternatives. More investment breadth leads to higher and more consistent expected performance.

Figure 2 – The number of diversifying risks and returns in a Balanced portfolio is low. Building an optimal portfolio encompassing alternatives offers more breadth, and more opportunity to consistently achieve investment goals



*We term this an Aspirational Optimal portfolio to recognize that investment constraints inhibit its realization. We reflect the impact of these constraints in the analysis that follows. Illustrative example. The information was prepared by CIBC Asset Management Inc. using the following third-party service providers' data: Bloomberg, LLC. Calculation methodology taken from Meucci, A., A. Santangelo, & R. DeGuest (2015), Risk Budgeting and Diversification Based on Optimized Uncorrelated Factors. SSRN Working Paper # 2276632. From the authors: "We measure the contributions to risk of a set of factors, strategies, or investments, based on "Minimum Torsion Bets", namely a set of uncorrelated factors, optimized to closely track the factors used to allocate the portfolio. [These] Minimum-Torsion Bets allow us to also introduce a natural diversification score, the Effective Number of Minimum-Torsion Bets, which we use to measure and manage diversification." Data Sample: January 2006 - September 2020. Please refer to Disclaimer for weights of each asset class in Aspirational Optimal portfolio.

When seeking breadth, it is important to focus on risks, and not names (Figure 3). Only asset classes and strategies that have fundamentally distinct sources of value creation and cash flow offer true diversification. For instance, Private Equity (PE) offers relatively attractive expected returns compared to public equity. But the cash flow source of these returns is very similar, suggesting that PE represents a substitute to public equity, rather than a diversifying complement. By contrast, Absolute Return Liquid Alternative strategies, High Yield credit, Emerging Market debt, Real Asset debt, commodities, including Gold, and index-linked bonds (TIPS), can offer true diversification by exposing investors to a different set of risks and opportunities.

Figure 3 – Asset classes & strategies provide exposure to specific risks. An optimal portfolio balances these risks to target desired investor outcomes

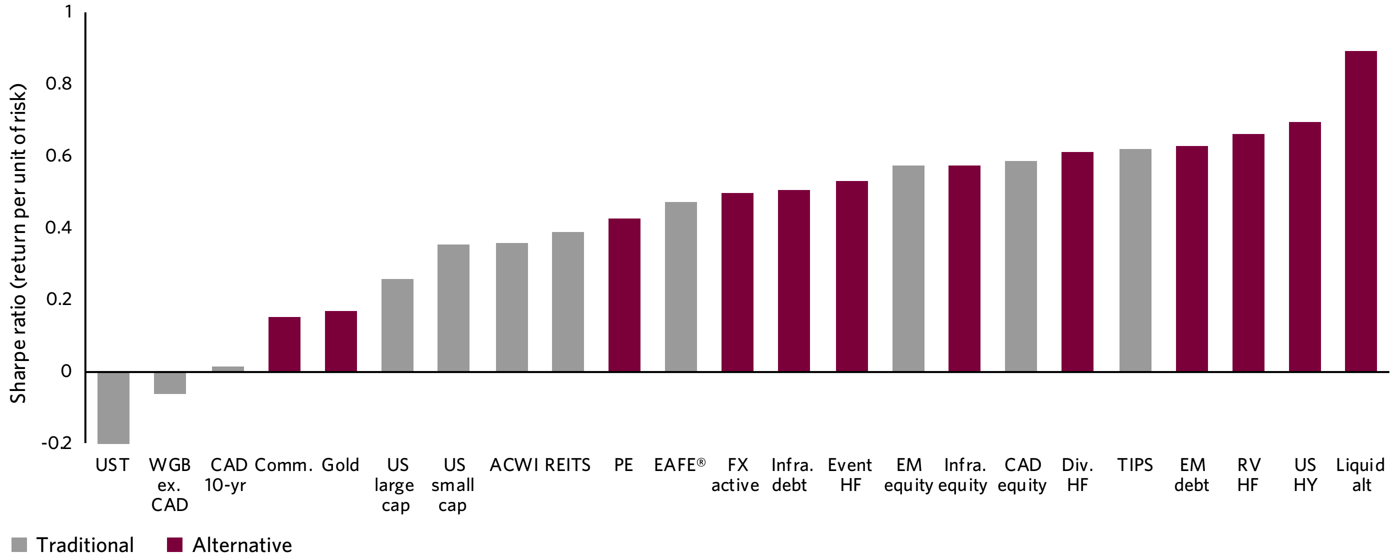
Economic growth risk	Interest rate risk	Inflation risk	Investment style risk	Illiquidity risk
Developed market equity	Government bonds	Gold	Value	On/off the run fixed income
Emerging equity	Credit/High Yield	Commodities	Carry	Private equity
Smart beta equity/credit	Emerging debt	TIPS	Momentum	Hedge funds
Private equity, real estate & infrastructure equity	Private debt, real estate & infrastructure debt	Real estate & infrastructure	Quality	Real estate & infrastructure

