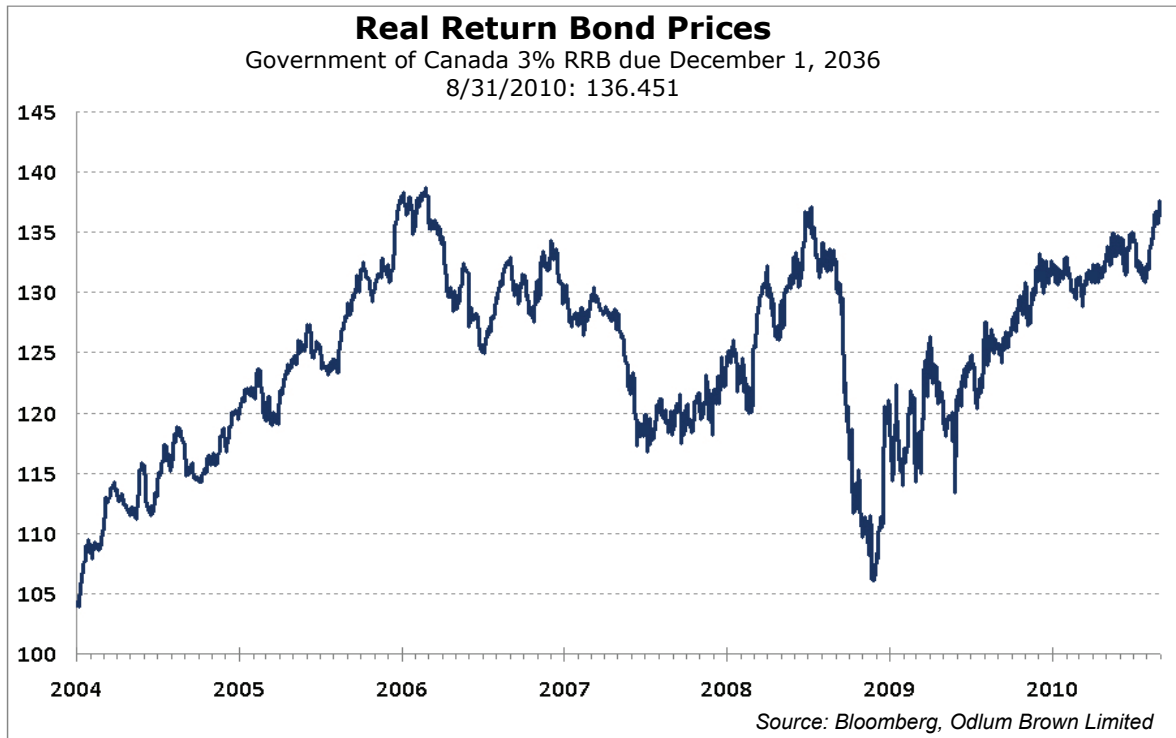


# A Primer to Real Return Bonds

## What are they?

Real Return Bonds (RRBs) are bonds issued by the Government of Canada and certain provinces. RRBs are similar to conventional Government of Canada bonds: they are issued with a fixed coupon rate; interest is paid twice a year; and they have a specific maturity date.

Below is an example of a RRB — Government of Canada 3 per cent RRB due December 1, 2036.



## How big is the market for RRBs?

There are \$29.8 billion of outstanding Government of Canada RRBs with maturities ranging from 2021 to 2044. This is approximately 8 per cent of the total Government of Canada bonds outstanding.

## How liquid are they?

The trading volume of RRBs is approximately \$300 million market value per month and thus they are considered to have average liquidity. RRBs are largely buy-and-hold securities.

## How are they different from conventional bonds?

The principal is indexed to changes in the Consumer Price Index (CPI). Each coupon payment is based on the original coupon rate and the indexed (adjusted) principal amount; and therefore, they offer constant purchasing power regardless of the trend in the CPI.

## What are the benefits of owning RRBs?

- Predefined real rate of return
- Less volatility than conventional Government of Canada bonds
- Returns highly correlated to inflation
- Low correlation with other asset classes

## How do they work?

The coupon rate on these bonds remain fixed. What changes is the principal base.

For example, assume that the Government of Canada 3 per cent RRB due December 1, 2036 has just been issued. Bonds are issued in denominations of \$1,000. If the CPI was to rise 2 per cent in the first 6 months, the principal would be adjusted by multiplying \$1,000 by 2 per cent and adding this amount to the principal.

