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## HIGHLIGHTS

- An economic approach to evaluating future financial returns suggests that well diversified portfolios are likely to return 5% to 7% per annum on average over the coming decade.
- Allowing for the future rebalancing of monetary policy, cash will likely provide an average annual return of 3.40%.
- Bond yields will rise from current levels, creating capital losses – particularly on long-bonds. Nevertheless, the average annual return on the DEX Universe Bond Index is projected to be 4.00%.
- Global, U.S. and Canadian equities are forecast to return roughly 7.50% on average per annum. This assumption does not include any allowance for higher price-to-earnings multiples. Emerging market equities should deliver a double-digit return, but this reflects the greater risks associated with such investments.
- These estimates are viewed as conservative and constitute reasonable assumptions for long-term financial planning purposes.

**Craig Alexander**  
SVP & Chief Economist  
416-982-8064  
mailto:[craig.alexander@td.com](mailto:craig.alexander@td.com)

**Francis Fong**  
Economist  
416-982-8066  
mailto:[francis.fong@td.com](mailto:francis.fong@td.com)

**Alistair Bentley**  
Economist  
416-307-5968  
mailto:[alistair.bentley@td.com](mailto:alistair.bentley@td.com)

## AN ECONOMICS PERSPECTIVE ON LONG-TERM FINANCIAL RETURNS

Financial portfolios have experienced wild swings over the past few years, greatly impacting investor confidence and tempering expectations of the future. Meanwhile, news coverage of financial markets through traditional and new media conduits have increased dramatically, bombarding investors with the latest economic and financial information and emphasizing the various investment risks. However, with the exception of high frequency traders or professional money managers, most investors should not be focused on the recent month's data, nor should they base their decisions on short-term prognostications or risks. Indeed, the vast majority of investors should be making their portfolio decisions on expected financial returns over the medium to long-term. The real problem is assessing what future returns might be. Financial analysis and financial products frequently come with the disclaimer

Financial Projections for the Next Decade	
Financial Instrument	Average Annual Percent Return
Cash (3-Month T-Bills)	3.40%
Bonds (DEX Universe Bond Index)	4.00%
Equities	
Canadian (S&P/TSX Composite)	7.50%
U.S. (S&P 500 Index)	7.50%
International (MSCI EAFE)	7.50%
Source: TD Economics	

that past returns are not a guide to the future. But if history is not indicative, what assumptions should be used when building a retirement plan? In this note, we assess the outlook for financial returns by the major financial asset classes (cash, bonds, and equities) based on projections of economic fundamentals and on the basis of economic theory. The main conclusion is that a well-diversified portfolio is likely to deliver an average annual return of 5% to 7% over the coming decade.

### Cash to return 3.40%

The benchmark for the return on cash is the average yield on Government of Canada 3-month T-bills. This investment carries zero risk and it acts as the basis upon which other financial returns are estimated. The yield on 3-month T-bills is anchored by the Bank of Canada overnight rate, as history shows a minimal difference between the two rates over time. If the Bank of Canada maintains its current inflation target of 2% and the Canadian economy grows a trend rate of 2% per year over the coming decade, economic analysis suggests that short-term interest rates should average between 3.25% and 4.00%. A popular economic guideline is the Taylor Rule, which stipulates how the central bank should change interest rates to achieve an inflation objective based on changes in economic growth. The Taylor Rule would suggest that the overnight rate will average in a range of 3.50% to 4.00%. We will pick the mid-point of this range at 3.75% as our long-term benchmark for cash.