Source: The information was prepared by CIBC Asset Management Inc. using the following third-party service providers' data: Amundi (2020), Multi Asset: A Solid Total Portfolio Approach For A Complex World.

Long-term expected returns

Investors should only allocate to risks which they expect to provide an attractive, diversifying reward. We compute long-term annualized expected risk-adjusted returns for a broad range of asset classes and strategies (Figure 4). Our projected returns are relatively meagre for most assets included in a traditional Balanced portfolio (grey bars in Figure 4), particularly Developed Market (DM) sovereign fixed income. Expected returns appear more attractive for a range of alternative assets and strategies (burgundy bars).

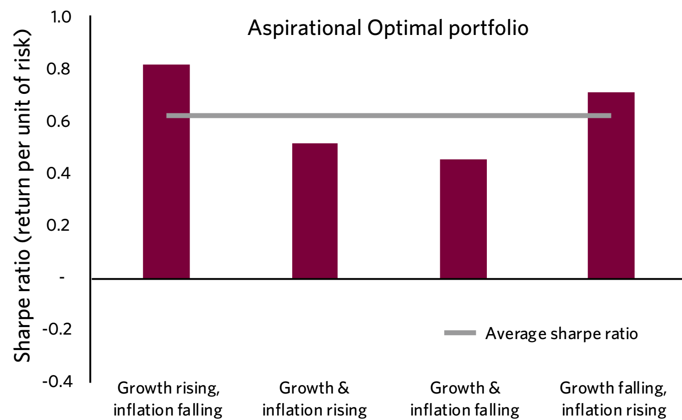
Figure 4 – Risk-adjusted expected returns to alternative assets & strategies appear attractive versus traditional assets



Source: The information was prepared by CIBC Asset Management Inc. using the following third-party service providers' data: JP Morgan Asset Management. Data accessed as at November 29, 2020. WGB = World Government Bonds; Comm = Commodities; PE = Private Equity; HF = Hedge Fund; Div = Diversified; RV = Relative Value; HY = High Yield. "EAFE" is a registered trademark of MSCI Inc., used under license.

The key is to discern between those alternatives that offer complementary, diversifying returns, and those that represent substitutes for some part of existing holdings. Returning to our earlier analysis, adding complementary assets and strategies improves the consistency of expected performance across various macroeconomic outcomes (Figure 5). And more consistency increases confidence in the achievement of long-term investment goals.

Figure 5 – Allocating to a broader set of risks & opportunities can improve the consistency of portfolio performance



Illustrative example. The information was prepared by CIBC Asset Management Inc. using the following third-party service providers' data: Bloomberg Finance L.P., Refinitiv Datastream. Calculated over sample period January 2006-September 2020. Inflation measured using % y/y in US CPI; growth measured using % y/y in US Real GDP growth. Inflation & growth rising (falling) measured as quarterly observation higher (lower) than trailing 4-quarter average of respective series. Please refer to Disclaimer for weights of each asset class in Aspirational Optimal portfolio. Performance net of cash.

