

BMO ETFs
How ETFs
are providing
solutions in
Fixed Income



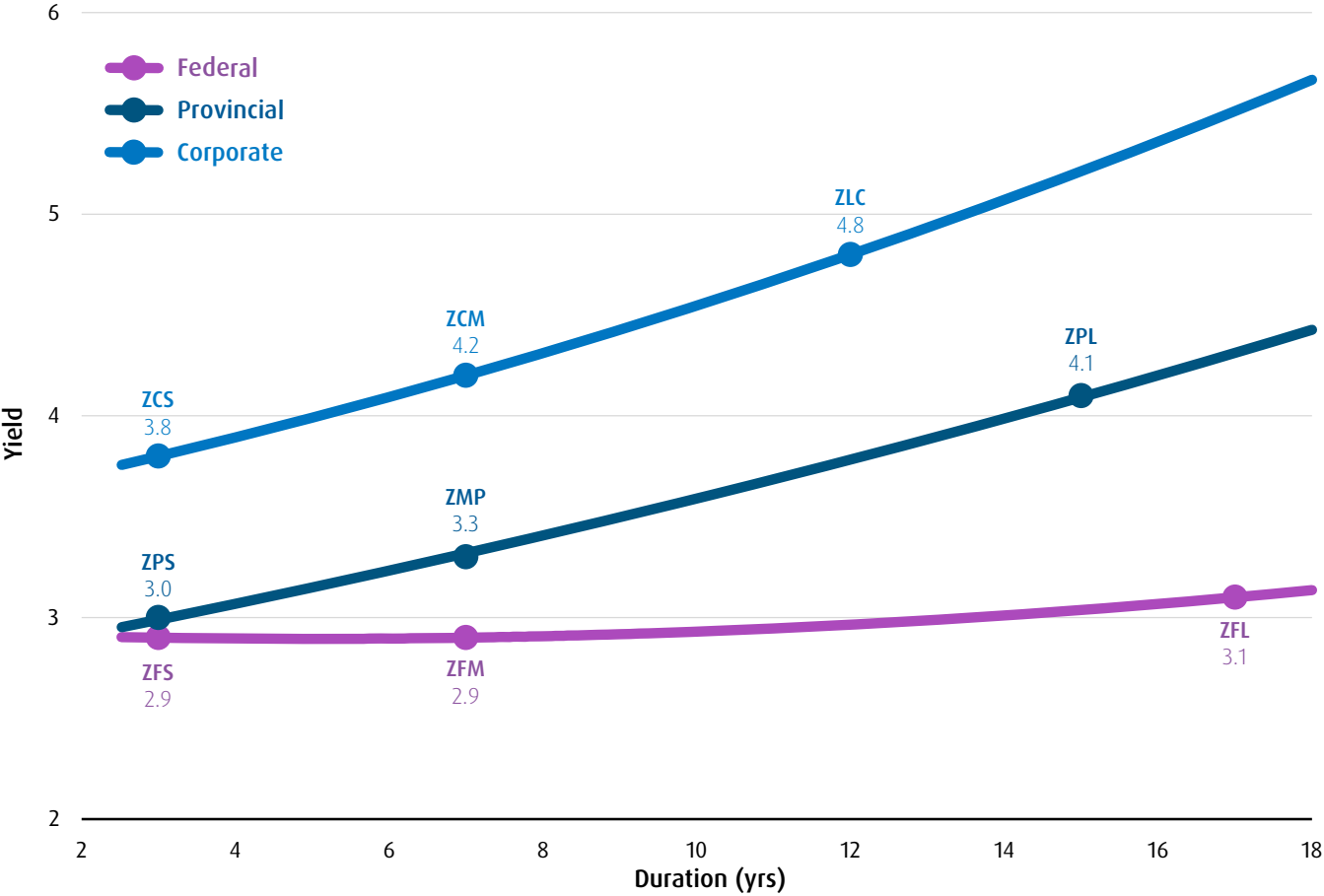
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Exchange Traded Funds were originally institutional tools, focussed mainly on broad Beta equity indices. Institutions were the primary adopters because ETFs provided simplicity and efficiency to allocate assets in large blocks that would otherwise take time to execute.

