Understanding ETFs

Introduction to ETFs

BMO Exchange Traded Funds by BMO Global Asset Management

For more information on the topics in this booklet or for additional information on BMO ETFs, please visit our website at **bmoetfs.com**

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What Are Exchange Traded Funds (ETFs)?

An Exchange Traded Fund (ETF) is an open-ended fund that is listed and traded on a stock exchange which can be bought or sold directly during trading hours, much like a stock. An ETF is a basket of securities which may consist of stocks, bonds, or other assets such as commodities. There are different types of ETFs available in the market place and can be broadly classified into equity, bond, and commodity ETFs.

What are the benefits of ETFs?

Lower cost

Passive ETFs generate lower operational fees compared to investment options with administrative fees for active management. Lower costs mean that more of your money is working for you over the long-term. By purchasing an ETF, an investor avoids the commission costs that would normally be paid for purchasing each underlying security in a diversified portfolio, while only paying one commission fee for the purchase of an ETF. Trading cost in passive ETFs are also kept to a minimum.

Portfolio transparency

An investor can view the current trading price of an ETF at any time during the course of a regular trading day. Investors can also verify the composition of an ETF's actual portfolio on a daily basis. This provides ongoing transparency, which can be particularly helpful during volatile markets.

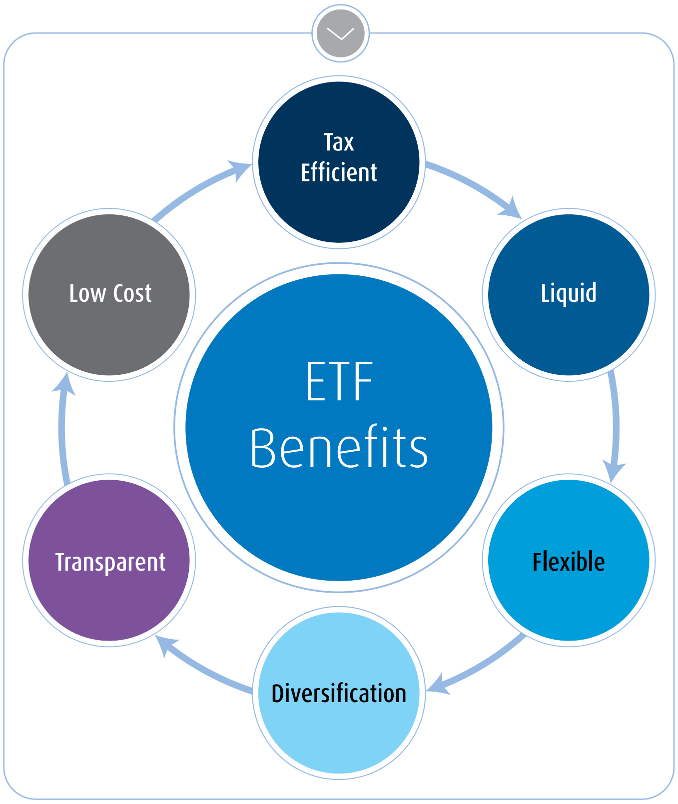
Liquidity & Flexibility

Unlike other investments, ETFs enable investors to buy and sell at any point while the markets are open. In addition, the liquidity of the underlying securities represents the true liquidity of an ETF due to the creation and redemption process.

ETFs allow investors to access securities that are broadly linked to a particular region, market, sector, commodity or factor without the need to trade each individual security.

Diversification

ETFs aim to incorporate all, or a representative sample of the securities that make up an index, regardless of the number of securities involved. This offers investors lower portfolio variability and can reduce the impact that volatile markets can have, especially when compared to holding individual securities.



How ETFs Can Be Used

BMO ETFs are equally suited for longer-term strategic investments and shorter-term tactical, market movement opportunities. BMO ETFs appeal across various user groups including institutional, sovereign wealth, advisors and retail investors.

Smart Beta
Optimized ETFs that deliver factor exposures combined with effective portfolio construction.

Comprehensive Fixed Income
ETFs that cover broad market, targeted and non traditional exposures.

BMO ETFs
A comprehensive suite of investment solutions designed for investors and their unique set of financial goals.

