

# Evolving Our Strategic Asset Mix

## Addressing substantial, durable changes in the economy and capital markets



JUNE 11, 2020



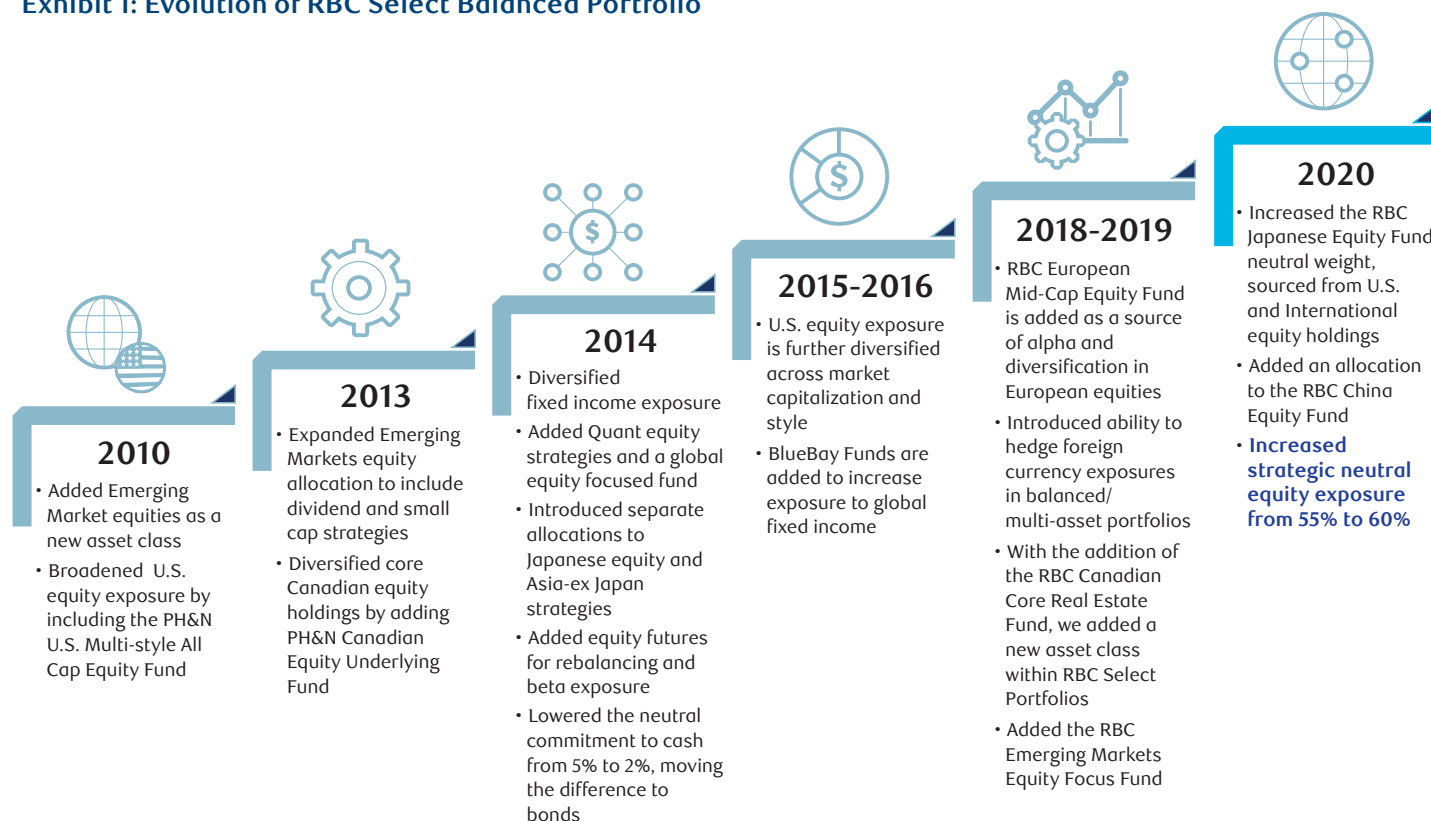
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Whether a pension-plan sponsor or an individual saving for their own goals, establishing a strategic asset mix is perhaps the most important decision an investor makes. It's a journey. Over time, the assets available to investors multiply, absolute and relative return prospects shift and different assets move around in relation to each other in ways that are not stable. No single blend of assets will remain optimal over a long-term saving and investment program.

