

RBC GAM long-term capital market assumptions

2024 update

JANUARY 2024







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Financial markets navigated a volatile macroeconomic environment in 2023 and delivered above-average gains across many asset classes. Long-term return potential has moderated as a result but remains much improved compared with two years ago.

Last year featured many concerns for investors. There was uncertainty about inflation, monetary policy, economic growth, consumer spending, energy, housing, politics and geopolitics. Many of these uncertainties inched in a positive direction as the year progressed. Steady progress was made in bringing down inflation as the U.S. Federal Reserve (Fed) hiked interest rates four more times to 5.5%. By year-end, economic growth surprised to the upside, consumers continued spending at a good clip, energy prices declined, housing stabilized, a U.S. debt-ceiling deal was struck, and the Israel-Hamas war had not expanded into the regional conflict feared by investors. In addition, a U.S. regional-bank crisis involving the March 2023 failures of Silicon Valley Bank and Signature Bank was largely resolved after the Fed intervened to shore up liquidity. Rapid technological advancement of and excitement about artificial intelligence (AI) fueled the stock prices of many of the perceived AI winners, which were already some of the world's largest companies. While the yield on the U.S. 10-year bond rose over 100 basis points to as high as 5.02% during the year and equity markets encountered frequent episodes of heightened volatility, most financial assets ended 2023 with decent gains. Only commodities suffered losses (Exhibit 1). We remain constructive on the outlook for investment returns across a broad range of asset classes over the next decade and beyond.

Exhibit 1: Asset performance

Calendar year total return the next decade and beyond

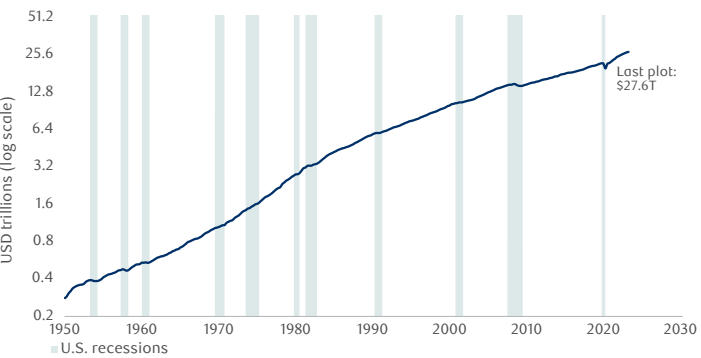
2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
30% REITS	5% Growth	25% Small Cap	31% Emerging Markets	0% Aggregate Bonds	31% Value	32% Growth	40% REITS	23% Commodities	29% Growth
13% Large Cap	2% REITS	18% Mid Cap	26% Developed Markets	-1% Growth	31% Large Cap	25% Gold	39% Commodities	0% Gold	26% Large Cap
13% Value	1% Large Cap	17% Value	26% Growth	-1% TIPS	30% Growth	18% Large Cap	31% Growth	-5% Value	21% Value
12% Growth	0% Aggregate Bonds	12% Emerging Markets	21% Large Cap	-2% Gold	29% REITS	15% Emerging Markets	29% Large Cap	-12% TIPS	18% Developed Markets
8% Mid Cap	0% Developed Markets	11% Commodities	15% Value	-4% Large Cap	24% Mid Cap	12% Mid Cap	27% Small Cap	-13% Aggregate Bonds	16% Small Cap
6% Aggregate Bonds	-2% TIPS	11% Large Cap	14% Mid Cap	-6% REITS	23% Small Cap	11% Small Cap	25% Value	-14% Mid Cap	14% Mid Cap
6% Small Cap	-2% Small Cap	8% Gold	13% Small Cap	-8% Small Cap	22% Developed Markets	11% TIPS	23% Mid Cap	-15% Developed Markets	13% Gold
4% TIPS	-4% Mid Cap	8% REITS	12% Gold	-9% Value	20% Emerging Markets	9% Developed Markets	12% Developed Markets	-16% Small Cap	11% REITS
0% Emerging Markets	-4% Value	6% Growth	6% REITS	-12% Mid Cap	18% Gold	7% Aggregate Bonds	6% TIPS	-18% Emerging Markets	9% Emerging Markets
-2% Gold	-11% Gold	5% TIPS	4% Commodities	-14% Commodities	16% Commodities	1% Value	1% Emerging Markets	-18% Large Cap	6% Aggregate Bonds
-6% Developed Markets	-16% Emerging Markets	3% Aggregate Bonds	4% Aggregate Bonds	-15% Developed Markets	8% Aggregate Bonds	-5% REITS	-2% Aggregate Bonds	-26% REITS	4% TIPS
-33% Commodities	-34% Commodities	1% Developed Markets	3% TIPS	-15% Emerging Markets	8% TIPS	-24% Commodities	-4% Gold	-29% Growth	-6% Commodities