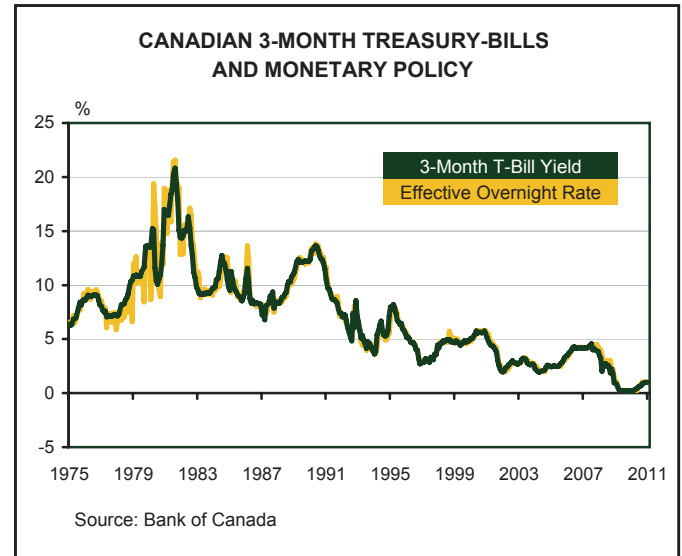
However, one must acknowledge that the current level of interest rates is abnormally low. The Bank of Canada will need to gradually raise rates over time. Over the next couple of years, short-term rates will be below their long-term average.

Then over the remaining years, one would expect cash rates to average close to their long-term fundamental level. Making allowances for the low starting point, the yield on cash will likely average 3.40% over the next ten years.

**Bonds to deliver 4.00%**

The benchmark for Canadian bonds is the DEX Universe Bond Index, which is comprised of federal, provincial, municipal and corporate bonds. The starting point is to build a yield curve for Government of Canada bonds, which have no risk of default, but do have a term premium over 3-month T-bills (i.e. a higher yield to compensate investors for locking in their money). The outlook for moderate growth, low inflation, gradually declining fiscal deficits, and strong demand for federal bonds from pension funds and other investors, suggest that 10-year Government of Canada bonds will likely provide a yield 100 basis points (1 percentage point) above cash. Thus, the average shape of the yield curve (which plots yields of fixed-income instruments of various maturities) will have a positive slope running from 3.75% for cash to 4.75% for 10-year federal bonds. We then add risk premia for provincial, municipal and corporate bonds of 20, 50, and 95 basis points, respectively. Using the weights in the DEX Universe Bond Index provides an estimated long-term average yield of 5.10%.

Again, it is important to acknowledge that bond yields today are well below their estimated long-term average. When interest rates rise, it will lead to capital losses on bonds, with the greatest losses on long-term bonds. If we



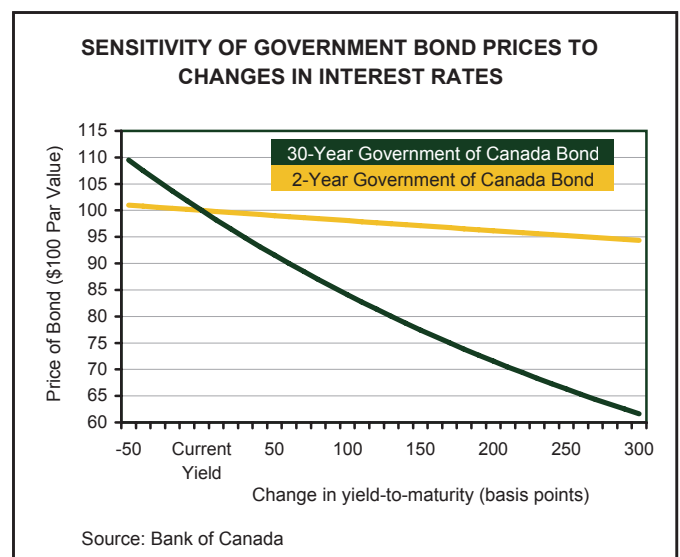
allow interest rates to gradually return to more normal levels over the next couple of years, the average annual return on the DEX Index over the next ten years falls to roughly 4.00%. Active bond traders can minimize their capital losses by holding an underweighting of long-term bonds. However, from the perspective of conservative financial planning, we would recommend assuming a 4.00% return.