Innovative Solutions
ETFs are at the forefront of recognizing and initiating industry development.

Effective Broad Market
Efficient ETFs with the market leading indices.

Tactical Uses	Strategic Uses
Transitions and Rebalancing Stay invested while executing large trade lists.	**Portfolio Completion** Access hard to reach asset classes.
Tactical Adjustments Temporary shifts by asset class, sector or region.	**ETF Overlay** Keep a liquid sleeve to fund trading and redemptions.
Cash Equalization Keep the portfolio fully invested.	**Core / Satellite** Either by region or asset class, or by paring active and passive.
Hedging Reduce market exposure by selling underlying holdings.	**Portfolio Building** Effective solutions to create a complete portfolio.

The Efficiencies of ETFs

ETFs expand investment opportunities

ETFs go beyond broad market and traditional segmented investments, by allowing investors to invest in strategies they could not previously access. We refer to this as the democratization of investing. ETFs provide investors with access to certain institutional strategies and exposure to hard to find asset classes. This is driven by the appeal of ETFs across investor segments.

ETFs are accessible to all investors. From large institutions and wealth funds that use ETFs in their portfolios, both as tactical holdings and as long-term investments, to individual investors that can use the same ETFs to meet their investment goals.

The most well known example of ETFs expanding investment opportunities is with gold. Previously, investors used to only buy gold directly through mints, dealers, and jewellers. Now with ETFs, gold can be traded in the same manner as a stock, enabling smaller trade sizes, increased number of trading strategies, and much more trading convenience.

In investments like gold, a common consideration is ETFs can influence the price of the underlying holdings. While this effect can occur, particularly in narrower asset classes, this really provides a true picture of the demand for the investment, by allowing all investors access.

In addition, ETFs allow for efficient trading, through the matching of buyers and sellers on the exchange. As an ETF matures, the volume on the ETF will trade at narrower spreads, through natural liquidity, as more investors buy and sell on the exchange. So not only do ETFs provide better access to asset classes, they can do so more efficiently as well.

The True Liquidity of ETFs

While the liquidity of an individual security is directly related to the traded volume of that security, the same correlation does not apply to ETFs.

Instead, the liquidity of an ETF is best measured by the underlying securities that it holds. If the individual securities that compose the ETF have a high traded volume, then the ETF that holds them will have the same degree of liquidity. Similarly, if the underlying securities of the ETF have a low traded volume, or are illiquid, the ETF may have a low degree of liquidity as well. BMO ETFs have been constructed to have liquid portfolios by establishing traded volume requirements for each security held within the portfolio.

The underlying liquidity of an ETF can be seen by observing the difference between the buying price and the selling price, or the bid-ask spread. A tighter bid-ask spread on an ETF generally indicates that the underlying securities also have tight bid-ask spreads and are therefore more liquid. In this way, even an ETF with low traded volume is liquid if its bid-ask spread is tight.

How does the ETF liquidity mechanism work?

First level of liquidity – On the exchange

The interaction between buyers and sellers creates the first level of liquidity for an ETF. This natural liquidity is established when a sell order from an existing unitholder is matched with a buy order from a purchaser on the exchange. Popular and established ETFs with high transaction volumes can develop even greater liquidity than their underlying holdings.

Second level of liquidity – Market maker activity

Market makers are responsible for posting bid and ask offers on the exchange. This enhances liquidity and allows a buyer or seller to transact with minimal trading costs.