Though it took a couple of years, fixed income ETFs emerged to address a more acute need to bring similar trading efficiencies to bonds. Today, institutional investors have a broad array of precisely defined fixed income index ETFs to execute their investment objectives. A collaborative and sophisticated ETF ecosystem has demonstrated its ability to inject transparency, anonymity and capacity into an over-the-counter security which is otherwise more difficult to trade effectively or in size

Canadian Precise Market ETFs



ZCS: BMO Short Corporate Bond Index ETF
 ZCM: BMO Mid Corporate Bond Index ETF
 ZLC: BMO Long Corporate Bond Index ETF

ZPS: BMO Short Provincial Bond Index ETF
 ZMP: BMO Mid Provincial Bond Index ETF
 ZPL: BMO Long Provincial Bond Index ETF

ZFS: BMO Short Federal Bond Index ETF
 ZFM: BMO Mid Federal Bond Index ETF
 ZFL: BMO Long Federal Bond Index ETF

Source: Bloomberg Inc. As of December 31, 2024.

Why BMO ETFs for Fixed Income?

BMO Exchange Traded Funds was one of the first ETF issuers in 2009 and it has become the second largest ETF provider in Canada¹. Investors continue to choose BMO ETFs because of our commitment to deliver award winning innovation and education² to help build better portfolios.

With over 40 billion in fixed income ETF assets under management, BMO is the largest fixed income ETF provider in Canada with scale and adaptability. BMO remains the leader in fixed income ETFs with a robust shelf of over 70 fixed income ETFs. These ETFs consist of the most precise fixed income suite in Canada that covers broad market, targeted and non-traditional exposures.

\$100B

Gathered over \$100 billion in AUM¹

23%

of Canadian ETF market share¹

#1

Largest fixed income ETF provider in Canada. Bradest fixed income suite in Canada¹

20+

Awards won by BMO ETFs²

BMO is the only provider to split the entire fixed income spectrum by term and credit in Canada.³

Challenges in Fixed Income

Fixed Income Portfolio Managers and Institutions are facing a challenging fixed income environment, with bond inventories declining and liquidity constraints on individual issuances. Liquidity strains in the fixed income market can be overcome by using ETFs as they add an additional layer of liquidity. Fixed Income ETFs offer unparalleled transparency and liquidity in an efficient tool that is changing the way portfolios are managed.

Canadian Institutions have already integrated ETFs into their portfolio strategies, most significantly in fixed income, and their motives are simple;

Fixed Income is the fastest growing segment of the Canadian ETF market.¹

1

Trading

- enhanced liquidity
- price/trading transparency
- trade anonymity

2

Cost

3

Diversification Benefits/ Access to Markets

¹ Source: National Bank Report, January 3, 2025.

³ Source: Bloomberg, as of December 31, 2024.

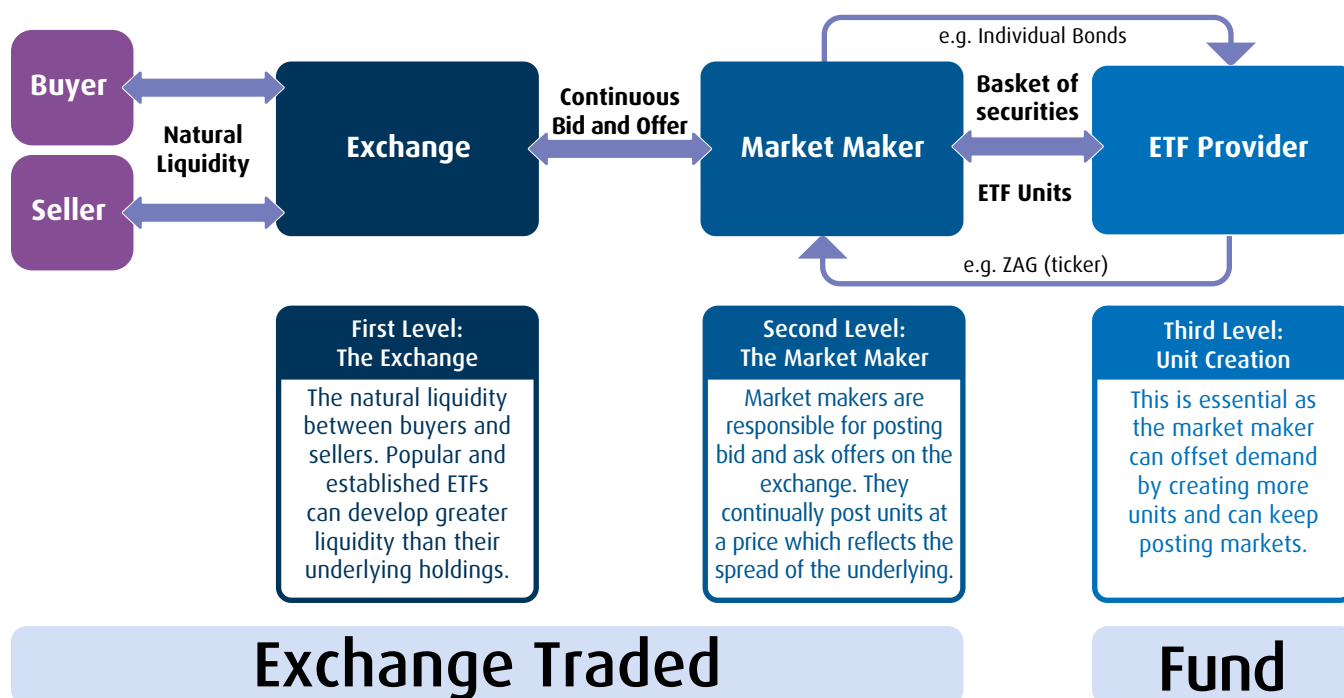
² Source: Fund Grade Awards 2023, Lipper Awards 2023.