**Equities to return 7.50%**

The benchmark for Canadian equities is the S&P/TSX Composite Index. Two methods were used to estimate the long-run return. First, we used a dividend growth model. Second, we estimated an equity risk premium over the yield

**Bonds, Rising Interest Rates, and Capital Losses**

Over the next ten years, we are expecting DEX Universe Bond Index to provide an average annual return of 4%. Why is this the case when, in the long-run, our estimate for the average annual return on the index is above 5%? The answer is that a bond purchased today at current yields will decline in value if interest rates rise in the future. Bond yields and prices are inversely related, such that when yields are low, prices are high, and vice-versa. The sensitivity of bond prices to moving interest rates depends on a variety of factors, but is increased both as the maturity of the bond lengthens and the lower the current interest rate is. Consider a 2-year and 30-year government bond both trading at their \$100 par value at the prevailing interest rate. If interest rates were to rise by one percentage point, the price of the 30-year bond would fall to \$84.09, while the price of the two-year bond would fall to \$98.07. These capital losses are magnified as interest rates rise further, but also when the starting point is lower. The price declines are larger when interest rates move from 2.00% to 3.00% than from 4.00% to 5.00%. Thus, given that interest rates are at their lowest levels in decades, and will eventually rise, the potential for capital losses on bonds is extremely relevant for any projection.



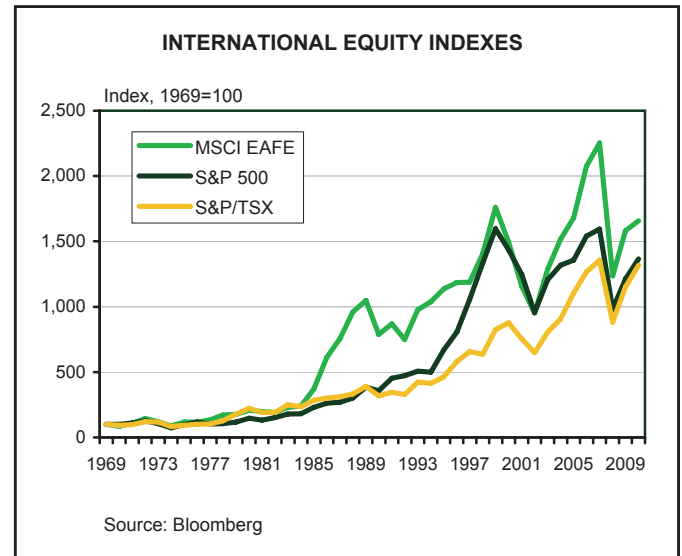
on risk-free 3-month T-bills. The dividend growth approach uses expectations of long-term economic growth (averaging 2%), inflation (averaging 2%) and the dividend yield (averaging 1.9%). There is an assumption that equity gains will generally track domestic profits plus export-generated profits from abroad. Although domestic profits are expected to rise at a 4% annual pace, a conservative view would be that stronger global income growth and robust demand for commodities supports 7.9% growth in export profits (which represents roughly 50% of the S&P TSX). This outlook for profits, to which we add dividends of 1.9%, supports an average annual return of 7.90% on Canadian equities.

There is little academic literature on the equity risk premium for the Canadian market. However, one would expect that the higher return that investors in Canadian equities require over the yield on risk-free 3-month T-bills would not be substantially different than that in the United States. The U.S. literature suggests that the equity risk premium over cash could be from 3.00% to 6.00%, but the most recent estimates are concentrated in the range of 3.00% to 4.00%. Again, taking a conservative approach and using the lower band, investors can expect equities to deliver 7-8%. So, the two approaches produce similar results, and for the exercise of estimating portfolio returns, we will assume an average annual equity return of 7.50%.

In terms of foreign equities, U.S. corporate profits have been a very stable share of nominal GDP and both should grow in-line with each other. Again, applying the assumption that equity gains will track domestic profits and export-generated profits from abroad, the dividend growth model suggests that the S&P 500 could return 7.80%. Conversely, the equity premium approach predicts a range of 7-8%. This implies that the return on U.S. equities should not differ materially from Canadian equities.