Note: As of December 2023. Performance shown in U.S. dollars based on the following ETF tickers: large cap (SPY), mid cap (MID), small cap (IJR), growth (IUSG), value (IUSV), emerging markets (VWO), developed markets (VEA), aggregate bonds (AGG), REITS (VNQ), commodities (GSG), TIPS (TIP), gold (GLD).

Source: Piper Sandler

Financial markets and asset prices fluctuate regularly and are often subject to extreme swings that are difficult to anticipate. Forecasting near-term returns is especially challenging given the wide range of potential outcomes and elevated uncertainty over short time periods. A look at history suggests, however, that longer-term trends have been relatively stable. Since 1950, the U.S. economy went through 11 cycles of expansion and contraction and, while these periods are difficult to experience in the moment, they are almost imperceptible in a long-term chart of U.S. nominal GDP, which has trended up and to the right in nearly uninterrupted fashion (Exhibit 2). The S&P 500 Index and its aggregate earnings per share display similar

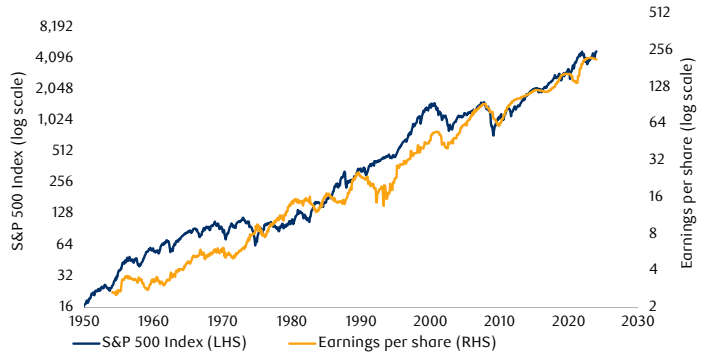
Exhibit 2: U.S. nominal GDP
U.S. dollars, seasonally adjusted annual rate (SAAR)



Note: As of September 30, 2023. Source: Bureau of Economic Analysis

trends, although with a bit more volatility (Exhibit 3). The upward trend in the stock market and earnings is clear even with eight bear markets, defined as a price decline of 20% or greater from a recent high, over the same time frame. Importantly, the economy, the stock market and earnings have always managed to recover from recessions or bear markets and resume their prior upward trajectories. Since the 1950s, U.S. nominal GDP has grown at just over 6% per year, stocks have returned around 10% per year on a total-return basis, and earnings have risen over 6% per annum. In our view, these trends cannot be ignored and represent part of our key assumptions with regards to long-term forecasting.

