



# Think Real Return

**THE EFFECTS OF INFLATION** on purchasing power can be devastating over periods of time. Whether planning for retirement or developing business budgets, inflation impacts many financial decisions.

Inflation causes a dollar in the future to be worth less than a dollar today. For example, if the inflation rate for the next 5 years is 3% and money in a bank account is earning 1%, then in 5 years the money in the bank account will not buy as much as it would today—purchasing power has been lost.

## REAL RETURNS

Unfortunately we have no control over inflation nor do we know what the future inflation rate will be. It is preferable to eliminate this unknown when doing some financial analyses. Real returns are returns where the inflation variable is removed. The real return is simply the nominal return less inflation. For example, if an investment earns 5% and inflation is 3%, then the real return is  $5\% - 3\% = 2\%$ . A positive (negative) real return increases (decreases) purchasing power over time.

When doing financial projections, it is often easier to think in terms of costs today and project those numbers into the future without having to adjust them for inflation. For example, let's suppose that a person can live comfortably on \$3,000 per month today. Assuming they do not want to change their lifestyle in the next 10 years, then \$3,000 per month is a good budget figure to use for the next 10 years when doing an analysis in real terms. If the analysis is done in nominal terms, then an inflation projection would need to be assumed and the \$3,000 would change each month.

## BREAK-EVEN INFLATION RATE

It is useful to know what rate of return is required to stay even with inflation—that is to have a 0% real return. For money that is in a tax-sheltered account such as an RRSP, the breakeven rate is simply the rate of inflation. For funds in a taxable account, the return is not simply the rate of inflation because income tax must be paid on returns. Assuming an interest bearing investment, the breakeven return required to stay even with inflation is the inflation rate divided by 1 minus the marginal tax rate. For example if the inflation rate is 3%, and the marginal tax rate is 40%, then the breakeven rate of return is  $3/(1 - 0.4) = 5\%$ .

## REAL RETURN BONDS

Most fixed income investments pay a nominal yield and therefore have built in inflation expectations. These investments are likely to do well (poorly) if inflation turns out to be less (more) than expected. There are very few investments that are based on providing a real return plus a floating inflation

adjustment. One exception is real return bonds (RRB) that are issued by the Government of Canada (GOC). The return earned on these bonds is based on a real yield plus an adjustment factor that changes with the inflation rate. Both the principal amount and the coupons are indexed to inflation.

By comparing the real yield of these bonds with the nominal yield of a similarly dated bond, it is straightforward to calculate the inflation expectations that are built into nominal bond yields. For example, the real yield on the 30 year GOC real return bond is currently 2.4% and the yield on a nominal 30 year GOC bond is 5.2%. The expected inflation rate built into the nominal bond is therefore  $5.2\% - 2.4\% = 2.8\%$ . Many people view this number as the market's assumption of the expected long-term inflation rate. An investor that believes the implied inflation rate is too high will prefer the nominal bonds while those investors that believe the implied inflation rate is too low will prefer the real return bonds. As a point of reference, the Bank of Canada's goal is to keep inflation in the 1% to 3% range with a target at the mid-point of 2%.

## Historical Perspective

To put all of this into a historical context, the real return of long-term GOC bonds from 1924-2002 (79 years) was 2.9%. There is, however, quite a lot of variability depending on the time period and whether monetary policy was inflationary or deflationary. For example, over the 25-year period 1953-1977 (inflationary policy), the real return was essentially zero, while the real return between 1978-2002 (deflationary policy) was 6%. For comparison, the real return of Canadian stocks was 6.5% (1924-2002), 5.0% (1953-1977) and 6.3% (1978-2002).

Many economists believe that the Bank of Canada and the U.S. Federal Reserve have moved from a deflationary monetary policy to one focused on reflation. If they are correct and history repeats itself, then over the next couple of decades the real returns from stocks will be lower than in the past 25 years and real return bonds will be a better investment than long-term nominal GOC bonds that will have a negligible real return. 💰