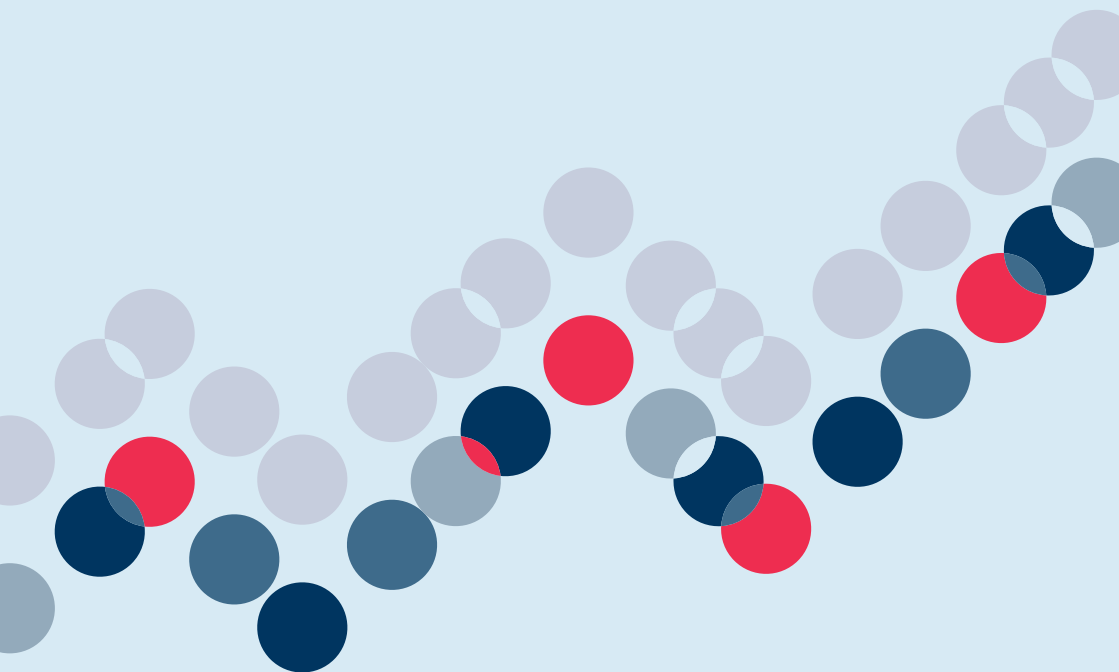


ETF HANDBOOK

A practical guide to Exchange Traded Funds



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INTRODUCTION

1

Introduction

Exchange Traded Funds (ETFs) have grown exponentially since the first one was listed in Canada in 1990. As investors increase their use of ETFs, it is important for investors to understand what makes ETFs unique, how they work and how to perform due diligence. Whether you are new to ETFs or an experienced investor, this handbook gives an in depth understanding of ETFs and provides the tools needed to integrate them into your portfolio.

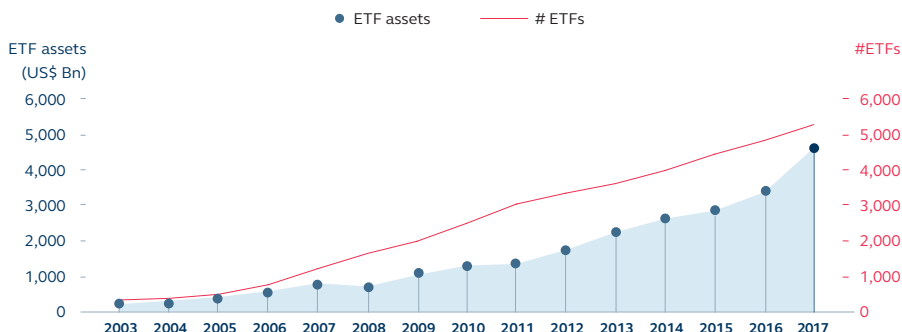
The ETF phenomenon

ETFs are one of the fastest growing investment products in the world, transforming the way investors access financial markets and construct investment portfolios. In 2008 there were more than 1,500 ETFs in existence globally worth a little more than US\$700 billion. By December 2017 there were over 5,000 ETFs with assets worth over US\$4.5 trillion.¹

Over **5,000**
ETFs with assets
worth over
US\$4.5 trillion

Until relatively recently ETFs were popular mainly in North American and European markets. However, the appeal of trading low-cost, efficient and liquid funds on an exchange is rising among investors in Asia-Pacific.

Global ETF asset growth

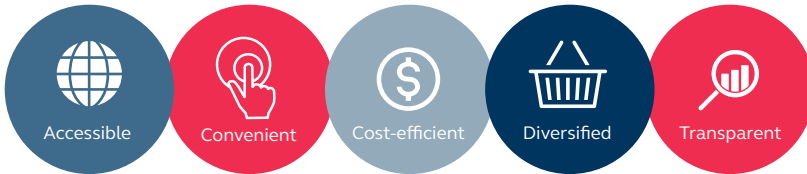


Source: ETFGI Industry Insights Global, December 2017

¹ Source: ETFGI Industry Insights Global, December 2017.