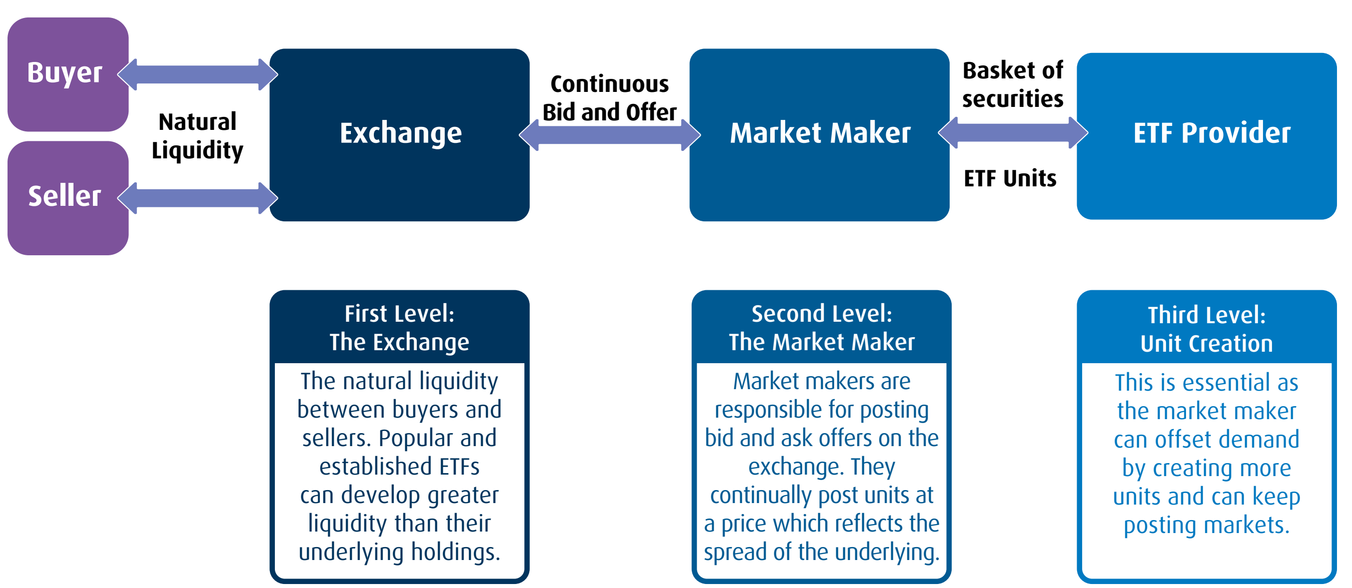
Third level of liquidity – Unit creation based on underlying securities

Because ETFs are open-end structures, the market maker can correct supply imbalances by creating or redeeming units. This is essential as the market maker can offset an increase in demand by creating more units. On the other hand, when the demand for the units decreases, the market maker redeems units to tighten supply.

When a large buy order occurs, the market maker will buy the basket of securities and initiate a creation order with the ETF provider. The cost to the investor would be the fair value of the units based on the midpoint of the spread, the market maker's costs of building the basket, and the investor's single trade commission rate with their broker. The market maker's costs are based on how much each security trade impacts its traded volume. With very liquid underlying securities, this cost is minimal. The cost increases as the liquidity of the underlying securities decreases.

By comparison, if the investor purchased each underlying security within the ETF, they would be faced with commission costs on each individual trade, plus the trading costs incurred with each transaction.

Understanding ETF Liquidity



Evaluating ETFs

The Canadian ETF market has expanded significantly. With hundreds of Canadian listed ETFs currently available, it has become increasingly important for investors to understand how to evaluate ETFs.

1. Choose Your Exposure

First, review the merits of diversification available through a wider exposure ETF against the precise targeting allowed by an industry ETF. For example, an investor looking to invest in Canadian banks could use broad market equity ETFs, dividend ETFs, financial sector ETFs, or a bank specific ETF.

2. Choose How to Access the Exposure

The majority of Canadian ETFs attain exposure by holding physical securities. A subset of ETFs use total return swaps to get market exposure. These ETFs receive the return of an index from a financial institution. An investor should analyze the added counterparty risk and additional fees against the advantages offered through the swap.

3. Choose How the Portfolio is Weighted

While ETFs may target the same market segment or industry, they could use a different weighting scheme such as market capitalization, equal weighting, or factor weighting. The appropriate choice may differ across asset classes or through the preferences of specific investors.

4. Choose a Trusted Provider

It is important to look at the track record, the product shelf, the ability to recognize investment trends, the capability to initiate industry development and the financial soundness of a provider. As the industry matures, ETF closures may occur, putting greater importance on using established providers.

Return considerations

Total cost

The total cost of transacting in an ETF includes the management expense ratio (MER), the trading expense ratio (TER), and the trading spread on the exchange. The MER will include management fees and taxes. The TER will include portfolio expenses such as commissions paid and withholding tax on foreign income. The trading spread will reflect the liquidity of the underlying portfolio and will decrease as the ETF matures and is more heavily traded in the secondary market.