Strategic asset mixes for the many different balanced and multi-asset programs managed by RBC Global Asset Management are always evolving. Through a combination of organic growth and mergers we have globalized our investment program, broadened our reach across different asset classes and deepened our capabilities within each of these. Over just the past 10 years, we have added two-dozen

new strategies to the RBC Select Balanced Portfolio while removing those with diminishing utility. The Fund's reach has pushed far beyond Canada's relatively narrow and illiquid markets, bulking up exposures in U.S., global and emerging-market credit while adding new capabilities in international and emerging-market equities and in quantitative and style tilted approaches to investing (see Exhibit 1).

### Exhibit 1: Evolution of RBC Select Balanced Portfolio



A variety of changes in the economy and capital markets, some which have developed slowly and others more recently, indicate the need for close attention to strategic asset mix right now:

- The global real rate of interest has fallen by more than 450 basis points over the past 40 years. Underpinning that trend are slow-moving forces which are unlikely to change in the cycle ahead. Real rates of interest could hold near zero to 1% for a very long time.
- As the “risk-free rate,” the real interest rate is the base rate of return for all asset classes. Other factors held constant, dropping the real rate reduces the returns likely to be earned on other investment options.
- Falling real rates and moribund inflation have pulled bond yields to their lowest levels in history. Fixed-income investors now experience reduced income from their positions and heightened volatility resulting from lengthening duration.
- The full package of income, risk-modification and security offered by sovereign bonds is now much less effective as an anchor for balanced and multi-asset solutions.
- Portfolio managers will be rewarded for renovating multi-asset programs to include assets that, to the degree possible, mimic the prior benefits of sovereign bonds in particular while contributing to portfolio returns close to those embedded in savings and investment programs.
- Some combination of raising exposure to “risk assets” such as equities and others that offer the diversifying and/or income properties of fixed income is timely. These

propositions are paired, as one without the other will introduce additional portfolio imbalances.

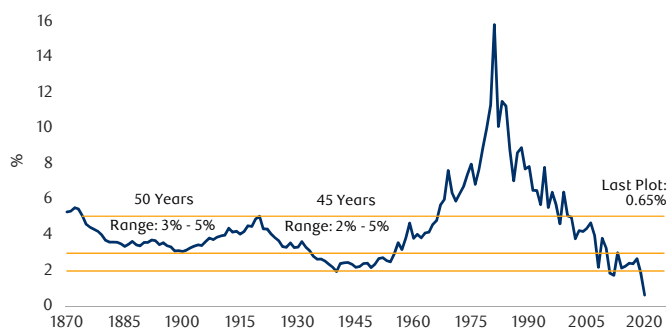
- Consistent with our always-evolving approach to asset management, and recognizing the significance of changes that are upon us, we are adjusting upward the midpoint of our allowed exposure to equities for many of our balanced solutions, including the RBC Select Portfolios. To control the additional volatility that higher equity weights bring, we will continue to promote portfolio efficiency through the periodic addition and paring of asset class and portfolio exposures. At the individual portfolio level, we believe that our focus on the comprehensive identification and management of risks while seeking sustained alpha through security selection will add value and dampen volatility.

### The roots of falling interest rates

Over the past 40 years, the 10-year U.S. Treasury-bond yield has fallen from 15.8% to 0.5% and now rests near its lowest mark in 150 years (Exhibit 2). That change ripples through all aspects of multi-asset portfolios, impacting income and return possibilities as well as expected volatility and cross-asset correlations in the near and long term. Simply put, *balanced and multi-asset portfolios will not perform in the years ahead as they have in the past without addressing this massive and enduring change in fixed-income markets.*

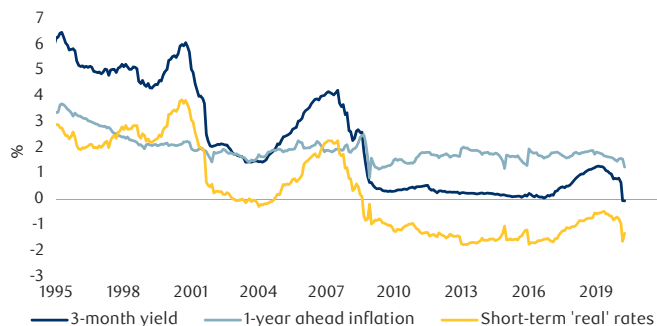
The fall in interest rates will not be reversed through the cycle ahead, and perhaps for many that will follow. Much more than the secular decline in inflation is at work. Around the world, the real rate of interest (the after-inflation interest rate) has plunged and the causes for that indicate some permanency to the change (Exhibit 3).