Benefits of Fixed Income ETFs

1. Trading

ETF Secondary market liquidity is highly advantageous to fixed income managers because it provides flexibility and tight execution.

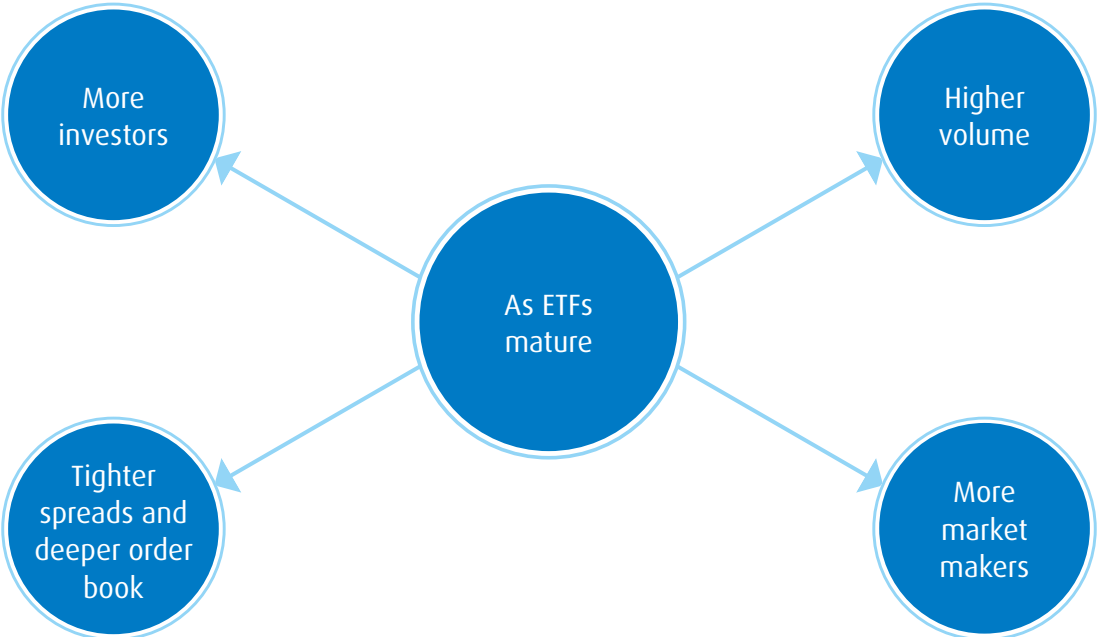
HOW AN ETF TRADES – THREE LEVELS OF LIQUIDITY



Be cautious in using volume as an indicator of liquidity, **true liquidity** is the liquidity of the underlying market (at a minimum)

- Watch the reported volume, **ETFs trade on many exchanges**
- **Spread is an important indication of liquidity**
- Institutions can use a variety of trading techniques to **ensure their price is met**

Secondary market liquidity is unique to ETFs and does not apply to individual bond holdings or bond pools. ETF volume is additive to what trades in the underlying market (underlying market is where active managers trade).



