

# Rationalizing Fixed Income Holdings & Understanding Payback


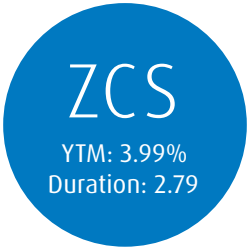
The Canadian bond market has just gone through the roughest start to the calendar year on record with data going back to 1980, with BMO Aggregate Bond Index ETF (ZAG) returning -10.8% Year to Date. Bond prices have fallen largely due to inflation concerns, which have caused central banks to be more aggressive on increasing overnight lending interest rates. There is a hidden benefit though, as interest rates have increased, the yield to maturity<sup>1</sup> on bond portfolios has also increased, which both shortens the recovery period on losses and provides potentially higher yield going forward.

For portfolio construction, BMO Short-Term US TIPS Index ETF (ZTIP, ZTIP/F) for inflation linked bonds, and BMO Canadian Bank Income Index ETF (ZBI) for bank debt and non-traditional bank financing are proving to be effective portfolio satellites since they offer investors diversification and the potential for greater inflation hedging than traditional assets.

**To illustrate the affects of rates rising and the affect on recovery times, consider two recognized BMO ETFs as examples, BMO Aggregate Bond Index ETF (ZAG) and BMO Short Corporate Bond Index ETF (ZCS).**

In each scenario below an increase of 50 and 100 basis points are used to show how bond prices and yield to maturities are affected. It also shows us what the hypothetical payback period is in terms of years for a holder to recover their losses. Recovery time is calculated by dividing the price decline percentage with the new yield to maturity percentage.

**Note:** For illustrative purposes table figures and calculations assume a parallel yield curve shift and no change to credit spreads, YTM, performance data and duration is as of May 13th 2022, recovery time is calculated by dividing impact to bond price with new yield to maturity.

	SCENARIO 1 50 basis point move higher (Rate movement: 0.5%)	SCENARIO 2 100 basis point move higher (Rate movement: 1.0%)
 <p><b>ZAG</b> YTM: 3.54% Duration: 7.45</p>	<b>Impact to Bond Prices</b>	
	Bond Price Movement	
	-3.7%	-7.5%
<b>New Yield to Maturity</b>		
Yield Movement		
	4.04%	4.54%
<b>Payback Period</b>		
Recovery Time (Years)		
	0.92	1.64
 <p><b>ZCS</b> YTM: 3.99% Duration: 2.79</p>	<b>Impact to Bond Prices</b>	
	Bond Price Movement	
	-1.39%	-2.79%
<b>New Yield to Maturity</b>		
Yield Movement		
	4.49%	4.99%
<b>Payback Period</b>		
Recovery Time (Years)		
	0.31	0.56

<sup>1</sup> The yield to maturity includes the coupon payments and any capital gain or loss that the investor will realize by holding the bonds to maturity

To emphasize the go forward benefit of rising yields, using the same ETFs and the 100-basis point scenario, the recovery period decreases significantly. For ZAG, the recovery period decreases from 2.1 years to 1.6 years (24% shorter) based on the new yield to maturity of 4.54%. For ZCS, the recovery period decreases from 0.70 years to 0.56 years (20% shorter) based on the new yield to maturity of 4.99%.

Since bond holders are receiving higher yields this creates a shorter recovery time to recoup any losses on individual bond holdings. Going forward with higher rates expected investors will have a better buffer against any future market volatility and fluctuations on bond prices.



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