The benefits of ETFs

ETFs increased in popularity when investors started to take note of the number of compelling benefits when compared to traditional mutual funds:



Accessible

An easy way to gain access to a variety of asset classes (stocks, bonds, commodities, property, etc.), markets (geography, sectors, etc.), and strategies (factor, leverage & inverse, ESG, etc.)



Convenient

Standardised asset classes so they can be traded like a stock on an exchange through a security broker or trading platform



Cost-efficient

Typically have lower expense ratios than comparable mutual funds and, generally, trading an ETF is less expensive than trading the underlying basket of securities



Diversified

In one trade, an ETF can provide access to a basket of securities



Transparent

Regularly publish their holdings and their price is updated throughout a trading day



The importance of low-cost investing

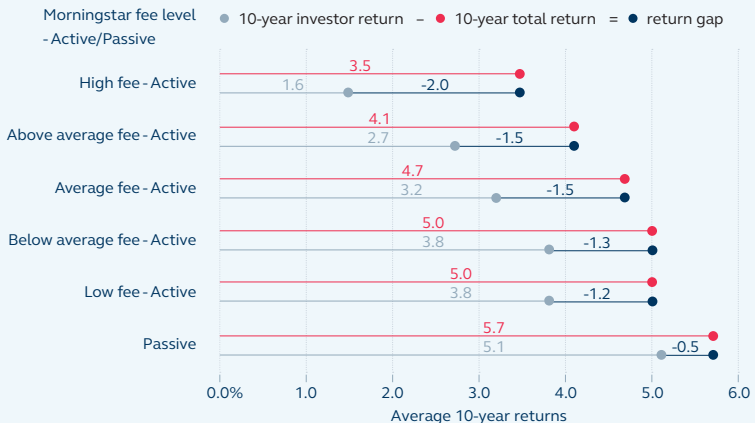
One of the key benefits of ETFs is their low-cost. This is important since the costs of a fund are one of the most significant indicators of potential returns to investors. Studies have shown that the more expensive the fund, the larger the gap between a fund's time-weighted return and the actual return investors see when investment timing decisions are taken into consideration.²

Whether or not ETFs are passive funds, the combined effects of standardisation, transparency and increasing competition means many

can offer lower-cost exposure to various investment strategies than comparable mutual funds. In 2016, for instance, the average³ expense ratio of US mutual funds investing in equities was 0.63%, or 63 cents for every US\$100 invested, while the equivalent for index equity ETFs was around one-third as expensive (0.23%).⁴

In **2016** the average expense ratio of US mutual funds investing in equities versus ETFs was **0.63% vs 0.23%** respectively

Passive investing achieve higher total returns and a lower return gap



Source: Morningstar

²Source: Morningstar, "Mind the Gap - Asia, 2017", May 2017

³Source: On an asset-weighted basis, according to the Investment Company Institute. See http://www.icifactbook.org/ch5/17_fb_ch5 for full methodology.

⁴Source: http://www.icifactbook.org/ch5/17_fb_ch5#etf

HOW ETFS WORK

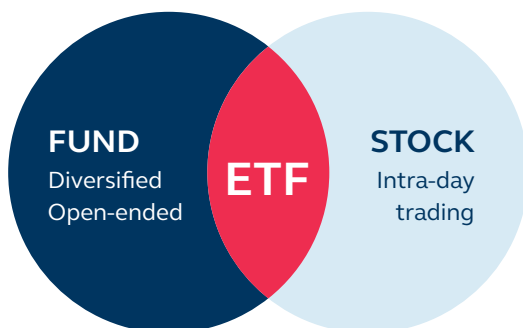
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How ETFs work

ETFs are hybrid securities, combining features of both mutual funds and stocks. Like mutual funds, ETFs are open-end funds consisting of a portfolio of securities that is assembled according to an investment objective and strategy.

Like stocks, ETF shares can be traded on an exchange, at any time of day while the markets are open⁵, whereas mutual funds or unit trust investments often have restrictions on the frequency with which buy or sell orders are processed – typically once per day.

What is an ETF?



ETF mechanics

The primary market

Before ETFs can be traded in the secondary market, they are created through interactions between parties in the primary market.

The starting point of an ETF is the issuer, an asset management company. For any ETF, authorised participants (APs) can apply to the issuer for creation of ETF shares, generally in large blocks. APs (also known as Participating Dealers or PDs) are principally large banks, broker/dealers and professional trading firms.