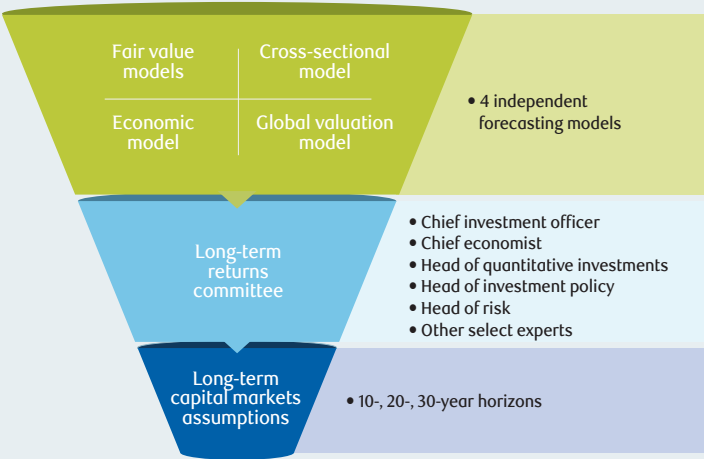
Exhibit 3: S&P 500 Index
Monthly data



Note: As of January 12, 2024. Source: Bloomberg

With long-term trends for the economy and financial markets in mind, and using a collection of four distinct models, RBC GAM’s Long-Term Expected Returns Committee (LTERC) generates capital market assumptions spanning the next 10-, 20- and 30-year periods (Exhibit 4). Each model operates independently but shares a common approach of employing forward-looking parameters in the context of historical results and empirical relationships to provide a long-term view on asset classes. The underlying core assumptions, starting points and calculations differ by model but with a common goal of arriving at multidecade return forecasts for various asset classes. Details of these models are beyond the scope of this paper, but one point of common ground across the models is that the starting point of the forecast is critical to ultimate returns. While long-term trends and predictions about the future tend to move glacially, financial markets can swing wildly from year to year or even month to month.

Exhibit 4: Long-term expected returns committee
Multi-model comprehensive approach



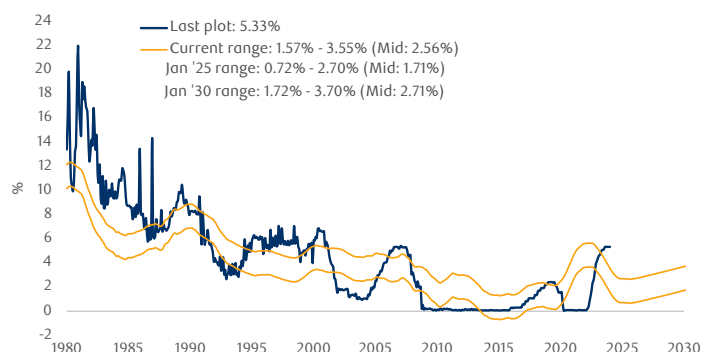
Source: RBC GAM

Cash and money-market instruments now offer positive real (or after-inflation) returns to investors, a situation that has seldom occurred following the 2008-2009 Global Financial Crisis (GFC). Aggressive interest-rate hikes by central banks over the past two years boosted overnight lending rates to 5.50% in the U.S. and not far below that in many other developed markets. While much of the era following the GFC featured cash returns near zero or even slightly negative in some regions, going forward our long-term expected returns for cash exceed the expected rate of inflation. That said, our cash return forecasts are slightly below current short-term interest rates because, in our view, the current high level of interest rates is unlikely to be sustained over the longer term. Central banks have shifted monetary policy to a restrictive stance to combat extremely high inflation and, once consumer-price increases fall back to the levels targeted by central banks, interest rates are likely to decline. Indeed, the U.S. fed funds rate is currently situated above the upper bound of our modelled equilibrium (Exhibit 5). We expect returns for cash to be around 3% if held over the longer term (i.e. decades) as interest rates, over the course of various cycles, will likely average a neutral level that neither stimulates nor restricts the economy.

Short-term interest rates and bond yields have risen meaningfully since central banks began hiking interest rates almost two years ago, and yields on sovereign bonds are back to levels not seen in 15 years (Exhibit 6). While this adjustment has been painful for fixed-income investors, it sets them up for much better return potential going forward. The yield-to-maturity on the U.S. 10-year Treasury bond has historically been an excellent predictor of what an investor would earn from buying and holding this bond over the full term. Looking at over 150 years of history, yields on the 10-year Treasury bond typically range from 2% to 5%. Beginning in the summer of 2019, yields spent two and a half years below this range, indicating poor expected returns for bonds. Yields now sit near 4%, pointing to more attractive returns consistent with long-term history. At levels in line with historic norms, and absent any further inflation shocks, we think there is less impetus for yields to adjust too far in either direction. Smaller swings in yields, combined with higher coupon income, should provide a much smoother ride for bond investors going forward.