3. Building optimal portfolios including alternatives

Portfolio construction does not exist in a vacuum. It faces real-world constraints that limit the ability of investors to build portfolios to maximize risk-adjusted expected returns or the stream of income, or to minimize the probability of experiencing capital loss over specific periods. Proposals to augment a traditional Balanced portfolio with various alternatives assets and strategies have to respect the existence of constraints, including on maximum exposure limits.[2]

In our illustrative analysis, we focus on a growth-oriented investor (Figure 6). We retain a substantial allocation to public equities, although with less home bias than a typical Balanced portfolio, and significantly more geographic diversification, and an emphasis on dividends to boost expected portfolio income. We also maintain a meaningful exposure to fixed income, but include allocations to market segments with higher expected returns and less asymmetry than DM sovereign bonds, including High Yield and Emerging Market debt.

We also allocate to a mix of liquid and illiquid alternatives. These offer various complementary attributes spanning higher expected returns, higher income, better liquidity, and downside protection. These alternatives include the CIBC Multi-Asset Absolute Return Strategy (MAARS), Gold, PE, Real Estate, and Infrastructure.

Figure 6 – Investors face constraints that impinge upon their ability to achieve investment objectives. Our portfolio simulations respect the following asset class and strategy constraints

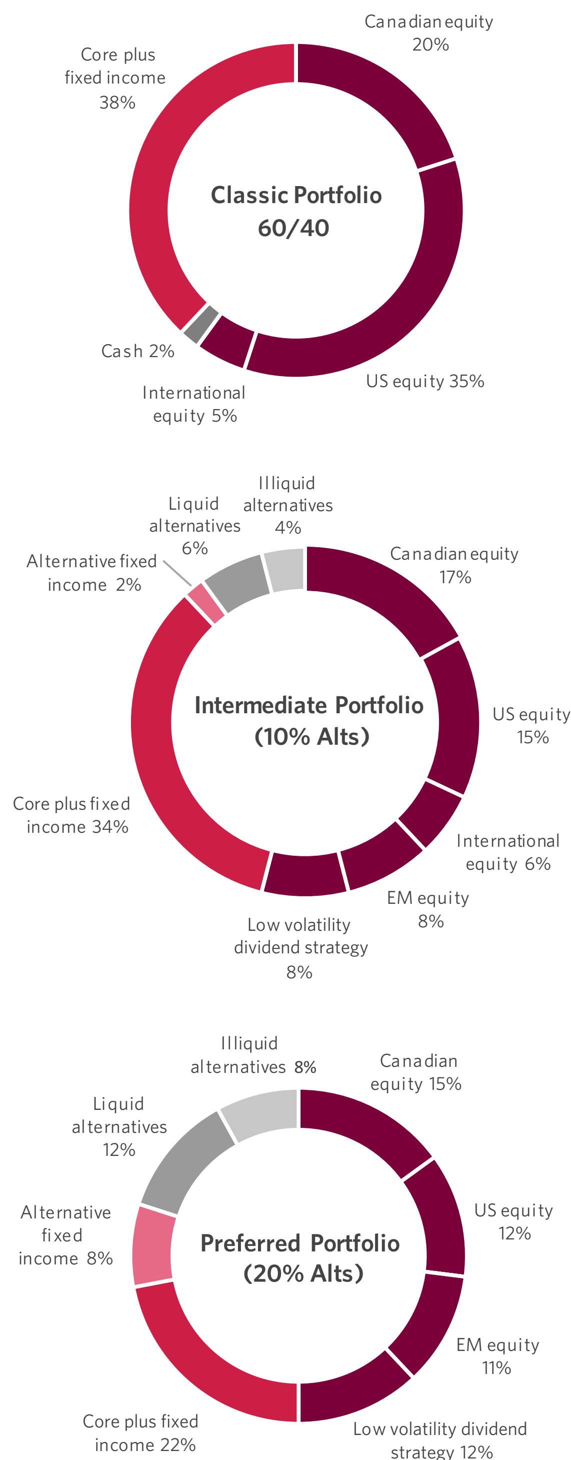
Asset classes	Percentage weights of the total portfolio
Equity	40-70%
Canadian equity	5-30%
US equity	5-50%
Global equity	0-5%
Other equity	0-5%
Fixed income	30-50%
Canadian fixed income	0-30%
US fixed income	0-15%
Global fixed income	0-10%
Alternative fixed income	0-10%
Alternatives	0-25%
Liquid alternatives	0-15%
Illiquid alternatives	0-15%