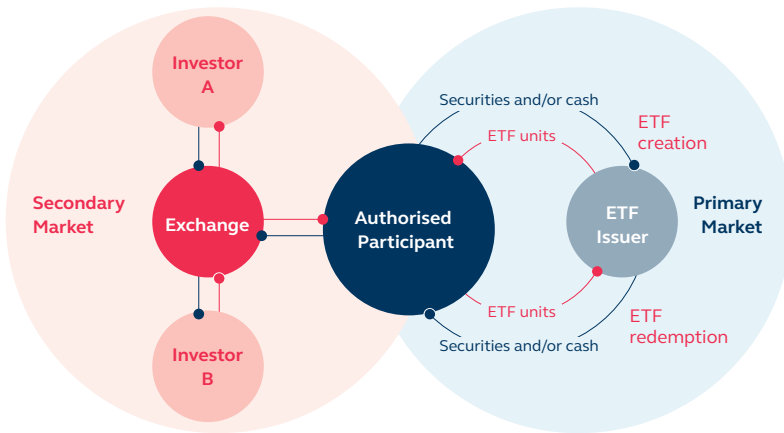
When creating ETF shares an AP will deliver to the issuer the underlying securities of the index and/or cash (known as “creation baskets”, which are published each day) in return for ETF shares. The AP can then sell the ETF shares to investors.

⁵ ETFs can be traded over the counter, during and outside market hours, via auctions or other methods that are typically employed by institutional investors when they are buying or selling in large volumes. See “How to trade ETFs” on page 17.

In reverse, if the AP has ETF shares it wants to offload (i.e. which it has bought on the secondary market from investors), it can redeem these with the ETF issuer in exchange for the basket of underlying securities and/or in exchange for cash (“redemption baskets”).

As ETFs are open-end funds, the ability to create and redeem shares to meet market demand is a key differentiator between ETF and stock liquidity. This will be further explored in the section on ETF liquidity.

ETF creation and redemption process



The secondary market and ETF pricing

In the secondary market, investors can buy and sell ETF shares on stock exchanges, through brokerages or trading platforms.

In many markets (like Hong Kong), stock exchanges offer market making programmes to enhance ETF liquidity. Market makers (also known as liquidity providers) provide prices to the market enabling investors to trade efficiently and at a lower transaction cost. Market makers can play a dual role serving as an AP, but this is not always the case.

ETF prices are quoted by market makers in a range between the “bid” price of the sellers and the “ask” or “offer” price for buyers. The importance of the bid-ask spread will vary according to an investor’s objectives and the expected holding period.

Generally, the more liquid an ETF its spread will be narrower and it will be easier to enter and exit positions.

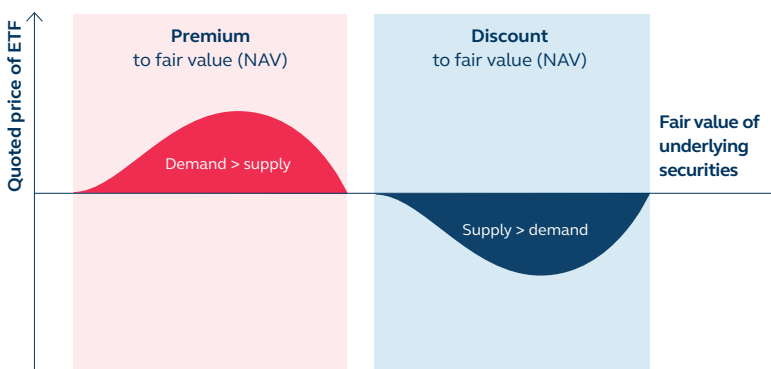
Premium and discount

During a trading day an ETF will fluctuate in price around its intra-day estimated “fair value” of its underlying securities based on prevailing market conditions. While investors can calculate this value those that don’t tend to use the indicative NAV (iNAV, also known as IOPV or IIV) when estimating the theoretical intra-day fair value. Before using iNAV an investor should understand what factors are used in calculating its value.

The estimated fair value is a theoretical, non-executable price. In practice an ETF price can and does deviate from fair value, trading at a premium or discount, owing to factors such as supply and demand for the ETF.

APs play an important role in maintaining the fair value of an ETF through arbitraging an ETFs’ NAV in the primary market and their trading price in the secondary market. When an ETF is traded at a premium to its NAV (e.g. demand is higher than supply), APs can short-sell ETF shares on the secondary market, buy the underlying securities and then create ETF shares with the issuer. In reverse, if an ETF is traded at a discount to its NAV (e.g. supply is higher than demand), APs can short-sell the underlying securities, buy ETF shares on the secondary market and then redeem ETF shares with the issuer. Both mechanisms restore the ETF back to fair value providing more efficient trading in the secondary market.

Premium/Discount mechanics



ETF liquidity

Given the relationship with an ETF's price, liquidity is a key consideration for investors, the importance of which will vary depending on factors such as trading frequency. As open-end funds, it's important to remember that ETFs have multiple layers of liquidity (unlike stocks) and understanding these layers can open a world of investment opportunities.