A key consideration in evaluating total cost of ETFs against other investment vehicles is the time horizon of the investment. The longer the holding period, the greater the impact of the low MERs on ETFs. The shorter the holding period, the greater the impact of possible spread costs on ETFs.

Tracking error

A key measurement of success of an index tracking ETF is the ETF's ability to closely track its index. Tracking error can be both positive and negative. The expected tracking error may widen on more difficult to access asset classes compared to Canadian equities which are very liquid.

Building Portfolios With ETFs

Whether you are building a portfolio on your own or with the assistance of a financial advisor, you must complete two basic but critical steps:

1. Identify your objectives, time horizon, risk profile*, level of financial knowledge, and personal preferences;
2. Select a range of appropriate investments and decide how much to allocate to each asset class to help maximize potential returns for a given level of risk.

Ideally, you want an optimal portfolio — one that provides maximum potential returns for a given level of risk. By using the efficient frontier†, investors can see the trade offs between risk and return offered by different portfolios. From this, they can then work to pinpoint the portfolio that may best achieve their objectives.

Portfolio building strategies using ETFs

ETFs are a valuable tool that can be used to build more optimal portfolios. Traditionally, ETFs track the performance of a specific index, such as an equity or bond index, mirroring its returns.

ETFs are ideally suited for use in portfolio building strategies because of their flexibility, low cost and wide range of investment options. The following are three examples of strategies that can be used on their own or in conjunction with one another and the benefits of using ETFs to implement them.

1. Blending index and actively managed funds

Indexed funds offer market performance which matches the beta, or returns of the overall market or of a specific segment of the market. Active management, meanwhile, provides the potential for alpha (outperformance relative to the market) through individual security selection, sector allocation or other active strategies.

Get the benefits of each type of investment by incorporating both into your portfolio.

Benefits of using ETFs:

ETFs provide diversified exposure at a low cost; they are traded throughout the day, which provides added flexibility.

2. Mix core and satellite investments

The core is comprised of major asset classes combined to achieve a particular risk and reward profile. For example, these could include Canadian and U.S. equities, and domestic investment grade fixed income. Satellites have the potential to add value when combined with your core, but may be associated with additional risk. An example of a satellite position includes U.S. high yield bonds. Investors who want exposure to this less correlated asset class with its higher income potential could invest in an ETF that provides the performance of a diversified basket of these securities.

Benefits of using ETFs:

Wide variety of equity and fixed income ETF options; easy and efficient access to various markets and market segments; suitable for both core and satellite portions of portfolio, depending on investor requirements.

3. Employ a tactical short-term strategy

ETFs are an efficient means to adjust portfolio exposure through specific sector or segment investments. For example, if an investor wants tactical access to growth and dividend income provided by the Canadian banking industry, they could invest in a TSX listed ETF that holds all of the big six banks in an appropriately diversified manner.

Benefits of using ETFs:

Low entry and exit cost; easy and efficient access to segments and sectors that you want in your portfolio.

* Risk Profile: Comprised of a client's risk tolerance (i.e. client's willingness to accept risk) and risk capacity (i.e. a client's ability to endure potential financial loss)

† Efficient Frontie: A visual representation of the most effective portfolios, showing the highest possible returns for a given level of risk.

Fixed Income Investing Using ETFs

ETFs bring an over the counter (OTC) asset class to the stock exchange providing liquidity, transparency and diversification. The traditional approach of selecting individual bonds based on sectors, credit ratings and maturities can be time consuming, costly and inefficient. Fixed income ETFs allow investors to treat fixed income investing like equity investing.

Why use ETFs for fixed income investing?

Efficient exposure

Rather than build a fixed income portfolio using a large number of individual bonds, fixed income ETFs provide investors with access to diversified bond portfolios in a cost effective and timely manner. Unlike equity markets which are generally more liquid and transparent, buying individual bonds OTC is difficult.

The bond universe offers a diverse spectrum of risks, returns and credit qualities. With fixed income ETFs, investors can easily gain broad exposure or target specific credit qualities, durations, sectors and maturities. Depending on the market environment, time horizon and personal risk and return preferences, fixed income investors can choose specific fixed income sectors and maturities for their portfolios.