ETFs have taken a largely off-exchange, OTC driven asset class and democratized its price discovery. Where individual bond prices may be stale or based on quotes instead of transactions, fixed income ETFs trade based on the exchange bid and ask, adjusting to the value of the underlying basket of bonds at any point in the trading day. The price transparency this has created means more efficient and cost-effective trading. ETFs can be a liquidity vehicle in periods of market stress, and while spreads may adjust, exiting positions will be easier compared to individual bonds which may not trade at all.

Institutions can benefit from and see great value in the trade anonymity provided by using ETFs and trading on an exchange. Instead of execution costs across a basket of bonds that may take days to execute, a single trade on an ETF provides instant exposure for the buyer.

Benefits of Fixed Income ETFs

2. Cost

MER

- Annual fee payable to the manager of the ETF
- Includes; custodian/valuation fees, transfer agent fees and any other services retained by the manager to run the fund

Spread

- The difference between the bid/ask price on the ETF
- Spreads can be impacted by the volume of the ETF, AUM of the ETF along with the liquidity of the underlying



Premium/Discount

- Difference in the quoted price of the ETF and the NAV is expressed as a Premium (when market price of ETF is above NAV) or Discount (when market price of ETF is below the NAV)
- It is important for investors to be aware, especially during market open and close or during periods of high market volatility, that they may be transacting at levels inconsistent with the underlying securities

Commissions

- Commission paid to the broker for trading the ETF

ETFs spread costs, while a factor, are often lower than spreads on individual bonds, particularly with harder to trade corporate bonds. Example below outlines an illustration of spread differentials between individual bonds, and ETFs.

Ticker	Maturity	Credit	Institutional Spread	ETF Spread
ZAG	Aggregate	Aggregate	0.29%	0.07%
ZFS	Short	Federal	0.04%	0.05%
ZFM	Mid	Federal	0.07%	0.07%
ZFL	Long	Federal	0.20%	0.08%
ZPS	Short	Provincial	0.04%	0.05%
ZMP	Mid	Provincial	0.06%	0.05%
ZPL	Long	Provincial	0.17%	0.14%
ZCS	Short	Corporate	0.08%	0.07%
ZCM	Mid	Corporate	0.20%	0.06%
ZLC	Long	Corporate	0.57%	0.20%
ZMBS	Short	Federal	0.30%	0.07%
ZCB	Full term	Corporate	0.36%	0.13%
ZGB	Full term	Federal	0.10%	0.07%
ZBBB	1-10 year	Corporate	0.17%	0.18%
ZQB	1-10 year	Corporate	0.20%	0.17%

Source: BMO Global Asset Management. For illustrative purposes only.

Please note that the ETF will trade in-line with the underlying securities but, due to ETFs trading at NAV but carrying a \$0.01 spread, will appear to have a wider spread due to rounding. In essence, an ETF unit creation will always trade the same as a trade in the underlying securities

Additionally, securities lending in the ETF can offset or potentially cover the MER, thereby increasing the yield.

Benefits of Fixed Income ETFs

3. Access & Diversification

Fixed Income ETFs provide beta exposure to segments of the market that were previously difficult to access such as High Yield, Emerging Markets, and Floating Rate Loans. They serve as a liquid tool to manage duration or credit exposure, adapting as markets change. Geographic diversification of many indices also helps improve yield and reduce volatility relating to potential rate hikes in any given geography. Most bond *alpha* is generated by a small number of bonds. The rest of the exposure can be held in fungible fixed income ETFs which have better liquidity, diversification and tighter spreads compared to cash bonds.

BMO Fixed Income ETFs

Ten years ago, when looking at over the counter (OTC) asset classes like fixed income and preferred shares, the Canadian ETF marketplace was still in its infancy, offering only 10 ETFs from two providers. ETFs add the transparency and trading efficiency of exchange trading to give investors better options, better execution, and the opportunity to apply asset allocation across their portfolio.

Historically, investors typically created portfolios of direct bonds, or held an aggregate fixed income fund. ETFs have allowed institutions to better position fixed income instead of focusing only on equity markets. Early in the development of the BMO ETF shelf, we created a unique grid that covers the Canadian investment grade universe, using precise segmentation to create nine ETFs across short-mid-long term crossed with federal-provincial-corporate exposures.