On-screen liquidity

Secondary market data available to investors "on-screen" only reflects a portion of an ETF's liquidity, often times it's the smallest. On-screen liquidity is the visible amount of ETF shares offered to trade during normal trading hours. This includes natural buyers and sellers such as retail, intermediary and institutional investors as well as market makers. Investors use indicators like average daily volume (ADV) over a given period to judge secondary market liquidity. Relying purely on secondary market liquidity does not give an investor the complete picture of an ETF's liquidity.

Hidden liquidity

On-screen liquidity is just the tip of the iceberg (see page 15). Hidden liquidity reflects two other important sources: the first is a market makers inventory that hasn't been committed to the market and second is inventory available through over-the-counter platforms and securities borrowing.

Underlying liquidity

The underlying liquidity, accessed through the primary market's creation and redemption process, is the deepest and most important source of an ETF's liquidity. As market demand dictates APs can create and redeem ETF shares as needed. It is important to remember an ETF is as liquid as its underlying securities.

An **ETF** is as
liquid as its
underlying
securities

This varies by asset class: for instance, equities are generally more liquid than bonds, since bonds do not trade on an exchange and have wider bid-ask spreads, which will be reflected in the range of prices quoted for shares in the ETF.

The intra-day liquidity of assets also depends on the time zone they are traded in: investors should be aware that pricing for foreign assets may not be available if the markets they are traded in are closed.

HOW TO TRADE ETFs

3

How to trade ETFs

As ETFs trade like stocks, investors can use many types of orders to execute trades, such as market orders (time is priority) or limit orders (price is priority). Additionally, investors can short-sell ETFs similar to stocks⁶.

Trading tips



Beware of the open and close

Investors should be aware of the importance of timing when trading ETFs. When markets open the bid-ask spread may be wider since not enough time may have passed for trading to have begun in an ETF's underlying securities, meaning market makers will have less information to judge the price. Towards the close of the day the spread may also widen as market participants seek to minimise their risk and exposure, potentially reducing liquidity.



Be mindful of where underlying assets are traded

If the ETF tracks an index of overseas securities, the trading hours for underlying assets could be different from that of the ETF, giving rise to pricing discrepancies.



Block trades and risk pricing

Investors can conduct block trades, commonly in multiples of millions of dollars, in over-the-counter transactions with counterparties. Block trades are a means to conduct risk-priced trading, in which investors seek to pass the market risk to the counterparty immediately and mitigate the risk of price movements before execution.

Block/risk-priced trading can be useful when an ETF is thinly traded on the secondary market and/or its underlying securities are less liquid.

⁶ Short-selling restrictions vary by markets, before engaging in short-selling, an investor should understand local market rules.

USES OF ETFS

4

Uses of ETFs

As the popularity and variety of ETFs has multiplied, investors have broadened the range of uses of ETFs within their portfolios. ETFs have proven to be very versatile and can be used for strategic and tactical purposes.

Strategic uses



Asset allocation

ETFs can be used for long-term asset allocation among primary asset classes such as equities, fixed income and commodities. ETFs can be used to make strategic tilts within asset classes, such as towards small-cap stocks, emerging market debt, specific types of commodities or a host of other categories.



Liquidity management

ETFs can be used to refine portfolio positions without affecting longer-term holdings, or to gain access to liquidity for unexpected and immediate needs. Asset managers can use ETFs within portfolios to create “liquidity sleeves” in periods where broader strategic shifts may be necessary, such as refocusing of fund style or objectives, or during periods of market stress or substantial outflows.



Portfolio completion

ETFs can be a useful way to fill gaps in portfolios to achieve a desired allocation with exposure to specific areas of the market, or to achieve a desired style or strategy. This can be important when considering overall exposure and seeking the means to balance or adjust, not only in terms of single asset or sub-asset allocation.

An increasing number of ETFs are also being created with other objectives, such as socially responsible investing. Assuming appropriate due diligence is performed on the ETF, buying these could help investors meet their fiduciary and governance responsibilities.

Tactical uses



Tactical adjustments

One of the primary uses of ETFs in a portfolio is to over- or underweight exposures based on short-term views. ETFs can be an efficient way to adjust portfolios for risk during periods of market stress, as they could offer greater liquidity than their underlying securities.



Cash equitisation

ETFs can be used to invest surplus cash to maximise returns and/or minimise cash drag (uninvested funds) in a portfolio. The ease of trading ETFs makes it efficient to use them as needed, especially if there is seasonality to a fund's cash holdings.



Interim beta

ETFs can be used efficiently for temporary shifts in asset allocation that ensure a portfolio continues to benefit from market movements even during periods of transition. This approach can be beneficial when portfolios are undergoing temporary shifts in management or investment approach, during which an interim exposure to the market via ETFs is useful insurance against idiosyncratic risk.