Pricing

In the fixed income ETF world, investors get the added benefit of institutional pricing. A bond's bid-ask spread is the difference between what the buyer is willing to pay and what the seller is willing to accept. The implicit savings are derived from the narrow ETF spreads. Further, the process of bond trading is often inefficient because the information necessary to make a sound investment decision is not easily accessible. Fixed income ETFs are traded on stock exchanges which provide investors with pricing transparency.

Liquidity

Fixed income ETFs democratize fixed income investing. They provide an efficient channel to fixed income securities that were previously unobtainable for individual investors.

ETFs provide liquid access to fixed income asset classes that are difficult to access such as real return bonds and high yield bonds. Fixed income ETFs can be easily traded at anytime while markets are open.

Things to consider

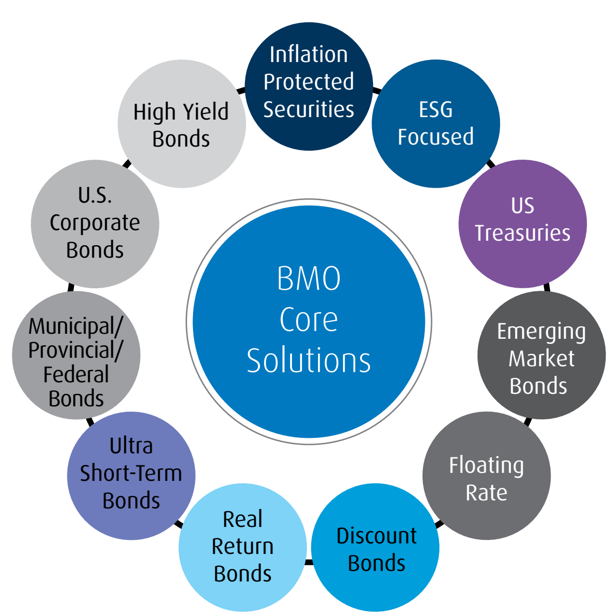
Issuer

Federal, provincial and municipal governments all issue bonds when they need to raise money. So do large and small corporations in different industries. However, there is a significant difference in the risk profile of government and corporate bonds. Most government bonds are typically less volatile than corporate bonds of similar maturities. Within the government bond sector, federal bonds are considered to be the most secure in terms of their ability to pay coupons and to repay principal. Therefore, they tend to fluctuate less in value than provincial or municipal bonds.

Credit rating

A bond's credit rating is an indication of the quality of the issuer and reflects the likelihood that bondholders will receive interest payments on schedule and get their principal back at maturity. As a general rule, investment grade bonds are rated BBB and above, whereas bonds that are considered below investment grade are rated lower than BBB. These non investment grade bonds are referred to as high yield debt. Typically, investment grade bonds have a higher credit quality and lower probabilities of default than high yield debt.

BMO ETFs: Comprehensive Fixed Income



Equity Investing Using ETFs

In equity investing, choosing the appropriate risk exposures allows individuals to target their investment needs. By using ETFs, equity investors receive a transparent investment vehicle that can be tailored to their specific goals or investment strategies.

What types of ETFs are available for equity investing?

Broad market ETFs

Also known as index investing, broad market ETFs provide exposure to many companies without specifying the industry and often follow a country's market index. The average investor can benefit from using broad market ETFs as the core of their portfolio by obtaining significant representation of a country's equities in one purchase. To reproduce the world's indices an investor would be required to purchase hundreds of securities and regularly buy and sell them to rebalance the portfolio to match index changes. By buying an ETF that tracks the index, the investor receives the exposure to the market, including the rebalancing of the ETF, at a fraction of the cost. This return after fees can have a large impact as your investment in the ETF compounds over time.

Sector specific ETFs

Along with broad market options, investors have the choice of investing in ETFs that provide exposures to a specific sector. The equity universe offers a diverse spectrum of risk and return characteristics where investors can target their exposures more precisely to a group of companies.

Whether trying to build a more concentrated portfolio of outperforming sectors or adjusting the weightings of their portfolio in combination with a broad market investment, using sector specific ETFs allows investors to target exposures.