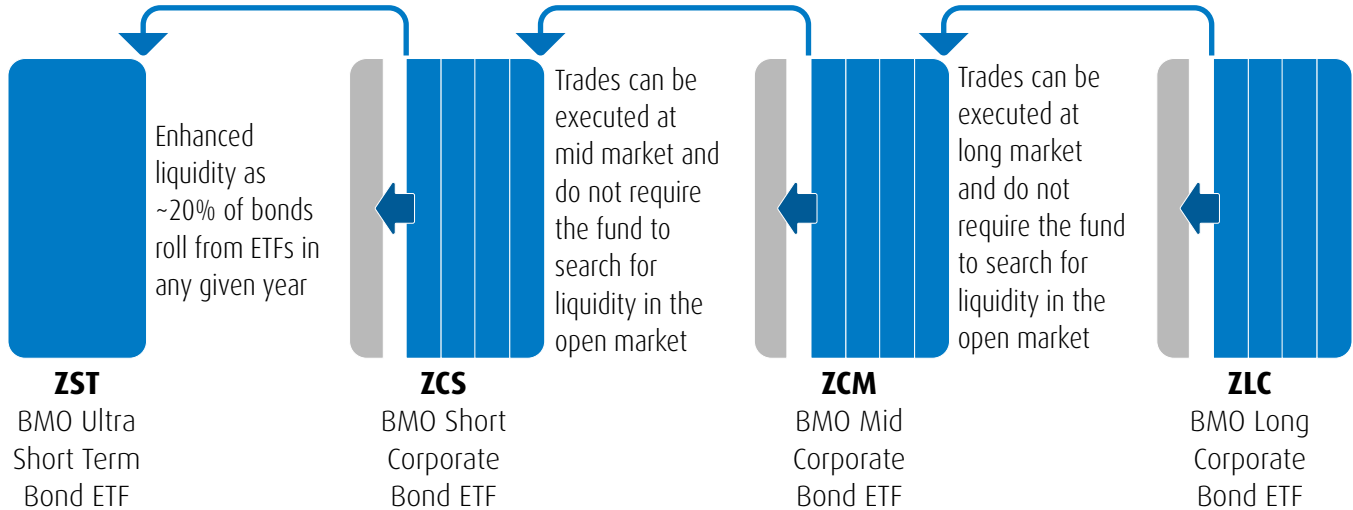
BMO ETFs is a top 10 Global Fixed Income ETF Provider (based on AUM) offering the most precise fixed income suite in Canada.

We have solutions covering broad market exposures, targeted and non-traditional exposures. This granularity offered helps portfolio managers build more precise exposures and tactically adjust those portfolios given their market outlooks.

Sampling & Scalability Advantage

A unique advantage of the BMO ETF suite is its sampling and scalability advantage which provides an additional liquidity layer on an annual basis, minimizing the necessity to buy bonds in the open market. This gives the current fund a significant amount of room to continue to grow (this is in addition to our ability to go to the Dealer network to source bonds)

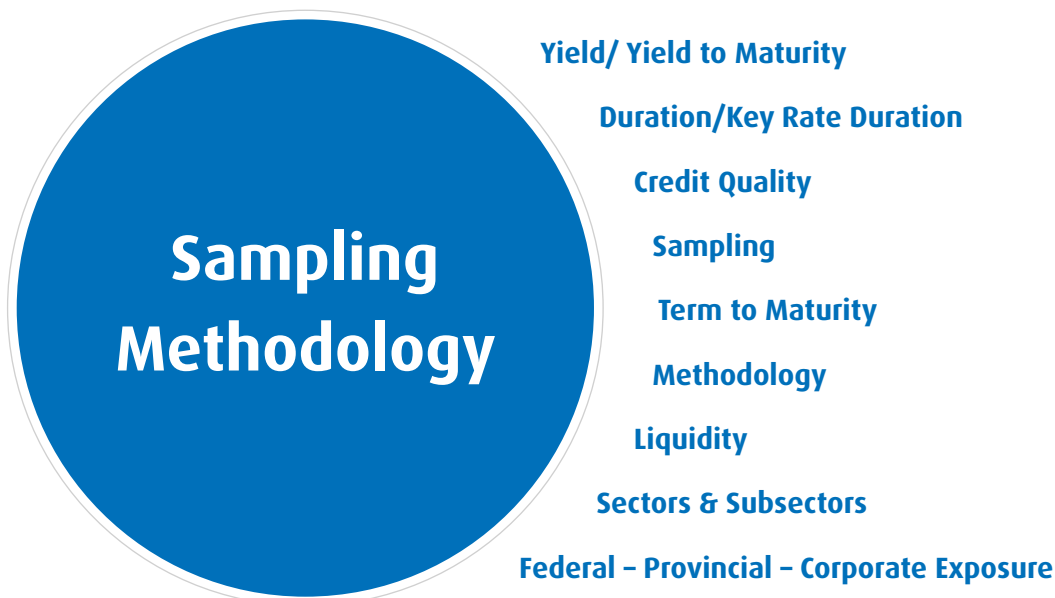
BMO ETF bond execution is aided by our ability to move individual issues down the curve as they approach maturity.