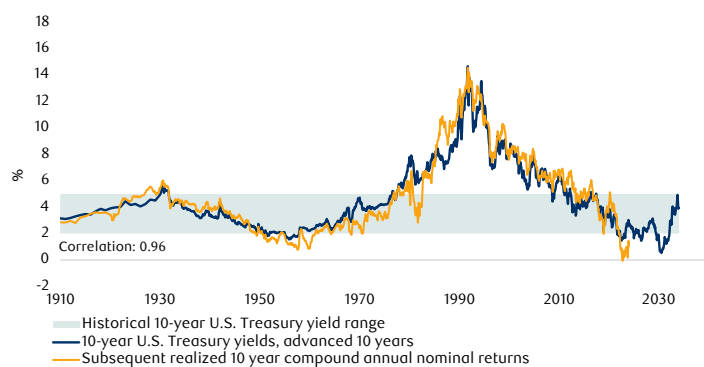
Exhibit 5: U.S. fed funds rate

Equilibrium range

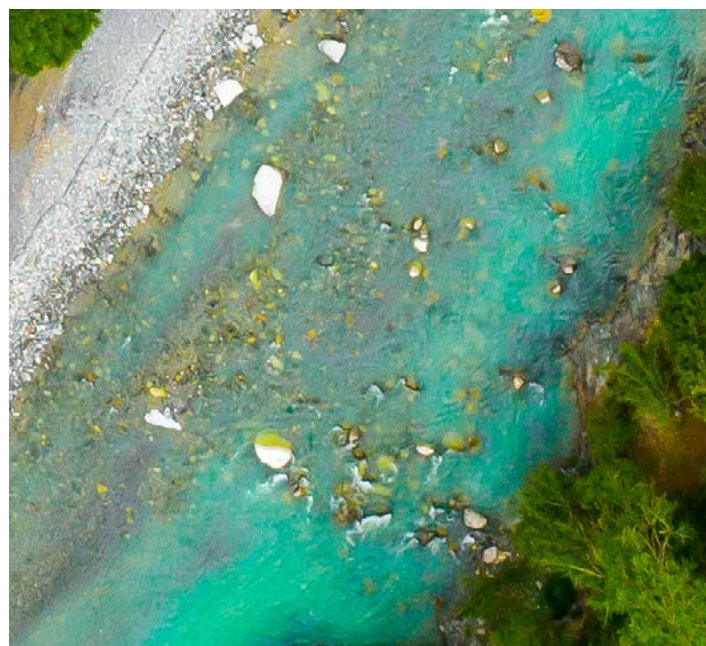


Note: As of January 23, 2024. Source: Federal Reserve, RBC GAM

Exhibit 6: U.S. 10-year Treasury note and returns



Note: As of January 15, 2024. Source: Deutsche Bank, Macrobond, RBC GAM

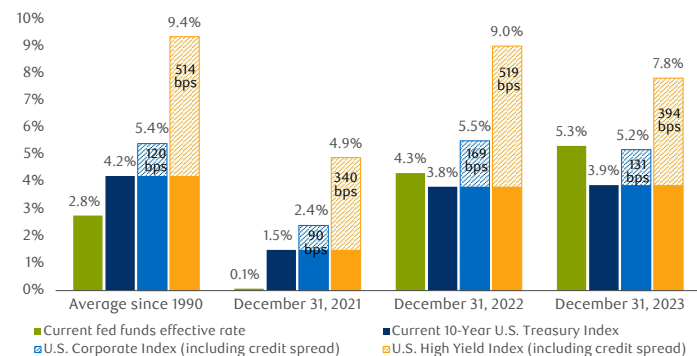


Credit spreads, the extra yields offered by corporate bonds over corresponding benchmark sovereign bonds, are also important for future returns. Spreads have narrowed since the end of 2022, meaning investors are accepting less compensation for the additional credit risk associated with holding corporate bonds (Exhibit 7). The spread on investment-grade corporate bonds is consistent with the long-term average but high-yield bonds appear richly valued on this basis with the spread at 394 basis points versus the average of 514 basis points. A lower spread reduces the all-in yield, or compensation available to investors on high-yield bonds, and any spread widening toward the average would be a headwind for returns. All of these factors translate into a lower return forecast for high-yield bonds compared with a year ago.

Global equities had a solid year in 2023 and most markets performed in line with long-term expectations. U.S. large-cap growth stocks greatly outperformed. In U.S.-dollar terms, the S&P 500 Index gained 26.3% in 2023, propelled by the “Magnificent 7” – the largest seven stocks in the U.S. which, benefited greatly from trends in AI. But the equal-weight S&P 500, which better reflects the performance of the average stock, rose just 13.9% and other global markets rose anywhere from 7% to 24%. After some volatility tied to inflation, higher-than-expected interest rates and flare-ups in geopolitical tension, global stock valuations based on our modelled equilibrium are little changed from a year ago. The global stock-market composite rests near fair value, meaning that stocks are neither cheap nor expensive at current levels (Exhibit 8). When the relatively expensive U.S. equity market is excluded, this measure shows a 14% discount to fair value, making non-U.S. equity markets especially attractive on this basis.