Smart beta

Investors can target their desired portfolio even further by using smart beta or factor based investment strategies. These ETFs set out a specific set of criteria for investments which must be met to be included in the ETF. These ETFs are managed with specific rules so that an investor can benefit from an investment strategy without having to build the strategy themselves.

Some of the specific strategies that are offered through ETFs are:

Dividend focused – A strategy focused on dividend paying equities that can provide higher long-term returns and lower portfolio volatility as a core investment in a portfolio.

Quality investing – A strategy built to identify market leading companies with sustainable business models and growing competitive advantages to provide long-term growth with lower volatility.

Low volatility – A conservative strategy that targets a lower portfolio risk than the broad market to provide downside protection to the investor's holdings.

Equal weighting – A strategy that mitigates company specific risk in concentrated portfolios, introduces a value bias and a small cap bias.

Value Investing – A strategy built to identify low-cost companies compared to their fundamental value; provides long term growth and rules-based access to the value factor.

Thematic investing – Strategies built to identify specific sectors and companies in the market place that are undergoing innovation.

ESG investing – Access strategies that track ESG (environmental, social, and governance) focused equity indexes across the globe.

Enhanced Cashflow – Gain access to strategies that focus on generating increased cashflow levels like covered call and put write mandates.

Investing In Other Currencies

Local Return of Underlying Security + **Return of Underlying Currency vs. Canadian dollar** = **Total Return of Foreign Investment**

Impact of currency returns

Currency returns are an important factor impacting any investor purchasing a non Canadian asset. Since the underlying investments of these assets are bought in a foreign currency, the appreciation or depreciation of the foreign currency against the Canadian dollar can either add or detract from the total return.

An ETF can be fully exposed to currency returns, or it can be currency hedged. The objective of currency hedging is to remove the effects of foreign exchange movements, giving Canadian investors a return that approximates the return of the local market.

This is done by taking an offsetting short position in the foreign currency to match the total notional amount of the underlying portfolio, typically through the use of a forward contract[*].

The impacts of currency should not be overlooked

Currency exposure tends to be an afterthought with most investors purchasing a foreign investment. Some will argue that the impact of currency tends to net out at zero over the long-term. In theory, it is believed that there is purchasing power parity (PPP)[†] between two currencies, to which they will revert to over time. This would suggest the practice of currency hedging to be irrelevant over the long-term.

In practice however, there are a few flaws to this argument. Currencies can trade beyond their PPP for extended periods of time, and not all investors are looking to hold an investment over the long-term. Over the short-term, the impact of currency can actually be quite substantial. Even for longer-term investors, currency can attribute a significant amount of additional volatility and affect returns.

The following table illustrates a performance difference of approximately 2% on average between investing in the S&P 500 Index in US dollars versus an unfledged position in Canadian dollars.

A Closer Look At The Impact of Currency On Index Returns

	S&P 500 Composite Total Return Index Hedged to the Canadian Dollar	S&P 500 Composite Total Return Index Unhedged to the U.S. Dollar
2014	14.32%	23.93%
2015	0.91%	21.59%
2016	11.40%	8.09%
2017	21.16%	13.83%
2018	-5.70%	4.23%
2019	29.87%	24.84%
2020	15.79%	16.32%
2021	28.29%	21.61%
2022	-19.10%	-12.16%
2023	24.74%	22.90%
2024	23.85%	36.36%
Average	14.66%	16.46%
Standard Deviation[‡]	15.08%[§]	11.80%[*]

Source: Morningstar direct December 31, 2024.
Past Performance is not indicative of future results.

[*] Forward contract: A customizable derivative contract between two parties to buy or sell an asset at a specified price on a future date.
[†] Purchasing Power Parity: An economic theory that suggests exchange rates should reflect the relative price levels of goods and services in different countries.
[‡] Standard Deviation: A measure of risk in terms of the volatility of returns. It represents the historical level of volatility in returns over set periods. A lower standard deviation means the returns have historically been less volatile and vice-versa. Historical volatility may not be indicative of future volatility.
[§] Annualized 10 year Standard deviation, Januaty 2015–December 2024.

Let's connect

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