**~20% of the short corporate universe will roll under 1yr in any given year.
Consider as an example the Short Corporate Bond ETF being 1.5B \$300MM of supply
that the Ultra Short Term Bond ETF can take advantage of**

For illustrative purposes only

Liquidity is enhanced further by our sampling methodology where the fixed income delivery basket is updated frequently to ensure we are sampling the most liquid names.



BMO ETFs Road Map

Core Fixed Income Road Map

Broad Market			
BMO Ultra Short-Term Bond ZST <small>distributing units</small> ZST.L <small>accumulating units</small> Duration: 0.3 Yield to Maturity: 3.5%	BMO Aggregate Bond O ZAG* Duration: 7.3 Yield to Maturity: 3.6%	BMO Discount Bond ZDB* Duration: 7.3 Yield to Maturity: 3.5%	BMO Real Return Bond ZRR Duration: 13.2 Yield to Maturity†: 3.6%
Canadian Segmented Market			
BMO Government Bond ZGB Duration: 7.8 Yield to Maturity: 3.4%	BMO Corporate Bond ZCB Duration: 5.8 Yield to Maturity: 4.0%	BMO Short-Term Bond ZSB Duration: 2.7 Yield to Maturity: 3.2%	
Canadian Precise Market			
BMO Short Corporate Bond ZCS* <small>distributing units</small> ZCS.L <small>accumulating units</small> Duration: 2.7 Yield to Maturity: 3.7%	BMO Mid Corporate Bond ZCM Duration: 6.5 Yield to Maturity: 3.6%	BMO Long Corporate Bond ZLC* Duration: 12.5 Yield to Maturity: 4.8%	
BMO Short Provincial Bond ZPS* <small>distributing units</small> ZPS.L <small>accumulating units</small> Duration: 2.9 Yield to Maturity: 3.1%	BMO Mid Provincial Bond ZMP* Duration: 6.5 Yield to Maturity: 3.6%	BMO Long Provincial Bond ZPL* Duration: 14.8 Yield to Maturity: 4.2%	
BMO Short Federal Bond ZFS* <small>distributing units</small> ZFS.L <small>accumulating units</small> Duration: 2.6 Yield to Maturity: 3.0%	BMO Mid Federal Bond ZFM* Duration: 6.8 Yield to Maturity: 3.2%	BMO Long Federal Bond O ZFL Duration: 18.3 Yield to Maturity: 3.4%	
US/Global			
BMO Short-Term US Treasury Bond ZTS <small>unhedged</small> ZTS.U <small>USD units</small> Duration: 2.6 Yield to Maturity: 4.3%	BMO Mid-Term US Treasury Bond ZTM <small>unhedged</small> ZTM.U <small>USD units</small> Duration: 6.2 Yield to Maturity: 4.5%	BMO Long-Term US Treasury Bond ZTL <small>unhedged</small> ZTL.U <small>USD units</small> Duration: 16.3 Yield to Maturity: 4.9%	
BMO Ultra Short-Term US Bond ZUS.U <small>USD units</small> ZUS.V <small>USD accumulating units</small> Yield to Maturity: 2.9% Risk Rating: Low	BMO Short-Term US IG Corporate Bond ZSU <small>hedged to CAD</small> Yield to Maturity: 2.5% Risk Rating: Low	BMO Mid-Term US IG Corporate Bond ZMU* <small>hedged to CAD</small> ZIC <small>unhedged</small> ZIC.U <small>unhedged USD traded</small> Yield to Maturity: 3.0% Risk Rating: Low	
BMO Ultra Short-Term Bond ZFH* Duration: 0.2 Yield to Maturity: 6.4%	BMO High Yield US Corporate Bond ZJK* <small>unhedged</small> ZJK.U* <small>hedged to CAD</small> Duration: 3.2 Yield to Maturity: 7.4%	BMO Emerging Market Bond O ZEF <small>hedged to CAD</small> Duration: 4.5 Yield to Maturity: 6.0%	

* Passive Foreign Investment Company (PFIC) annual information statements available.