**Exhibit 2: U.S. 10-year bond yield**



Note: As of May 29, 2020. Source: RBC GAM, RBC CM

**Exhibit 3: Real short-term interest rates in developed markets**



Note: As of April 30, 2020. Yields and inflation are GDP-weighted and consist of 20 developed market economies. Source: Bank of England, IMF, Consensus Economics, RBC GAM

In a 2015 paper, economists at the Bank of England (BOE)<sup>1</sup> documented the persistent decline in real interest rates and provided specific causes for the 450-basis-point fall since 1980. In theory, real rates of interest are determined by long-term growth expectations and societies' preferences for savings versus spending. Exhibit 4 separates the 40-year decline in real rates into its main components. Notice that demographics contributed a large share of the drop through an aging population's shift in the savings/investment preference and through changing preferences in the emerging world resulting from shrinking family size and improved living standards. Decades of superior growth from emerging nations are evident in those converging preferences, but that also suggests lower trend economic growth going forward as the gap between the developed and emerging world has narrowed. Moreover, demographic trends are slow-moving and therefore relatively easy to forecast. These changes and their impact on real interest rates will not soon be reversed.

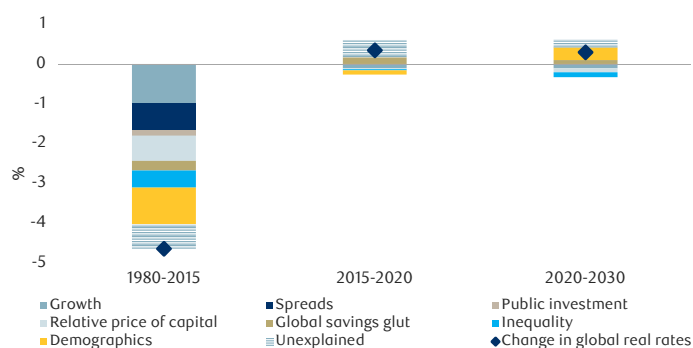
The COVID-19 shock has reinforced the decline in trendline GDP growth. In *Growth in a Time of Debt*,<sup>2</sup> Reinhart and Rogoff analyzed GDP growth rates for a sample of 20 nations at various levels of debt/GDP ratios. As the 2007-2009 financial crisis drew to a close, they argued that growth through the cycle ahead would remain sluggish because sovereign debt loads of the world's largest countries had all moved above thresholds that in the past coincided with a marked decline in output. Generally, as debt/GDP climbed above 90%, annual GDP growth in these economies slowed by over 1.5% and none of the G7 economies were unaffected. Except for Germany, epic support programs by governments responding to the COVID-19 crisis will drag the G7 well above the critical level (Exhibit 5).

Based on projected changes in the factors that contributed to the drop, the BOE economists expected the real rate of interest to hold at or below 1% for many years into the future. Those forecasts are now five years old. Over the period since the paper's publication, real rates in the U.S. have moved between -0.5% and 1.1%, and all within a general trend lower. For Canada, that range has been -0.6 to 0.6% and for the G7 it has held within a band bounded by -1.9% and 1.1%.

### Why focus on the real interest rate?

In theory, the short-term real rate of interest is the base rate of return for a risk-free investment. Additional returns can be captured through "risk premiums." Common premia

**Exhibit 4: Secular drivers of global real interest rates – Change in global neutral rate**



Note: As of December 31, 2015. Source: Bank of England, RBC GAM

**Exhibit 5: Global gross debt/GDP ratios with IMF forecasts**

	U.S.	Canada	France	Germany	Italy	Japan	U.K.
2009	86.7	79.3	83.0	73.0	116.6	200.9	63.3
2010	95.5	81.2	85.3	82.4	119.2	207.7	74.6
2011	99.8	81.8	87.8	79.8	119.7	221.9	80.1
2012	103.3	85.4	90.6	81.1	126.5	228.7	83.2
2013	104.9	86.1	93.4	78.7	132.4	232.2	84.2
2014	104.6	85.6	94.9	75.7	135.3	235.8	86.2
2015	104.8	91.2	95.6	72.1	135.3	231.3	86.9
2016	106.8	91.7	98.0	69.2	134.8	236.4	86.8
2017	105.9	90.5	98.4	65.3	134.1	234.5	86.2
2018	106.9	89.7	98.4	61.9	134.8	236.5	85.7
2019	109.0	88.6	98.5	59.8	134.8	237.4	85.4
2020	131.1	109.5	115.4	68.7	155.5	251.9	95.7
2021	131.9	108.6	116.4	65.6	150.4	247.6	95.8
Prior peak	109.0	100.2	98.4	73.0	135.3	237.4	86.9
Anticipated Deficit/GDP Ratio for 2020	-15.4	-11.8	-5.5	-9.2	-8.3	-7.1	-8.3

Note:   = anticipated peak. Source: IMF

<sup>1</sup> Lukasz Rachel and Thomas D. Smith (December 2015). Bank of England Staff Working Paper No. 571: *Secular drivers of the global real interest rate*.