Source: The information was prepared by CIBC Asset Management Inc. Other Equity includes Emerging Markets equity, & low volatility strategies; Alternative Fixed Income includes Emerging Market Bonds, Commercial Mortgages & Real Asset Debt; Liquid Alternatives include Absolute Return Multi-Asset strategies, & Gold; Illiquid Alternatives include Private Equity, Real Estate Equity & Infrastructure.

We also recognize the importance of starting allocations as an additional constraint on investor efforts to realize an optimal portfolio; we cannot expect investors to move immediately from a traditional Balanced portfolio to one that fully embraces alternatives and higher octane segments of public equity and bond markets in one jump.

Accordingly, we present performance analysis for three portfolios: a classic, traditional Balanced portfolio; an Intermediate portfolio that utilizes some of the leeway in our allocation ranges in Figure 6; and a Preferred portfolio that utilizes the full scope of the available opportunity set.[3] Notional asset allocations in each portfolio are reported in Figure 7.

Figure 7 – Adding an allocation to complementary liquid and illiquid alternatives diversifies a traditional Balanced portfolio

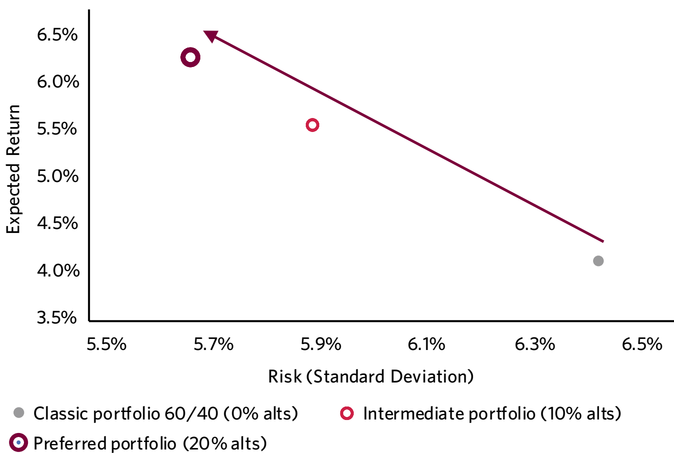


Source: The information was prepared by CIBC Asset Management Inc. using the following third-party service providers' data: Bloomberg Finance L.P., Refinitiv Datastream. Data sample: January 2006 – September 2020. Asset classes are defined as follows: Canadian Equity (S&P/TSX Composite Index), US Equity (S&P 500 Index), International Equity (MSCI EAFE® Index), EM Equity (MSCI Emerging Markets Index), Low Volatility Dividend Strategy (CIBC Qi Global Dividend Low Vol Strategy), Core Plus Fixed Income (FTSE Canada Universe Bond Index & Bank of America Merrill Lynch US High Yield Master II Index), Alternative Fixed Income (JPM Emerging Markets Bond Index Plus & Credit Suisse Leveraged Loan Index), Liquid Alternatives (CIBC Multi-Asset Absolute Return Strategy (MAARS) & Gold, Illiquid Alternatives (Private Equity (Kensington Private Equity Fund), Real Estate Equity (FTSE EPRA/NAREIT Developed Real Estate Net Index), Infrastructure (Dow Jones Brookfield Global Infrastructure Index)).

Portfolio performance evaluation

As expected, our simulation results demonstrate the benefit of augmenting a Balanced portfolio with a broad set of complementary risks and opportunities, including those provided by alternatives (Figure 8). Moving from a classic Balanced portfolio to our Preferred portfolio, expected portfolio risk diminishes due to better diversification, and expected annual return increases markedly, from around 4.1% to 6.3%. A lot of this performance improvement is realized by the move to our Intermediate portfolio. Incremental steps yield substantial benefits.