O = Optionable ETFs

† With inflation assumption.

Source: BMO Global Asset Management, as of December 31, 2024.

Performance

Ticker	Inception Date	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
Broad Market							
ZST	28/Jan/11	5.30%	5.30%	3.91%	2.74%	2.17%	2.15%
ZST.L	9/Feb/17	5.30%	5.30%	3.91%	2.75%	—	2.44%
ZAG	19/Jan/10	4.15%	4.15%	-0.68%	0.70%	1.85%	2.84%
ZRR	19/May/10	3.21%	3.21%	-3.84%	0.33%	1.40%	2.67%
Canadian Segmented Market							
ZGB	2/Mar/18	3.18%	3.18%	-1.43%	0.19%	—	1.38%
ZCB	2/Mar/18	6.56%	6.56%	1.21%	1.99%	—	2.71%
ZSB	2/Mar/18	5.58%	5.58%	2.00%	2.01%	—	2.15%
Canadian Percise Market							
ZCS	20/Oct/09	7.13%	7.13%	2.93%	2.82%	2.59%	2.90%
ZCS.L	9/Feb/17	7.13%	7.13%	2.93%	2.83%	—	2.62%
ZCM	19/Jan/10	7.74%	7.74%	1.48%	2.53%	3.08%	4.12%
ZLC	19/Jan/10	5.00%	5.00%	-1.74%	0.27%	2.83%	4.92%
ZPS	20/Oct/09	5.01%	5.01%	1.59%	1.67%	1.58%	2.01%
ZPS.L	9/Feb/17	5.01%	5.01%	1.59%	1.67%	—	1.58%
ZMP	19/Mar/13	4.63%	4.63%	-0.01%	1.27%	2.04%	2.36%
ZPL	19/Mar/13	0.56%	0.56%	-5.35%	-2.11%	1.41%	2.13%
ZFS	20/Oct/09	4.60%	4.60%	1.40%	1.44%	1.22%	1.58%
ZFS.L	9/Feb/17	4.59%	4.59%	1.39%	1.43%	—	1.25%
ZFM	29/May/09	3.19%	3.19%	-1.34%	0.16%	1.01%	2.39%
ZFL	19/May/10	-2.04%	-2.04%	-7.23%	-3.54%	-0.07%	2.31%


Ticker	Inception Date	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
US/Global Fixed Income							
ZTS	28/Feb/17	11.85%	11.85%	4.81%	2.86%	—	2.36%
ZTS.U	28/Feb/17	3.11%	3.11%	0.44%	0.79%	—	1.15%
ZTM	28/Feb/17	8.68%	8.68%	1.08%	1.09%	—	1.72%
ZTM.U	28/Feb/17	0.18%	0.18%	-3.13%	-0.95%	—	0.57%
ZTL	28/Feb/17	-0.20%	-0.20%	-9.64%	-4.33%	—	-0.72%
ZTL.U	28/Feb/17	-8.00%	-8.00%	-13.40%	-6.26%	—	-1.69%
ZUS.U	15/Feb/19	5.37%	5.37%	3.79%	2.45%	—	2.43%
ZUS.V	15/Feb/19	5.37%	5.37%	3.79%	2.45%	—	2.43%
ZMU	20/Mar/13	1.65%	1.65%	-2.18%	-0.10%	2.01%	2.17%
ZIC	19/Mar/13	11.50%	11.50%	2.99%	2.72%	4.74%	5.46%
ZIC.U	19/Mar/13	2.79%	2.79%	-1.30%	0.64%	2.52%	2.45%
ZFH	10/Feb/14	11.47%	11.47%	8.07%	4.86%	5.39%	5.24%
ZJK	4/Oct/17	16.14%	16.14%	6.64%	5.12%	—	5.57%
ZJK.U	12/Feb/21	7.05%	7.05%	2.19%	—	—	2.42%
ZEF	21/May/10	3.79%	3.79%	-1.95%	-0.46%	1.49%	3.34%

Performance Data Source: Bloomberg as of December 31, 2024.

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Global Asset Management

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