<sup>2</sup> Carmen M. Reinhart and Kenneth S. Rogoff (May 2010). *Growth in a Time of Debt*.

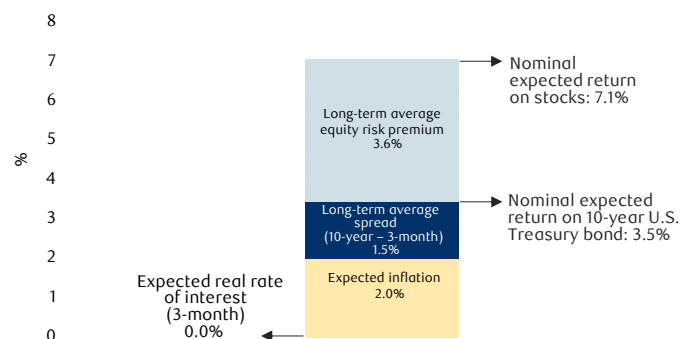
include the opportunity to earn a higher return by investing for a longer holding period, accepting exposure to the threat of default (credit risk), foregoing the ability to quickly exit a position or perhaps facing a frozen market (liquidity risk), accepting that changes in the level and direction of the returns for the stock-market index will have an impact on all listed companies (equity market beta), and capturing gains or experiencing losses related solely to the unique activities of a company (idiosyncratic risk, or security selection alpha).

Exhibit 6 provides a simple example of how a low real rate of interest can impact returns across the main asset classes. Assuming the real rate holds at 0% and that inflation ultimately regains the 2% level targeted by the U.S. Federal Reserve, adding the average term premium for 10-year U.S. government bonds takes the T-bond yield to 3.5%. Among the best forecasts for the forward 10-year return on a T-bond is its yield to maturity at the date of purchase (see Exhibit 7). So 3.5%, or even less, may be a reasonable placeholder for estimates of future returns on bonds. Adding the long-term average equity-risk premium of 3.6% to that bumps prospective stock-market returns to 7.1%. A simple balanced fund with a 60/40 split between stocks and fixed income would therefore target a return of 5.7%.

Exhibit 8 presents compound annual total returns for U.S. stocks and bonds over various holding periods into May 2020. At 3.5%, the forecast return for bonds falls below results for every one of these prior periods. Except for the latest 20-year result for stocks (which is reduced by the fact that the count starts near the peak of the technology bubble), forecast annual equity market returns fall 2.5% to 6.1% below prior periods, and the 5.7% forecast for a 60/40 balanced fund is beneath all points captured in the sample. Although this analysis is based on simple combinations of assets and only very basic modeling of future returns, it indicates *the likelihood of returns for balanced portfolios falling below those of the past few decades and even beneath levels embedded in investors' expectations and their savings and investment plans*. Our current forecasts for long-term returns for key asset classes are not much different from these estimates (see Appendix I).

Lower returns on bonds, stocks and multi-asset portfolios are not the only challenge that investors face as a result of the depression in the real interest rate. Barring an unlikely surge in inflation, nominal (after-inflation) interest rates will stay low even as growth in the economy is restored and cyclical pressures build. That means that *coupon income in fixed-income and multi-asset portfolios will hold below the historic norm*. Twenty years ago the Canadian bond universe averaged a 7.4% coupon. Today that rate is 3.3%.

### Exhibit 6: Modelling nominal returns through risk premia



Note: As of May 29, 2020. Source: Bloomberg, RBC GAM

### Exhibit 7: U.S. 10-year Treasury note and returns



Note: As of May 29, 2020. Source: Deutsche Bank, Haver Analytics, RBC CM

### Exhibit 8: Trailing performance Compound annual total returns

	1-year	5-year*	10-year*	20-year*	30-year*	40-year*
Bonds	11.4%	3.9%	3.6%	4.9%	5.8%	7.2%
Stocks	12.8%	9.9%	13.2%	5.9%	9.6%	11.5%
Hypothetical balanced portfolio (60/40)	13.1%	7.8%	9.6%	5.9%	8.4%	10.1%

Note: Data as of May 29, 2020, \*periods greater than 1 year are annualized  
 Bonds = Bloomberg Barclays U.S. Treasury Total Return Unhedged USD  
 Stocks = S&P 500 Total Return Index  
 Balanced portfolio (60/40) = 60% Stocks + 40% Bonds, rebalanced monthly.  
 An investment cannot be made directly into an index. The above does not reflect transaction costs, investment management fees or taxes. If such costs and fees were reflected, returns would be lower. Past performance is not a guarantee of future results. Source: RBC GAM



Low interest rates also mean a longer duration and higher volatility for the fixed-income segment of portfolios. In that environment, *the ballast provided by bonds, a critical and highly valued feature of balanced portfolios, is much diminished.*

### Results can be improved...

These return expectations can be improved. Increasing a portfolio's risk profile by adjusting relative exposures of current holdings (for example, buying more stocks while reducing holdings of sovereign bonds) could bolster results. New assets could be added to the current solution set, focusing on measuring and managing specific risk premia can improve portfolio efficiency, leverage could be introduced to the mix, or some combination of all of these could be effective.