Valuations at the onset of an investment decision are a critical factor in determining the returns an equity investor is likely to earn over the very long term. Shiller’s Cyclically Adjusted P/E ratio (CAPE) is a widely cited valuation measure known for its efficacy in predicting S&P 500 returns over any 10-year period. Exhibit 9 shows the close relationship between the CAPE in blue and the subsequent realized 10-year annualized return for the S&P 500, which is plotted in orange on the chart and follows the inverted right-hand scale. The chart illustrates that investors have earned a higher return purchasing stocks when they were cheaper (i.e. lower CAPE) than when they were more expensive (i.e. higher CAPE). A plunge in equities in 2022 lowered the CAPE

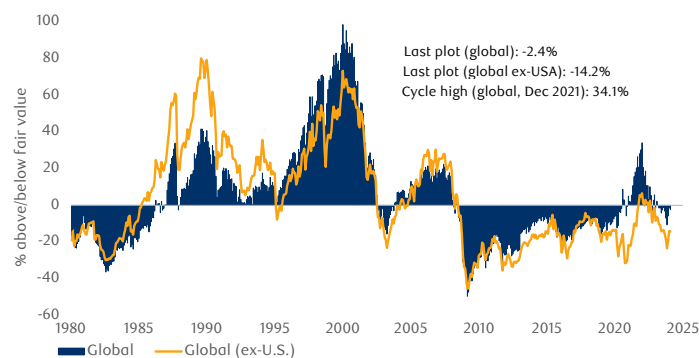
Exhibit 7: Yield to maturity



Note: Current spread as of December 31, 2023. Shaded areas within the bars indicate the yield spread versus the U.S. 10-year Treasury bond yield.
Source: ICE BofA, RBC GAM

Exhibit 8: Global stock market composite

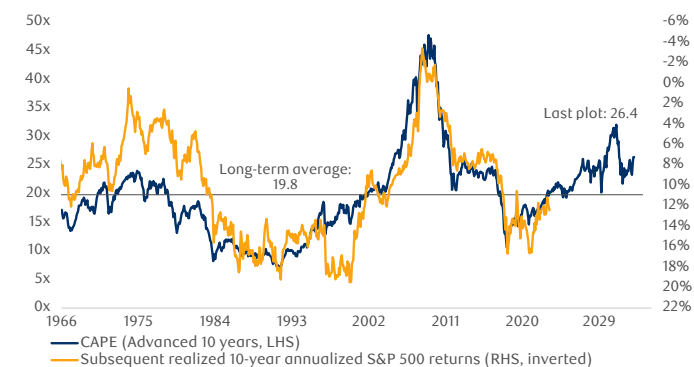
Equity market indexes relative to equilibrium



Note: As of January 12, 2024. Source: RBC GAM

Exhibit 9: Shiller’s CAPE

Real S&P 500 Index / 10-year average of real EPS



Note: As of January 12, 2024. Source: Macrobond, Bloomberg, RBC GAM

to about 25 from close to 35, raising the indicated annual return to 8% from 2%. Last year was a much better one for stocks, and the CAPE rose to 26.4 from 21.8 at the start of the year. Accordingly, the expected return indicated by the CAPE has decreased to about 7.5% from nearly 9.5% per annum.

Our equity model computes an expected fair-value level for major stock-market indices into the future by considering factors such as valuations, earnings, inflation, and short-term and long-term interest rates (Exhibit 10). The fair-value band is relatively stable over the long term, and stock valuations at the beginning of a forecast period are therefore more relevant for expected returns. With equities starting closer to the top of the fair-value channel after strong gains this year, return expectations have been tempered going forward.