Leveraged and inverse investing

Investors can use Leveraged and Inverse (L&I) Products (also known as L&I ETFs) to capitalise on short-term market movements with leveraged or inverse (short) investing.

L&I Products have various tactical and mostly short-term uses. Leveraged Products can be used to magnify daily returns, to obtain a target level of exposure to a benchmark using less cash, or to overweight a market segment without committing additional funds. Shorting the market using Inverse Products can be useful to hedge against expected declines, profit from downturns or underweight exposure to a market segment.



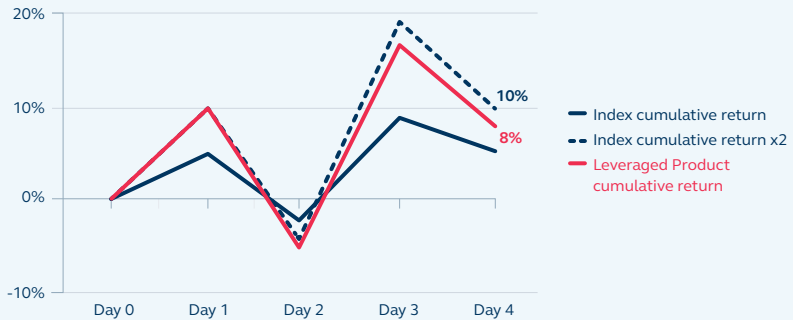
About L&I Products

Leveraged Products seek to magnify the daily performance of their underlying benchmarks, while Inverse Products seek to provide the inverse daily performance of their underlying benchmarks.

All L&I Products have three key features: a daily investment objective, the compounding effect of daily returns (that is, their performance can deviate from the multiple of the benchmark's cumulative return when held for longer than one trading day) and the use of derivatives, typically futures or swaps, to achieve their investment objectives.

Investors should always remember that L&I Products are designed to deliver returns against the daily movement of the underlying benchmark. Over longer time periods the performance of such products will be compounded and may deviate from the benchmark.

As an illustration, during a volatile upward trend when a Leveraged Product is held for longer than one trading day, its performance tends to be worse than two times the benchmark's cumulative performance.



Day	1	2	3	4
Index:				
Daily return	5%	-7%	12%	-4%
Cumulative return	5%	-2.4%	9%	5%
Cumulative return x 2	10%	-4.7%	19%	10%
Leveraged Product (2x):				
Daily return	10%	-14%	24%	-8%
Cumulative return	10%	-5.4%	17%	8%

Over four days, the index is up 5%. An investor may expect to see double that gain in the Leveraged Product over that period (i.e. 10%), whereas owing to the compounding of daily returns the investment in the Leveraged Product has gone up 8%.

ETF DUE DILIGENCE

5

ETF due diligence

At the end of 2017 there were over 5,000 ETFs listed on over 65 exchanges and the number and variety continues to grow.⁷ With all the options available, selecting an ETF can be a daunting task. In this section, we set forth an easy to use framework to help investors select the right ETF.

Exposure

When selecting an ETF, an investor should first consider their target exposure and whether the ETF meets the investor’s objective. The name of the ETF is a good indication but not sufficient on its own: investors should always be aware of a fund’s investment strategy, how a fund seeks to deliver performance and the key drivers of performance.

Management style

The majority of ETFs are passive in that they seek to replicate the performance of an index, although a growing number are based around active investment strategies in which portfolio composition and weighting is at the discretion of the fund manager. The most common types of ETF include:

Passive		Active	
Approach	Description	Approach	Description
Market-cap weighted	Fund holdings weighted according to their market value	Discretionary	Holdings weighted and adjusted at the discretion of the fund manager
Equal-weighted	Fund holdings weighted in equal proportion		
Factor-based	Fund holdings weighted according to factors other than market cap, including company fundamentals (“value” or “quality”), dividend history, trajectory of their stock price (“growth”, “momentum”, volatility or variance) etc.		
Strategic	Currency hedged, Leveraged & Inverse Products etc.		
Thematic	ESG, infrastructure, faith-based, disruptive industries etc.		

⁷ Source: ETFGI Industry Insights Global, December 2017.

Replication method

There are a number of ways to construct an ETF to achieve the desired exposure or strategy:

Method	Approach	Pros	Cons
Physical	<p>Directly buys assets needed to replicate an index, or</p> <p>May buy a representative sample of index constituents that have high correlation with overall index</p>	<p>No counterparty risk</p> <p>Simplicity</p>	<p>Difficult to track restricted markets or where holding physical securities are not practical</p>
Synthetic	<p>Does not hold physical securities in benchmark</p> <p>Instead uses OTC derivatives such as swap agreements to replicate benchmark</p>	<p>Useful when tracking restricted markets or when holding physical securities may not be practical</p> <p>Can be used to execute complex strategies</p>	<p>Exposed to counterparty risk through use of OTC derivatives</p> <p>Should consider if other costs associated with OTC derivatives are charged</p>
Futures-based	<p>Invest in futures contracts</p> <p>Contracts are rolled over (funds never take possession of physical assets)</p>	<p>Allows exposure to commodities or other exposures/ assets in which direct investment may be costly or not practical (No storage costs)</p>	<p>Generally “rolls” futures contracts monthly incurring costs</p>

The pros and cons listed in the table above are for guidance only and investors should always research the structure of the ETF before investing.