Similarly, the impact on portfolio volatility from the drop in yields can be dampened by blending in assets with relatively low correlations to equities. And the loss of income from falling coupon rates can be partially offset by adding fixed-income and other vehicles with payouts above those of sovereign bonds. *Market efficiency ensures that there is no free lunch, but the full impact of the drop in yields need not be absorbed.*

### ...by boosting exposure to stocks...

For many, boosting stock market exposure is a good first step. If, as in the above analysis, bonds are to contribute only 3.5% per year, adding weight in equities, which may earn closer to 7%, makes sense if investors have a long enough time horizon to ignore the resulting increase in volatility. Exhibit 9 shows rolling period returns and volatilities for two identical portfolios based on the past 70 years of market history: one with a 55/45 equity/fixed income blend and the other 60/40. Notice that although the return for the 60/40 portfolio exceeds that of the 55/45 set for all holding periods, volatility for the former, measured as the standard deviation of returns, is also elevated in the early years before essentially converging with the 55/45 portfolio from years 5-10 and beyond. The Sharpe ratio, a measure of the degree to which a rise in volatility is compensated for by a boost in returns, validates the addition to equity exposure as the metric is higher for the 60/40 set across all time frames. In this simple example, investors seem reasonably well rewarded for accepting a journey that is a bit bumpier in the short term to capture additional returns through the long term.

## Exhibit 9: Hypothetical balanced portfolio return statistics

Total returns based on rolling monthly data from January 1950 to May 2020

		Mean	Standard deviation	Batting average <sup>^</sup>	Max	Min	Sharpe ratio*
Balanced (55% EQ, 45% FI)	1-month	0.7%	2.5%	65.0%	9.9%	-9.6%	n/a
	1-year	9.4%	9.9%	82.9%	46.0%	-21.2%	0.64
	3-year	8.7%	5.6%	93.2%	26.6%	-4.9%	0.46
	5-year	8.6%	4.6%	99.9%	23.2%	-1.0%	0.40
	10-year	8.4%	3.5%	100.0%	16.4%	1.0%	0.29
	20-year	8.6%	2.5%	100.0%	14.6%	5.0%	0.23
	30-year	9.1%	1.2%	100.0%	11.7%	6.5%	0.22
Balanced (60% EQ, 40% FI)	1-month	0.8%	2.7%	64.9%	10.7%	-10.7%	N/A
	1-year	9.7%	10.5%	82.6%	47.7%	-23.2%	0.67
	3-year	9.0%	5.9%	91.4%	27.3%	-5.6%	0.47
	5-year	8.9%	4.8%	99.6%	23.9%	-1.7%	0.41
	10-year	8.7%	3.7%	100.0%	16.7%	0.5%	0.30
	20-year	8.8%	2.6%	100.0%	15.0%	5.1%	0.23
	30-year	9.3%	1.2%	100.0%	12.0%	6.8%	0.23

Notes: S&P 500 Index used as a proxy for equities (EQ). U.S. 10-year Treasury bond used as a proxy for fixed income (FI). Data goes back to 1950.

<sup>^</sup>Batting average: incidence of positive return. \*Sharpe ratio calculated as average return divided by standard deviation of those returns.

Returns for periods greater than 1-year are annualized. An investment cannot be made directly into an index. The above does not reflect transaction costs, investment management fees or taxes. If such costs and fees were reflected, returns would be lower. Past performance is not a guarantee of future results.

Source: RBC GAM

### ...while controlling volatility

On that basis, the tradeoff seems like a good one, but the investor's time horizon is an important consideration. Exhibit 9 also shows that while the portfolios have similar batting averages (the percent of periods with positive returns), the 60/40 portfolio features higher highs and lower lows (best/worst rolling holding period returns). Exhibit 10 shows the incidence of the portfolios falling below their initial value for holding periods of one month through 30 years. For both, that's never happened for periods beyond 10 years, seldom happened beyond a 5-year holding period and, importantly, there isn't much difference between the success rates for the two portfolios at any point in time. For those with time horizons beyond five years, the higher equity exposure likely makes sense.