Figure 8 – Expected portfolio performance improves with an allocation to alternatives

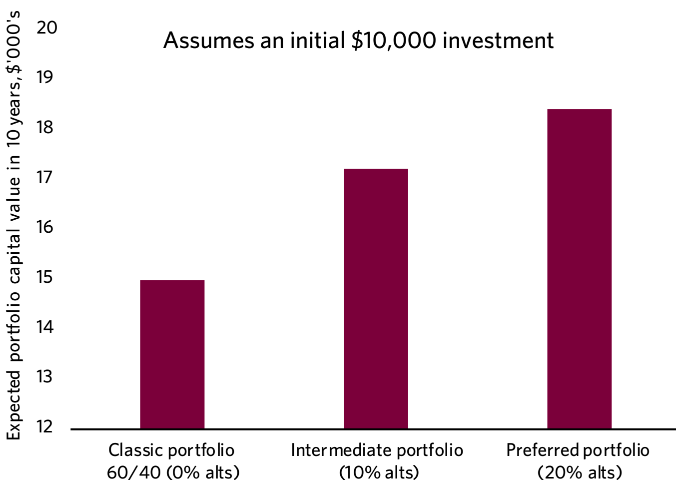


Classic portfolio 60/40 (0% alts) Intermediate portfolio (10% alts) Preferred portfolio (20% alts)

Source: The information was prepared by CIBC Asset Management Inc. using the following third-party service providers' data: Bloomberg Finance L.P., Refinitiv Datastream. Data sample: January 2006 – September 2020. Illustrative example.

This mix of higher expected return and lower expected portfolio risk is powerful, in terms of generating long-term capital appreciation (Figure 9).

Figure 9 – Portfolio capital accumulation benefits from investment breadth



Source: The information was prepared by CIBC Asset Management Inc. using the following third-party service providers' data: Bloomberg Finance L.P., Refinitiv Datastream. Data sample: January 2006 – September 2020. Assumes an initial $10,000 investment. Illustrative example.

Based on our return expectations, the time taken for an initial $10,000 capital investment to double in value is reduced from more than 17 years, to a little under 12 (Preferred portfolio). And the current yield and income of the portfolio is also appreciably improved by adding additional breadth (Figure 10).

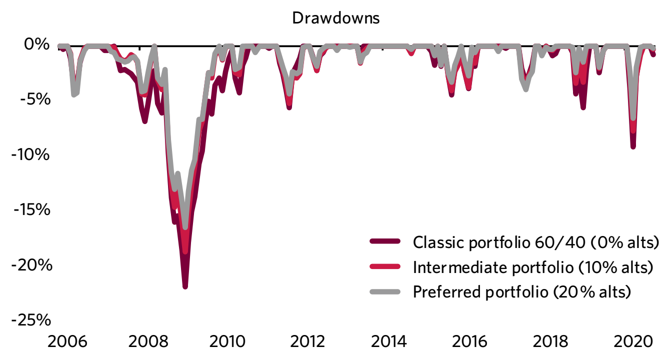
Figure 10 – Allocating to alternatives can enhance expected portfolio income

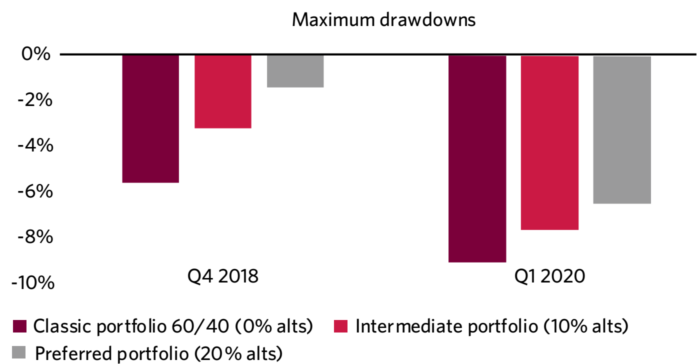
	Classic portfolio 60/40 (0% alts)	Intermediate portfolio (10% alts)	Preferred portfolio (20% alts)
Weighted-average yield of income generating assets	1.48%	1.85%	1.93%

Source: The information was prepared by CIBC Asset Management Inc. using the following third-party service providers' data: Bloomberg Finance L.P., Refinitiv Datastream. Data as at September 30th, 2020.