- ▶ **The new principal amount = \$1,000 x 2% = \$20 adjustment + \$1,000 principal = \$1,020**

Taking half of the annual payment rate of 3 per cent, the coupon payment becomes:

- ▶  $1.5\% \times \$1,020 = \mathbf{\$15.30}$

If six months later, the CPI goes up by another 2 per cent, the principal now becomes:

- ▶  $\$1,020 \times 2\% = \$40.40 + \$1,000 = \mathbf{\$1,040.40}$

The interest payment is 1.5 per cent of this amount:

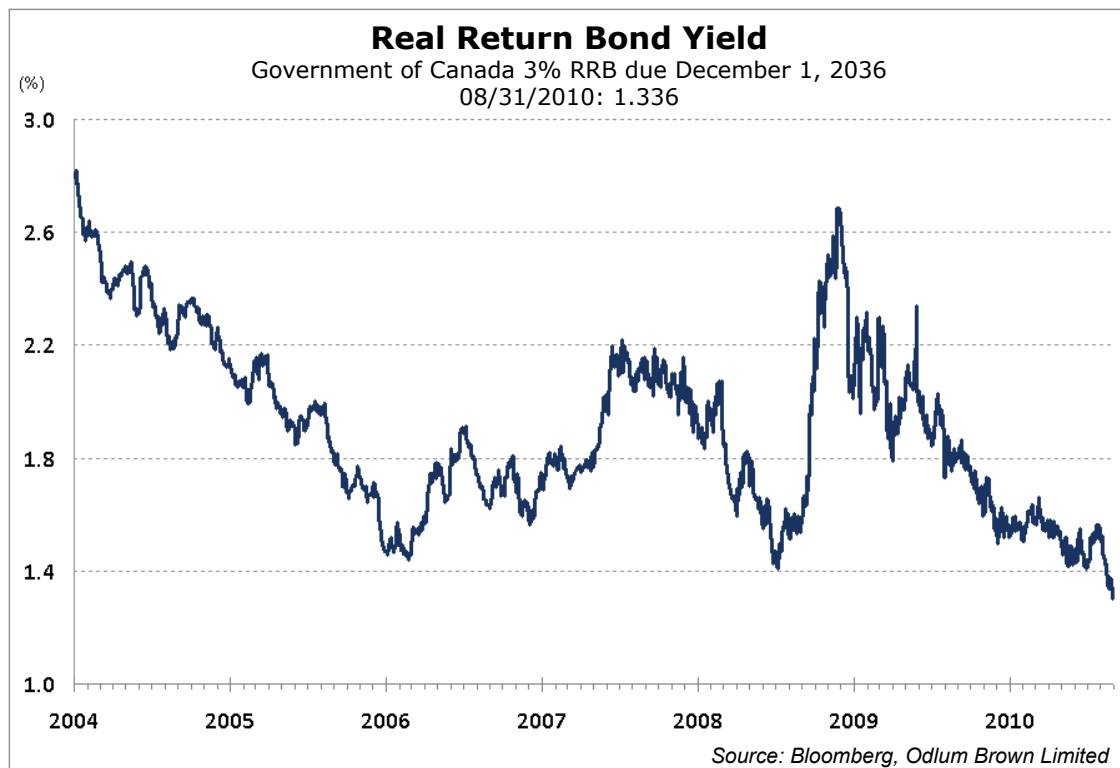
- ▶  $\$1,040.40 \times 1.5\% = \mathbf{\$15.61}$

The process is repeated every six months, thus offering investors the constant purchasing power of his/her interest income.

While the principal is indexed to the CPI, the inflation adjusted principal amount accrues and is only paid out at maturity. This adjustment to the principal is called the index ratio.

## How do RRBs trade?

RRBs trade on a real yield basis.



**For example:****Bond: Government of Canada 3% RRB due December 1, 2036****Price: \$137****Real Yield: 1.33%****Index Ratio: 1.12844**

If investors buy this bond at \$137 and hold it to maturity, they will earn a rate of return *after* inflation of 1.33 per cent.

Given a transaction of \$10,000 face value for this bond at \$137.00, the cost to investor is:

- ▶ 10 bonds x \$1,370 (price of a \$1,000 bond) = \$13,700
- ▶ Total Cost: \$13,700 x 1.12844 = \$15,459.63 plus accrued interest.

**Risks of RRBs**

As with conventional bonds, the market price for RRBs fluctuates daily. If an investor decides to sell his/her RRB before maturity, he/she would face the possibility of a capital loss should the real yield rise. Real yields do fluctuate over time.

There is also the possibility that, in the event that CPI is negative, the index ratio will fall, producing less interest income.