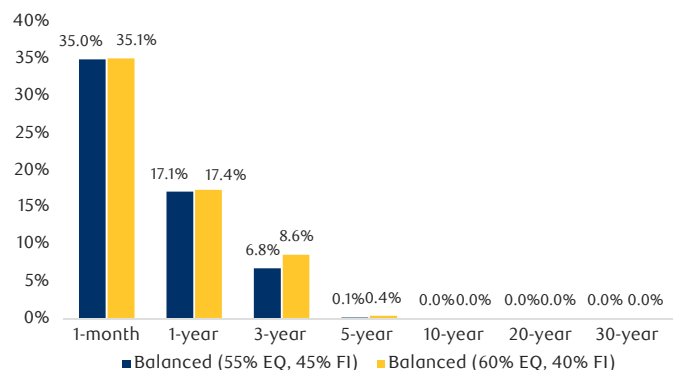
Some of the additional volatility resulting from increased stock-market exposure can be dampened through close attention to the specific elements of returns within equity portfolios. Individual equity and aggregate portfolio returns can be attributed to very granular sources (again: "risk premia") including factors and investment styles. Factors relate to macroeconomic forces such as exposures to interest rates, oil prices, etc. Investment styles measure the degree to which the returns for any particular security move in sync with the index trend (stock-market beta), or closely follow stocks demonstrating similar profiles such as growth, value, momentum or a variety of other descriptors. The portion of returns that cannot be explained by factors and styles is considered to be idiosyncratic alpha.

Idiosyncratic alpha flows from unique aspects of a business's activities. These "pure" returns generated through stock picking are especially valuable as they are largely uncorrelated with the level and direction of returns for other stocks and from the equity-market indices. Through our portfolio-engineering initiative we have embedded within every investment team analysts whose responsibilities include isolating the factor and style tilts that exist within each position and working with portfolio managers to hold these within appropriate risk budgets. Alongside traditional risk-management techniques, we aim to construct portfolios that feature high levels of diversification through idiosyncratic returns. The intended result are portfolios that capture the overall market return (beta) and add to that pure returns from stock picking while lessening exposure to the difficult-to-predict rotations in style and factor leadership.

### Finding ways to generate income...

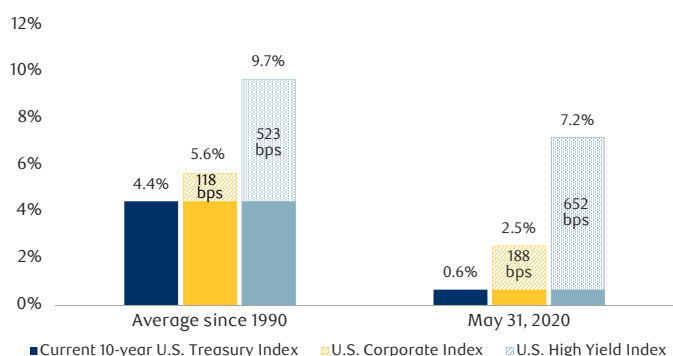
To preserve income and generate capital gains through security selection and tactical market timing, we have progressively added investment-grade, high-yield and emerging-market debt to our portfolios over the past 20 years. Diminishing weights in sovereign bonds has funded these positions. Exhibit 11 indicates the historical average and

**Exhibit 10: Incidence of failure**  
Percentage of rolling periods with negative returns



Note: As of May 29, 2020. S&P 500 Index used as a proxy for equities (EQ). U.S. 10-year Treasury bond used as a proxy for fixed income (FI). Data goes back to 1950. Source: RBC GAM

**Exhibit 11: Yield to maturity**



Note: Current spread as of May 31, 2020. Shaded areas within the bars indicate the yield spread versus the U.S. 10-year Treasury bond yield. Source: ICE BofA, RBC GAM

current spread between sovereign yields and credit-market alternatives. Moving beyond the safety of government-issued and guaranteed bonds and into credit markets (earning a credit-risk premium) exposes investors to the possibility of default. As a result, correlations to stocks rise (see Exhibit 12), increasing portfolio volatility somewhat and especially during market corrections. Here too, there is a tradeoff, but time horizons and diversification of positions are important and effective modifiers.

With the updating of Canadian mutual-fund legislation (National Instrument 81-102) in late 2018, gaining exposure to alternative assets is now a possibility for a broader range of investors. Absolute-return credit strategies have demonstrated low correlation to equity-market returns (Exhibit 12) and our modeling indicates a good fit with many of our balanced and multi-asset solutions. Access to relevant strategies at BlueBay, our affiliated global specialty fixed-income manager, places absolute-return credit high in the queue for future renovations.