It is also important to focus on the consistency of performance. With a more diversified portfolio that includes an allocation to alternatives, the length and depth of historical capital drawdowns is reduced, including in recent periods of extreme market stress (Figures 11a&b).

Figure 11a– Historical capital drawdowns are reduced by allocating to a broad & diversified set of risks & opportunities





Classic portfolio 60/40 (0% alts) Intermediate portfolio (10% alts) Preferred portfolio (20% alts)

Source: The information was prepared by CIBC Asset Management Inc. using the following third-party service providers' data: Bloomberg Finance L.P., Refinitiv Datastream. Data sample: January 2006 – September 2020.

Figure 11b – The length of drawdowns is also shortened by allocating to a broad & diversified set of risks & opportunities

	Classic portfolio 60/40 (0% alts)	Intermediate portfolio (10% alts)	Preferred portfolio (20% alts)
Longest drawdown, mths	39	21	18
Maximum drawdown	-22%	-19%	-16%

Source: The information was prepared by CIBC Asset Management Inc. using the following third-party service providers' data: Bloomberg Finance L.P., Refinitiv Datastream. Data sample: January 2006 – September 2020.

As discussed above, greater performance consistency encompasses lower sensitivity to changes in macroeconomic conditions. It also encompasses a reduction in the dispersion of performance between periods of normal trading conditions and periods of equity market stress. Traditional Balanced portfolios typically experience significant capital loss during periods of market stress; fixed income exposure has usually only been a partial hedge, at best, against deep losses experienced by public equity holdings. Adding diversifying alternative assets and strategies to a Balanced portfolio, within the confines of realistic investment constraints, can help mitigate this inconsistency (Figure 12).

Figure 12 – The consistency of portfolio performance improves with an allocation to alternatives

Normal periods	Expected return	Risk	Sharpe
Classic portfolio 60/40 (0% alts)	4.13%	6.45%	0.64
Intermediate portfolio (10% alts)	5.57%	5.92%	0.94
Preferred portfolio (20% alts)	6.30%	5.69%	1.11

Periods of equity market stress[4]	Expected return	Risk	Sharpe
Classic portfolio 60/40 (0% alts)	-5.71%	8.56%	(0.67)
Intermediate portfolio (10% alts)	-2.74%	7.90%	(0.35)
Preferred portfolio (20% alts)	-1.33%	7.39%	(0.18)

Source: The information was prepared by CIBC Asset Management Inc. using the following third-party service providers' data: Bloomberg Finance L.P., Refinitiv Datastream. Data sample: January 2006 – September 2020.

4. Conclusion

Investors often exhibit competing return, income, and risk objectives. The assumptions of every portfolio construction exercise vary. Our simulations provide some generic guidelines to assist in thinking through optimal allocations to asset classes and strategies. It is difficult to build a portfolio that protects capital in stressed times without giving up a meaningful chunk of expected return in better times. In the portfolio construction process, investors also need to be mindful of other factors such as rebalancing and taxation.

Alternatives are not a panacea. But our analysis indicates that they certainly seem to be an important part of the solution for most high net worth investors.

Let's connect

Should you have any questions about this report or anything else, please do not hesitate to connect:

Michael Sager, Ph.D.
Vice-President, Multi-Asset and Currency
Institutional Asset Management
michael.sager@cibc.com
416 980-6301

[1] Michael Sager is Vice President, Multi-Asset & Currency, in the CIBC AM (CAM) Institutional Asset Management Team. Mac Miao is Manager, Institutional Product Development & Management in the CAM Product Solutioning and Management Team.