Liquidity

In evaluating an ETF's liquidity an investor should consider the following principles:

- An ETF's full liquidity equals on-screen liquidity + hidden liquidity + underlying liquidity;
- An ETF is as liquid as its underlying securities; and
- Generally the more liquid an ETF the narrower its trading spreads and easier to enter and exit positions.

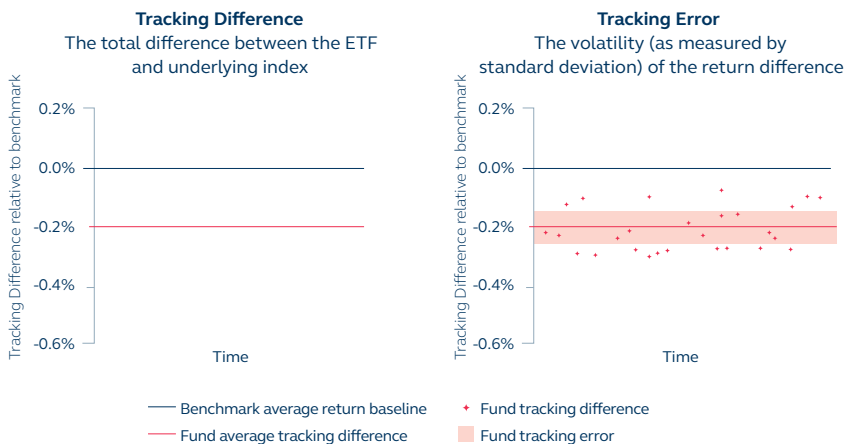
See also the discussion on ETF liquidity in Part 2, page 14.

Performance

For ETFs that are designed to track indices, their performance should closely match that of their benchmarks, but it is not always the case. When evaluating a passive fund's performance, an investor should consider two key performance metrics and its relevancy to their selection criteria.

Tracking difference and tracking error

Tracking difference will indicate the size of the discrepancy between the returns of the fund and its benchmark over a given period of time. Tracking error measures the volatility (as measured by standard deviation) of tracking differences) of a fund's performance over the same period of time.



In general a passive ETF seeks to minimise both tracking difference and tracking error. However, in cases where an investor must choose the most appropriate metric, they should use:

- tracking difference if total return is the priority; or
- tracking error if performance consistency is the priority

Cost

Investors should be aware of all the potential costs of investing in an ETF before buying it. This can be easily quantified in an ETF's total cost of ownership (TCO).

The true cost of an ETF is more than total expense ratio (TER) and it can be broken down into both trading and holding costs.

Total Cost of Ownership (TCO) =					
Trading Costs	+	Holding Costs			
<ul style="list-style-type: none"> • Bid/ask spread • Broker commissions 		<table border="1"> <tr> <td> <ul style="list-style-type: none"> • Tracking difference • Total expense ratio • Securities lending • Investment/Fund taxation • Transaction costs • Other </td> <td>+</td> <td> <ul style="list-style-type: none"> • Investment level taxation • Dividend/Interest withholding tax (WHT) </td> </tr> </table>	<ul style="list-style-type: none"> • Tracking difference • Total expense ratio • Securities lending • Investment/Fund taxation • Transaction costs • Other 	+	<ul style="list-style-type: none"> • Investment level taxation • Dividend/Interest withholding tax (WHT)
<ul style="list-style-type: none"> • Tracking difference • Total expense ratio • Securities lending • Investment/Fund taxation • Transaction costs • Other 	+	<ul style="list-style-type: none"> • Investment level taxation • Dividend/Interest withholding tax (WHT) 			

Trading costs

Trading costs include the bid-ask spread and a broker's commission, the fee paid to a broker for trade execution services.