## Exhibit 12: Correlation coefficients between traditional and alternative asset classes

		Cash and Fixed Income					Equities								Alternative Strategies						
10-year correlation of monthly returns as of April 2020		Cash	Sovereign Bonds	Investment Grade Bonds	High Yield Bonds	Emerging Market Debt	Canadian Equities	US Large-Cap Equities	US Growth Equities	US Value Equities	European Equities	Asian Equities	Emerging Market Equities	China Equities	Absolute Return Bonds	Direct Real Estate	Mortgages	Infrastructure	Low Vol equities	Long/Short Equities	Market Neutral
Cash and Fixed Income	Cash	1.00																			
	Sovereign Bonds	0.12	1.00																		
	Investment Grade Bonds	0.03	0.94	1.00																	
	High Yield Bonds	-0.23	-0.06	0.22	1.00																
	Emerging Market Debt	-0.24	0.27	0.51	0.79	1.00															
Equities	Canadian Equities	-0.21	-0.13	0.10	0.78	0.60	1.00														
	US Large-Cap Equities	-0.09	-0.15	-0.01	0.51	0.27	0.63	1.00													
	US Growth Equities	-0.08	-0.13	0.03	0.54	0.29	0.68	0.93	1.00												
	US Value Equities	-0.18	-0.14	0.04	0.65	0.40	0.75	0.92	0.90	1.00											
	European Equities	-0.11	-0.17	0.00	0.63	0.46	0.60	0.73	0.68	0.70	1.00										
	Asian Equities	-0.14	-0.05	0.14	0.62	0.53	0.59	0.63	0.63	0.62	0.71	1.00									
	Emerging Market Equities	-0.16	-0.08	0.11	0.65	0.58	0.62	0.56	0.57	0.58	0.68	0.96	1.00								
	China Equities	-0.05	-0.11	0.01	0.42	0.31	0.40	0.41	0.45	0.37	0.49	0.82	0.80	1.00							
Alternative Strategies	Absolute Return Bonds	-0.18	-0.11	0.09	0.60	0.54	0.50	0.40	0.37	0.46	0.53	0.52	0.56	0.41	1.00						
	Direct Real Estate	0.13	-0.05	-0.11	-0.06	-0.01	-0.25	-0.24	-0.27	-0.20	-0.04	-0.15	-0.15	-0.08	-0.04	1.00					
	Mortgages	-0.20	0.43	0.53	0.23	0.45	0.16	0.08	0.08	0.19	0.07	0.12	0.09	-0.06	0.19	-0.13	1.00				
	Infrastructure	-0.04	0.28	0.37	0.43	0.47	0.39	0.59	0.48	0.59	0.67	0.53	0.50	0.23	0.32	-0.08	0.34	1.00			
	Low Vol equities	-0.19	0.06	0.27	0.70	0.65	0.92	0.61	0.63	0.73	0.55	0.53	0.55	0.31	0.45	-0.18	0.31	0.53	1.00		
	Long/Short Equities	0.31	-0.17	-0.08	0.37	0.20	0.40	0.47	0.51	0.39	0.56	0.44	0.42	0.35	0.26	0.13	-0.20	0.22	0.31	1.00	
	Market Neutral	-0.07	-0.03	0.00	0.12	0.07	0.11	0.21	0.23	0.26	0.10	0.05	0.01	0.04	0.00	0.02	0.22	0.14	0.14	-0.09	1.00

Source: RBC GAM

### ...and modify risk through diversification and low correlation

Private markets are also a focus. In Canada, we began building a capability in direct real estate investing in 2018 and launched our first fund in partnership with QuadReal, British Columbia Investment Management Corp.'s real estate subsidiary, in the fall of last year. Through this partnership, many of our balanced and multi-asset funds were for the first time able to gain exposure to a diversified portfolio of Canadian office, residential, retail and industrial properties, and we hope to build these positions going forward. Importantly, the correlation coefficients in Exhibit 12 highlight direct real estate as a highly useful diversifier for stocks while also offering superior yields.

Similarly, mortgages, with yields that exceed those on sovereign bonds, offer promise as a partial substitute. Our experience in the asset class stretches back decades and over the past couple of years we have been adding investment-management talent in this area and are looking to expand our reach.

### The challenge to keeping current

A recent *Wall Street Journal* article on pension-fund losses caught our eye. Public plans in the U.S. target a 7% rate of return, but at a median of 5.2% through the last 20 years their experience has been nowhere close to that. Even before the COVID-19 crisis, these plans had fallen US\$4.1 trillion short of their US\$8.9 trillion in promised future benefits.