In terms of credit quality, RRBs are unconditionally guaranteed by the Government of Canada; therefore, they are AAA securities with purchasing power protection.

**When is a good time to buy them?**

It is best to buy RRBs when inflation and inflationary expectations are rising. Investors should avoid RRBs when inflation and inflationary expectations are falling and real yields are low. In the past five years, real yields have fluctuated between 1.20 per cent and 2.79 per cent, averaging 1.79 per cent.

**How do investors buy them?**

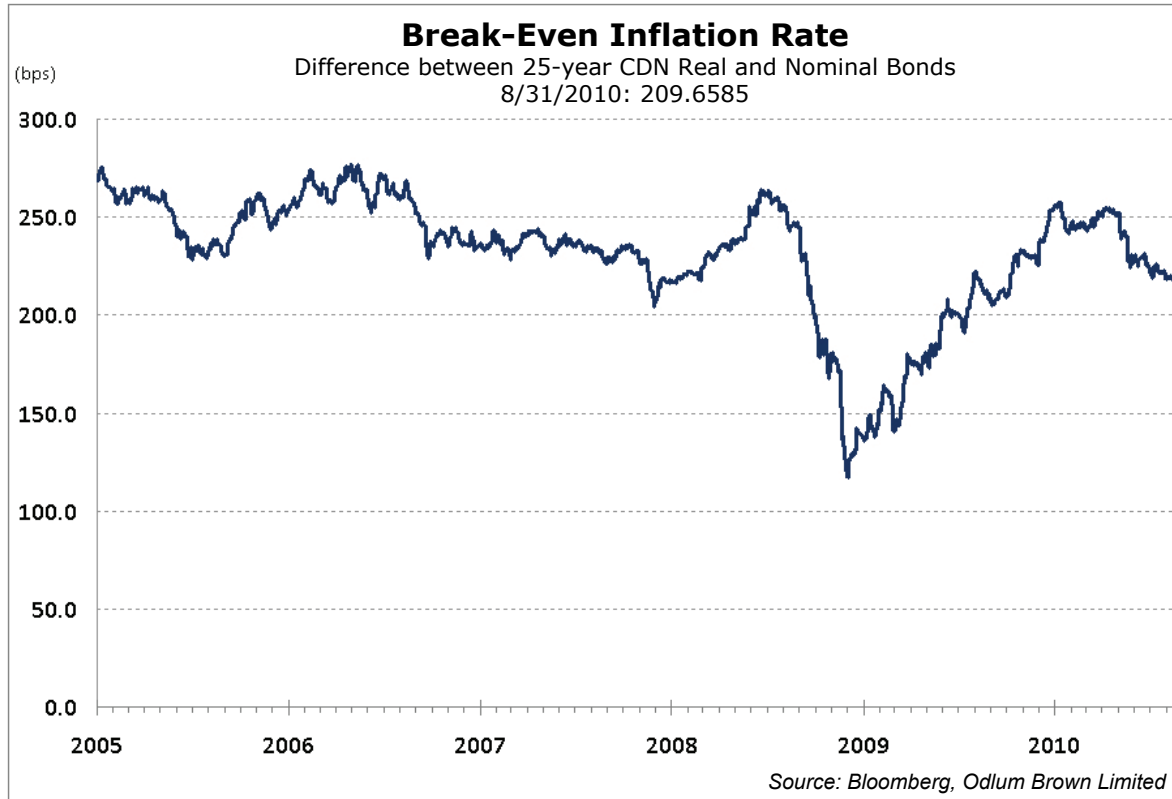
Consult with your Investment Advisor or Portfolio Manager. He or she can assist you with determining the appropriate time to invest in RRBs, according to your investment objectives and comfort level.

RRBs can also be purchased through Exchange Traded Funds (ETFs), with relatively modest management expense ratios.

**Do RRBs help in forecasting inflation?**

Yes. By subtracting the yield on an RRB from a conventional Government of Canada bond of the same maturity, we arrive at the Break-Even Inflation Rate.

Using our example, the Government of Canada 3 per cent RRB due December 1, 2036 yields 1.33 per cent at present while the Government of Canada 5 per cent due June 1, 2037 yields 3.49 per cent. The difference of 2.16 per cent is what the market expects inflation to be over the term of the bond. By tracking this spread, investors can observe shifting inflation expectations. For example, at the end of 2009, this spread was 2.60 per cent.



**Summary**

Real Return Bonds can make a sensible addition to a fixed income portfolio as their returns are not closely correlated to other asset classes. In conjunction with a bond ladder, they would contribute in reducing downside risk while offering stability to returns.

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