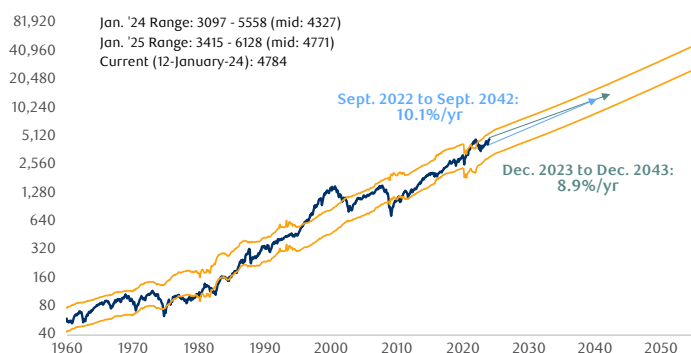
Asset mix and balanced portfolio implications

Capital markets have experienced a great amount of change in the past two years, impacting asset-mix decisions and the performance of balanced portfolios. Yields on fixed income rose from near zero to a more historically normal level, and the higher level of prevailing long-term interest rates has helped to boost expected returns for fixed income. Equities were volatile over the same period but are now situated at levels closer to fair value after the recent rally from cheap

levels. It would be reasonable, then, to expect equity returns to be similar to the historical experience, barring any major developments that warrant adjustments to our long-term assumptions about earnings and valuations. We have argued in the past that in a low interest-rate environment, stocks should outperform bonds over the long term, and by a relatively large degree. This was the motivation in shifting the strategic asset mix of our balanced strategies toward more equities and less fixed income in 2020¹. Since then, the equity risk premium, which measures the appeal of stocks over bonds, has declined meaningfully. This measure, calculated as the S&P 500 earnings yield less the yield on a 10-year U.S. Treasury bond, averaged about 3.6% between 2009 and 2022 but has since fallen to 0.6%, its lowest level in two decades (Exhibit 11). One could conclude here that equity investors are not being sufficiently compensated for taking on additional investment risk. As a result, the gap between our fixed-income and equity-market forecasts has narrowed over the past couple of years. Considering current levels of interest rates, bond yields, equity prices and projections of economic and corporate profit growth, our latest long-term return forecasts are for low-single digit returns for cash, mid-single-digit returns for fixed income and high-single-digit to low-double-digit returns for equities.

Exhibit 10: S&P 500 equilibrium

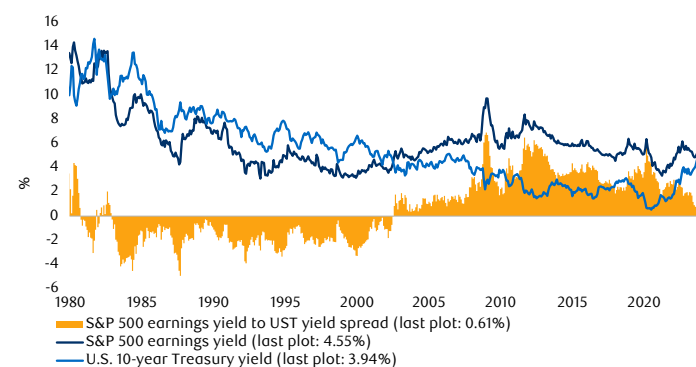
Normalized earnings & valuations



Note: As of January 12, 2024. Fair value estimates are for illustrative purposes only. Corrections are always a possibility and valuations will not limit the risk of damage from systemic shocks. It is not possible to invest directly in an unmanaged index. Source: RBC GAM

Exhibit 11: S&P 500 earnings yield

12-month trailing earnings/index level



Note: As of January 12, 2024. Source: RBC GAM

¹ *Evolving Our Strategic Asset Mix*, Daniel E. Chornous, CFA (June 11, 2020)

We expect balanced funds to perform in line with their returns over the past 10 years and significantly better than they did in 2022, when both stocks and bonds fared poorly in a high-inflation environment (Exhibit 12). Applying our long-term expected returns to a sample balanced fund consisting of cash, bonds and stocks, we expect an annual return of about 6% for the sample fund compared with the less than 4% it earned over the preceding three years. We also expect bonds to contribute more to a balanced fund than they have in the past three, five and 10 years because of a more

historically normal interest-rate environment. We expect the long-term return contribution of fixed income to increase to about 25% from -30% over the past three years, 6% over the past five years and 16% over the 10-year period. Because of fixed income's important role as ballast in a portfolio during bouts of volatility and given today's more attractive yields, balanced funds offer an effective means of meeting financial goals for investors with a long time-horizon and moderate risk tolerance.