[2] We also note that many alternatives are only available on an OM basis, which can present an additional, operational constraint to inclusion in portfolios.

[3] To be clear, in the absence of constraints our Preferred portfolio would likely have a greater allocation to alternatives. In that sense, 'Preferred' Is not equivalent to 'Optimal'.

[4] Equity market stress is defined as periods when monthly returns to the US S&P 500 index were at least 1 standard deviation below the full-sample mean return calculated over period January 2006 - September 2020.

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Weights of each asset class in Aspirational Optimal portfolio in Figures 2 & 5: 10% U.S. Equities (S&P 500 Index), 2% Global Equities (50% MSCI World Index/50% MSCI Emerging Markets Index), 2% Canadian Equities (S&P/TSX Composite Index), 10% Private Equity (30% Thomson Reuters Private Equity Buyout Index/70% Kensington Private Equity Fund), 5% US Core Plus Bond (60% Bloomberg Barclays U.S. Aggregate Bond Index/40% Bank of America Merrill Lynch US High Yield Master II Index), 20% Global Fixed Income (75% Bloomberg Barclays Global Aggregate Bond Index/25% MSCI Emerging Markets Index), 5% Commercial Mortgage (FTSE Canada 3YR Mortgage), 10% Real Asset Debt (70% ML Global Corporate Index/30% ML Global High Yield Index), 10% Private Debt (Credit Suisse Leveraged Loan Index), 10% Gold Spot USD, 5% Infrastructure (Dow Jones Brookfield Global Infrastructure Index), 10% Liquid Alternative (Prior to November 2018, proxied using a representative HFRI Hedge Fund index; since November 2018, proxied using the CIBC Multi-Asset Absolute Return Strategy (MAARS)).

Weights of each asset class in Intermediate portfolio in Figures 7,8,9,10,11 & 12: 17% Canadian Equity (S&P/TSX Composite Index), 15% US Equity (S&P 500 Index), 6% International Equity (MSCI EAFE® Index), 8% EM Equity (MSCI Emerging Markets Index), 8% Low Vol Dividend Strategy (CIBC Qi Global Dividend Low Vol Strategy), 11% Canada Government Bond (FTSE Canada Government Bond Index), 18% Canada Corporate Bond (FTSE Canada Corporate Bond Index), 5% US High Yield Bond (Bank of America Merrill Lynch US High Yield Master II Index), 2% Emerging Markets Bond (JPM Emerging Markets Bond Index Plus), 4% Liquid Alternatives ((Prior to November 2018, proxied using a representative HFRI Hedge Fund index; since November 2018, proxied using the CIBC Multi-Asset Absolute Return Strategy (MAARS)), 3% Private Equity (Kensington Private Equity Fund), 2% Gold spot, 1% Real Estate Equity (FTSE EPRA/NAREIT Developed Real Estate Net Index (CAD)).

Weights of each asset class in Preferred portfolio in Figures 7, 8, 9, 10,11, & 12: 15% Canadian Equity (S&P/TSX Composite Index), 12% US Equity (S&P 500 Index), 11% EM Equity (MSCI Emerging Markets Index), 12% Low Vol Dividend Strategy (CIBC Qi Global Dividend Low Vol Strategy), 5% Canada Government Bond (FTSE Canada Government Bond Index), 15% Canada Corporate Bond (FTSE Canada Corporate Bond Index), 2% US High Yield Bond (Bank of America Merrill Lynch US High Yield Master II Index), 8% Emerging Markets Bond (JPM Emerging Markets Bond Index Plus), 8% Liquid Alternatives ((Prior to November 2018, proxied using a representative HFRI Hedge Fund index; since November 2018, proxied using the CIBC Multi-Asset Absolute Return Strategy (MAARS)), 6% Private Equity (Kensington Private Equity Fund), 4% Gold spot, 2% Real Estate Equity (FTSE EPRA/NAREIT Developed Real Estate Net Index (CAD)), 1% Infrastructure (Dow Jones Brookfield Global Infrastructure Index (CAD)).

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