Dividend Growth Model: Economic Assumptions				
Country	Real GDP Growth	Inflation	Dividend Yield	Neutral Policy Rate
Canada	2.00%	2.00%	1.90%	3.75%
U.S.	2.25%	2.50%	1.80%	4.00%
World	4.40%	3.50%	--	--
EAFE	--	--	2.50%	--
Japan	1.20%	1.00%	--	--
UK	2.40%	2.00%	--	--
France	1.90%	2.00%	--	--
Germany	1.50%	2.00%	--	--
Australia	2.70%	2.50%	--	--
Hong Kong	3.70%	4.10%	--	--
Singapore	4.20%	1.50%	--	--

Source: TD Economics



The benchmark for global equities is the MSCI Europe, Australasia, and Far East (EAFE) Index. Using the dividend growth model, the projections for meagre growth in Japan, moderate growth in Europe, and strong growth in Asia point to 5% profit growth when the EAFE weights are applied. This is slower than the profit growth in North America, but the dividend yield on the EAFE is higher at 2.50%. So, the estimated long-run global equity return is roughly equivalent to that on the S&P/TSX and the S&P 500. History suggests that there will be periods when one index will outperform another, but these do not generally persist in the long-term.

The implication is that the average equity return across the industrialized world will be around 7% to 8% per annum. However, there are several caveats to this estimation. First, there will likely be large swings in equity valuations over the next ten years. Indeed, economic history shows that another recession/recovery will likely occur, producing considerable fluctuations in valuations. It must be stressed that the projections are the average over a ten year time frame. Second, the estimate is conservative and does not include underlying shifts in valuations. In other words, we have assumed no increase in price-to-earnings ratios. Third, the projections are for the major benchmarks and the performance of individual portfolio managers will vary. Fourth, we are only looking at the major benchmarks for industrialized countries. There are many sector-based investments that could elicit returns highly different than the major indexes. Moreover, we have not included consideration of investments in emerging markets. Based on the prospects of strong economic growth over the next decade in developing countries, the MSCI Emerging Market Index could deliver an annual return of 11% to 12% -- but caution is warranted

as this higher return captures the elevated risks and volatility associated with investing in such markets. Fifth, we have not considered the impact of foreign exchange rate fluctuations on portfolios. Given the prospects of strong demand for commodities and the fiscal challenges facing industrialized countries other than Canada, our assumption is that the Canadian dollar will remain strong. Although the currency will fluctuate, TD Economics believes that the impact on portfolios, on average, over the next decade will be limited.

**Portfolios to return 5.00% to 7.00%**

The last stage is to calculate the returns on some representative portfolios. The accompanying table shows three portfolios: an income portfolio with a heavy weighting towards cash and fixed income, a growth portfolio with a heavy weighting towards equities, and a balanced portfolio. Plugging in our projections for cash, bonds and equities gives a range of portfolio returns from 5% to 7%. The main conclusion is that investors should not count on high single-

digit or low double-digit rates of returns on their portfolios. There will certainly be years when such events occur, like last year, but then there will be periods of weakness that will bring down the average. The low returns on fixed income, particularly during the period when central banks are raising rates and bonds are incurring capital losses, also suggests that investors are likely going to need to have exposure to equities in order to support portfolio returns.

Some may be discouraged by the assessment that the most likely outcome is mid-single-digit returns, but it is important to keep your expectations conservative when building a financial plan. After all, the impact of getting the planning assumptions wrong is not equal in its consequences. Building a conservative plan and having a better-than-anticipated performance is a financial windfall in retirement; but, assuming higher returns and saving inadequately could lead to a lower standard of living in retirement.

Projected Average Annual Returns on Representative Portfolios Over the Next Decade						
Portfolio	Asset % Share of Portfolio					% Rate of Return
	Cash	Bonds	Cdn Equity	U.S. Equity	Int'l Equity	
Income	10	60	15	8	7	5.0%
Balanced	5	45	25	13	12	5.7%
Growth	5	15	40	20	20	6.8%

Source: TD Economics

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