Exhibit 12: Sample balanced fund long-term expected return

	Portfolio weight	Trailing 10-year return	Trailing 10-year contribution	Trailing 5-year return	Trailing 5-year contribution	Trailing 3-year return	Trailing 3-year contribution	20-year expected return	Expected 20-year contribution
Cash (2%)			0%		0%		1%		1%
Canadian cash	2%	1.3%		1.8%		2.2%		2.9%	
Fixed Income (38%)			16%		6%		-30%		24%
Canadian universe bonds	38%	2.4%		1.3%		-2.8%		3.9%	
Equities (60%)			84%		93%		129%		75%
Canadian equities	21%	7.6%		11.3%		9.6%		8.2%	
International equities	13%	4.8%		8.7%		4.5%		7.6%	
U.S. equities	22%	12.0%		15.7%		10.0%		6.7%	
Emerging markets	4%	3.0%		4.1%		-4.7%		9.4%	
Balanced fund		5.9%		7.6%		3.5%		6.1%	

Note: Annualized total returns as of December 31, 2023. For illustrative purposes. Market indexes used are the FTSE Canada 30 day T-Bill Index for Canadian cash, FTSE Canada Universe Bond Index for Canadian universe bonds, S&P/TSX Composite for Canadian equities, MSCI EAFE Index for international equities, S&P 500 for U.S. equities and MSCI Emerging Markets for emerging market equities. Source: RBC GAM