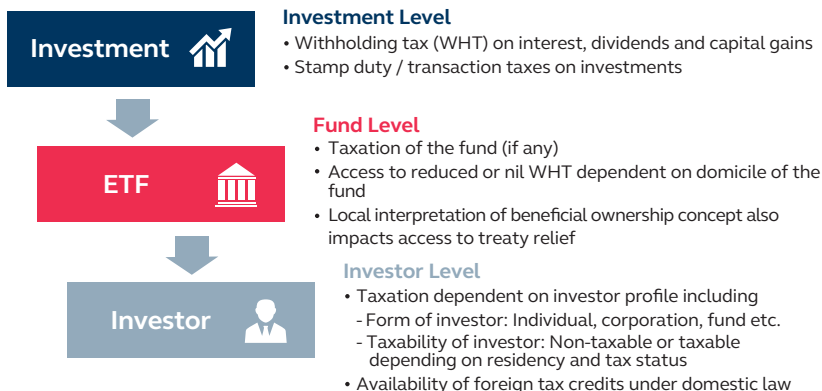
Holding costs

Holding costs can be broken down into two core components, tracking difference and investor level taxation. As mentioned in the previous section, tracking difference measures the difference between the performance of the fund and its benchmark. The factors that primarily influence a fund's tracking difference are its total expense ratio, securities lending revenue, investment and fund level taxation, and transaction costs. Other factors can influence tracking difference too.

Spotlight on tax

For most investors the overarching objective is to maximise their return. In doing so, they spend a considerable amount of time focusing on which strategy they should invest, but spends considerably less time maximising the return within the strategy itself. As mentioned in the “Importance of low-cost investing” costs play a significant role in maximising an investment’s return. One significant yet lesser understood cost is taxation, a subtle but potentially large cost.

Three tier taxation



These sources of taxation apply to both mutual funds and ETFs.

Key to these issues are the domiciles of the ETF, the investor and the underlying securities. Of these, the domicile of the ETF is most important, since it will dictate the rate of WHT at the investment and investor levels, the taxes at fund level (if any) and taxation treaty access requirements (through which investors may be able to claim credit for taxes paid). With its vast treaty network and favourable domestic tax rules, Hong Kong fares well making it a tax-efficient place to invest in ETFs (see Hong Kong ETFs and Taxation: A source of competitive advantage, page 34).



Hong Kong ETFs and taxation: A source of competitive advantage

Rohit Narula, Partner, Transaction Tax, at EY explains why Hong Kong is well placed from a tax perspective for ETF investors.

Hong Kong's domestic tax rules and expanding treaty network offer significant benefits for Hong Kong and other Asian based investors seeking to invest via Hong Kong domiciled ETFs to gain exposure to other Asian and global markets.

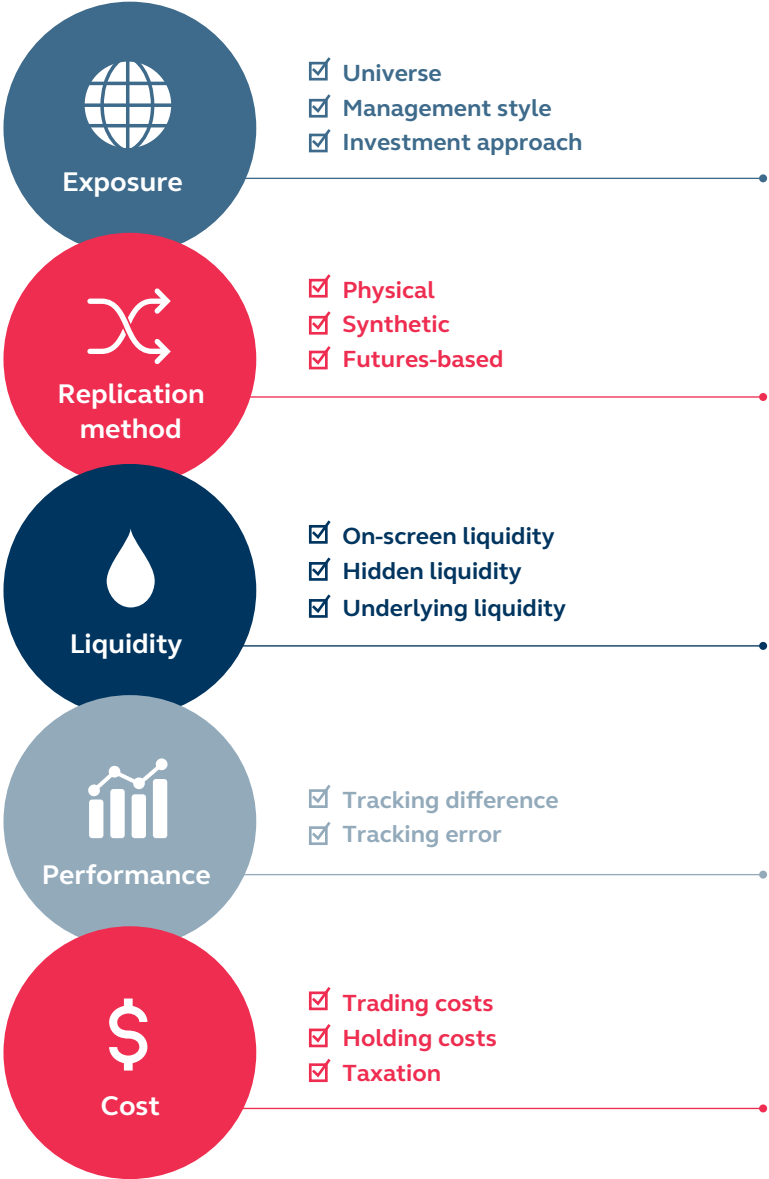
Other common forms of ETFs include Irish UCITs, Luxembourg SICAV/SICF and US RICs. Whilst individual types of ETFs may offer better after tax returns for specific markets like the US, our analysis of the after tax returns for common Asian indexes such as S&P Pan Asia ex-JANZ Index and S&P Asia-Pacific Emerging BMI Index demonstrates that Hong Kong ETFs are competitive.