No doubt there are many reasons for that massive shortfall and plenty of work is being done to close the gap in one way or another, but avoiding the painful situation that U.S. public pension plans have fallen into is possible. Realistic return expectations that take into account critical, long-lasting changes in the economy and capital markets are essential. Equally important is ensuring that the assets marshaled within an investment plan are fit for purpose going forward and not based solely on their history.

The “marginal gains approach” to improvement is deeply embedded in our investment philosophy and it seems especially useful in this context. Rather than focusing on one big thing that will perhaps secure the future of an investment plan (for example, regularly guessing where the stock market will go in the near term), better to incorporate a variety of small enhancements. In our view, that includes understanding the powerful changes forced upon investors from low single-digit interest rates and the likelihood that these will remain a feature for a very long time. Plans should be renovated to ensure that return targets can be met over an appropriate time horizon, taking advantage of both traditional asset classes and through the addition of those that bolster returns, improve income generation, manage volatility, add ballast or, ideally, contribute to more than one of these. Most important, whatever the plan is, it must be understood that there never was, and certainly will not be, a perfect steady state for strategic asset mix – it’s a journey.

# APPENDIX I

## RBC GAM long-term capital market assumptions

Asset Class	Reference Index		
Fixed Income		Expected returns (%)	Historical standard deviation (%)
U.S. Cash	Citigroup (1 M) CD (LOC)	1.6	0.5
CDN Cash	FTSE Canada 30 day T-Bill Index	1.5	0.4
GBP Cash	Citigroup U.K. Sterling Euro Deposit (1 M) (LOC)	2.2	0.5
Euro Cash	Citigroup Euro Euro Deposit (1 M) (LOC)	1.0	0.5
Japan Cash	FTSE Japanese Yen Euro Deposit (1 M) (LOC)	0.6	0.5
EM Cash	JP Morgan ELMI+	5.5	8.5
CDN Provincial Bonds	FTSE Canada Provincial Bond Index	2.0	4.5
CDN Federal Bonds	FTSE Canada Federal Bond Index	1.0	3.5
CDN Government Bonds	FTSE Canada All government Bond Index	1.5	4.0
CDN Corporate Bonds	FTSE Canada All Corporate Bond Index	2.6	5.0
CDN Universe Bonds	FTSE Canada Universe Bond Index	1.8	4.5
U.S. Government Bonds	ICE BofA 1-10 Year U.S. Treasury Index	0.9	4.0
U.S. Corporate Bonds	ICE BofA 1-10 Year U.S. Corporate Index	2.9	6.0
U.K. Government Bonds	ICE BofA 1-10 Year U.K. Gilt Index	0.7	3.7
U.K. Corporate Bonds	ICE BofA 1-10 Year Sterling Corporate Index	2.8	5.5
Euro Government Bonds	Iboxx Eurozone Sovereigns	0.7	4.0
Euro Corporate Bonds	Iboxx Eurozone Corporates	2.2	6.0
Asian Bonds	HSBC Asian Local Bond Index LCL	0.3	7.0
Citi WGBI	Citi WGBI	1.0	3.5
HY Bonds	ICE BofA U.S. High Yield Index	6.1	9.0
EM Bonds	JPM EMBI Global Diversified TR USD	4.3	10.0
Global Bonds	Barcap Global Agg Bond Index (USD)	1.8	5.0
Equities		Expected returns (%)	Historical standard deviation (%)
CDN Equities	TSX Composite	8.0	16.0
U.S. Equities	S&P 500 TR	8.2	15.0
U.S. Mid Caps	S&P 400 TR	8.7	18.0
U.S. Small Caps	S&P 600 TR	9.2	20.0
U.K. Equities	FTSE AllSh TR	10.0	15.0
Europe Equities ex UK	MSCI Europe ex U.K. USD	9.6	17.0
Asian Equities	MSCI AC Asia Pac LCL	4.9	16.0
Japan Equities	Nikkei 225 Average PR JPY	7.0	15.0
Australian Equities	S&P/ASX 200 TR	8.4	14.0
Developed Markets (World)	MSCI World	8.1	14.5
EM equities	MSCI EM LCL	10.8	18.0
EAFE Equities	MSCI EAFE	8.0	15.0

Note: As of April 30, 2020. RBC GAM employs multiple independent forecasting models from different investment teams within RBC GAM. The results from the models are collected, reviewed and discussed by the RBC GAM Long-Term Returns Committee to arrive at the expected return assumptions. The committee is also a forum for the discussion of new asset classes, new forecasting tools, methods and refinements to the existing process. Source: RBC GAM.



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Publication date: June 11, 2020

(06/11/2020)

EVOLVING OUR STRATEGIC ASSET MIX 06/11/2020