Asset assumptions

Annualized return expectation

Annualized return expectations		As of Sept. 2022	As of Dec. 2023		As of Sept. 2022	As of Dec. 2023		As of Sept. 2022	As of Dec. 2023	
Fixed Income	Reference Index	10-year ER (%)	10-year ER (%)	Change	20-year ER (%)	20-year ER (%)	Change	30-year ER (%)	30-year ER (%)	Change
US Cash	FTSE CD 1 Month Index	3.10	2.90	▼ -0.20	3.05	2.85	▼ -0.20	3.05	2.85	▼ -0.20
CDN Cash	FTSE Canada 30 day T-Bill Index	2.75	2.90	▲ 0.15	2.65	2.80	▲ 0.15	2.65	2.80	▲ 0.15
GBP Cash	FTSE U.K. Sterling Euro Deposit (1M) (LOC)	3.10	3.20	▲ 0.10	2.95	3.00	▲ 0.05	2.90	3.00	▲ 0.10
Euro Cash	FTSE Euro Euro Deposit (1M) (LOC)	1.65	1.75	▲ 0.10	1.65	1.65	▲ 0.00	1.70	1.65	▼ -0.05
Japan Cash	FTSE Japanese Yen Euro Deposit (1M) (LOC)	0.30	0.75	▲ 0.45	0.20	0.70	▲ 0.50	0.35	0.85	▲ 0.50
EM Cash	JP Morgan ELMI+	4.00	3.90	▼ -0.10	3.95	3.90	▼ -0.05	3.95	3.90	▼ -0.05
CDN Provincial Bonds	FTSE Canada Provincial Bond Index	4.60	4.25	▼ -0.35	4.25	3.95	▼ -0.30	4.20	3.90	▼ -0.30
CDN Federal Bonds	FTSE Canada Federal Bond Index	3.75	3.35	▼ -0.40	3.60	3.20	▼ -0.40	3.60	3.20	▼ -0.40
CDN Government Bonds	FTSE Canada All Government Bond Index	4.20	3.80	▼ -0.40	3.90	3.60	▼ -0.30	3.90	3.55	▼ -0.35
CDN Corporate Bonds	FTSE Canada All Corporate Bond Index	5.15	4.85	▼ -0.30	4.85	4.55	▼ -0.30	4.80	4.50	▼ -0.30
CDN Universe Bonds	FTSE Canada Universe Bond Index	4.45	4.10	▼ -0.35	4.20	3.85	▼ -0.35	4.15	3.80	▼ -0.35
US Government Bonds	ICE BofA 1-10 Year U.S. Treasury Index	4.35	4.30	▼ -0.05	4.15	3.95	▼ -0.20	4.15	3.85	▼ -0.30
US Corporate Bonds	ICE BofA 1-10 Year U.S. Corporate Index	5.80	5.20	▼ -0.60	5.50	4.85	▼ -0.65	5.45	4.80	▼ -0.65
UK Government Bonds	ICE BofA 1-10 Year U.K. Gilt Index	4.30	4.45	▲ 0.15	4.00	4.10	▲ 0.10	3.90	4.05	▲ 0.15
UK Corporate Bonds	ICE BofA 1-10 Year Sterling Corporate Index	6.15	5.70	▼ -0.45	5.80	5.50	▼ -0.30	5.75	5.45	▼ -0.30
Euro Government Bonds	Iboxx EUR Sovereigns	3.55	3.75	▲ 0.20	3.15	3.40	▲ 0.25	3.10	3.35	▲ 0.25
Euro Corporate Bonds	Iboxx EUR Corporates	5.05	5.05	▲ 0.00	4.65	4.80	▲ 0.15	4.60	4.75	▲ 0.15
Asian Bonds	HSBC Asian Local Bond Index LCL	0.80	1.90	▲ 1.10	0.80	1.90	▲ 1.10	0.80	1.90	▲ 1.10
World Government Bonds	FTSE WGBI	4.10	4.20	▲ 0.10	3.35	3.40	▲ 0.05	3.30	3.35	▲ 0.05
HY Bonds	ICE BofA U.S. High Yield Index	7.35	6.10	▼ -1.25	7.10	5.90	▼ -1.20	7.05	5.85	▼ -1.20
EM Bonds	JPM EMBI Global Diversified USD	6.70	6.00	▼ -0.70	6.00	5.55	▼ -0.45	5.85	5.45	▼ -0.40
Global Bonds	Bloomberg Global Aggregate Bond Index (USD)	4.80	4.60	▼ -0.20	4.45	4.30	▼ -0.15	4.40	4.25	▼ -0.15
Equities		10-year ER (%)	10-year ER (%)		20-year ER (%)	20-year ER (%)		30-year ER (%)	30-year ER (%)	
CDN Equities	S&P/TSX Composite	9.40	8.25	▼ -1.15	8.70	8.20	▼ -0.50	8.45	8.35	▼ -0.10
U.S. Equities	S&P 500	7.85	5.60	▼ -2.25	8.00	6.70	▼ -1.30	8.10	7.25	▼ -0.85
U.S. Mid Caps	S&P 400	11.55	9.05	▼ -2.50	9.90	8.45	▼ -1.45	9.15	8.15	▼ -1.00
U.S. Small Caps	S&P 600	11.90	10.40	▼ -1.50	10.55	9.55	▼ -1.00	10.00	9.25	▼ -0.75
U.K. Equities	FTSE All-Share	11.25	9.35	▼ -1.90	9.60	8.75	▼ -0.85	8.75	8.35	▼ -0.40
Europe Equities ex UK	MSCI Europe ex U.K. LCL	9.85	8.75	▼ -1.10	9.05	8.45	▼ -0.60	8.25	8.10	▼ -0.15
Asian Equities	MSCI AC Asia Pac LCL	7.75	6.45	▼ -1.30	6.45	6.20	▼ -0.25	6.20	6.25	▲ 0.05
Japan Equities	Nikkei 225 Average PR JPY	7.60	6.25	▼ -1.35	6.10	5.65	▼ -0.45	5.45	5.45	▲ 0.00
Australian Equities	S&P/ASX 200	8.35	7.70	▼ -0.65	8.10	7.90	▼ -0.20	8.00	8.10	▲ 0.10
Developed Markets (World)	MSCI World	8.30	6.65	▼ -1.65	8.00	7.10	▼ -0.90	7.85	7.35	▼ -0.50
EM Equities	MSCI EM LCL	11.50	9.35	▼ -2.15	10.55	9.40	▼ -1.15	8.70	10.35	▲ 1.65
EAFE Equities	MSCI EAFE	9.00	7.90	▼ -1.10	7.95	7.60	▼ -0.35	7.40	7.35	▼ -0.05

Notes: Asset assumptions as of December 31, 2023.

1. Fixed income indices may have compositional differences which could impact the comparability of return expectations between regions.
2. Fewer of our models contribute to forecasts for U.S. small cap and U.S. mid cap equities and, as a result, less breadth of information is contained in these figures as compared to other asset classes.
3. History suggests that asset valuations at the onset of an investment holding period have a meaningful impact to subsequent realized returns over long horizons.

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