EY recently published our 2017 Global ETF Survey which shows that Asia-Pacific is a more important target for geographic expansion than ever and we expect more Asian asset managers to launch their first Asian ETFs. From our perspective, Asian institutions outside Japan and Australia often prefer US or European ETFs to their less liquid Asian counterparts. But we believe Asian promoters could benefit from more local or regionally themed products.

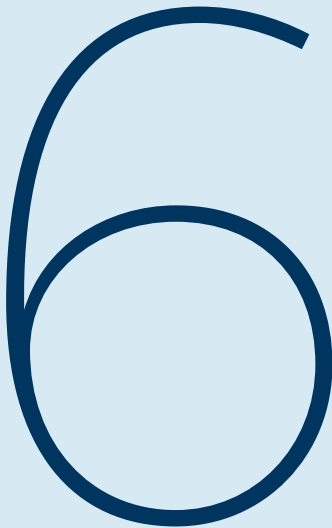
The Hong Kong government is in the process of negotiating more tax treaties with key trade partners and recently signed a treaty with India, a prominent emerging market in the region. The conclusion of tax treaty negotiations with Australia will also be significant. In our opinion, the increase in tax treaties between Hong Kong and key investment markets for Asian based ETFs as well as Hong Kong's existing favorable domestic tax rules will enhance Hong Kong's position as a desirable location for the launch of new Asian focused ETFs.

Hong Kong has always been important for investors to gain access to assets in Mainland China. But given the expansion of its tax treaties, investors should understand that it is becoming equally as relevant to access other markets.

ETF due diligence checklist



THE FUTURE OF ETFS



The future of ETFs

While over three-quarters of ETF assets are currently in passive equity-index-tracking products, the diversity of funds available in terms of exposure and approach is accelerating rapidly. This is linked to the fact that barriers to investing in ETFs are falling and the demand for innovative funds is growing.

ETFs have evolved steadily to incorporate more asset classes and investment styles. Fixed income ETFs are proliferating, as are “smart beta” funds that weight their constituents by factors other than market cap, and in effect blend passive and active investment styles. Smart beta equity funds are just one avenue of diversification: similar quantification strategies for indexing can be applied to commodity, fixed income and multi-asset funds.

ETFs are also being designed that are actively managed. These do not track an underlying index but are reliant on the discretion of a fund manager, subject to portfolio disclosure requirements.

If current trends continue the use of all types of ETF will continue to expand. Indeed, it is likely to accelerate, not only as the varieties of products expand but as more investors understand their advantages and potential, and as barriers to their use fall in tandem with the rise of digital platforms that put trading at the fingertips of everyone.

ASIA'S ETF
MARKETPLACE

7

Asia's ETF marketplace

Hong Kong is quickly becoming Asia's ETF marketplace. Investors can conveniently access the world of ETFs through Hong Kong's diverse, liquid and tax efficient product offering during Asian trading hours.



Accessible

Over 130⁸ ETFs and L&I Products providing access to a world of asset classes, markets and strategies



Liquid

Over US\$600 million traded daily⁸



Tax efficient

Vast tax network allowing investors to keep more of their return

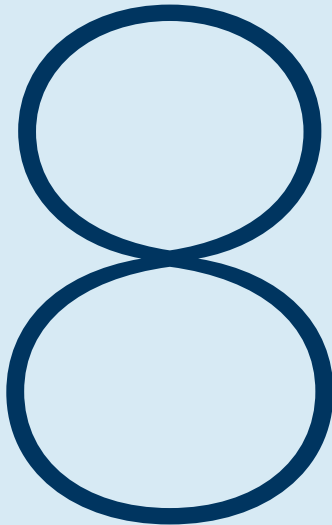


Trading Hours

Trade the world of ETFs during Asian trading hours

⁸Source: HKEX as of December 2017.

GLOSSARY



Glossary

Authorised Participant (AP)	Large financial institutions authorised by the ETF issuer, designated to create and redeem ETFs units. Also known as Participating Dealer (PD).
Accessible	An easy way to gain access to a variety of asset classes (stocks, bonds, commodities, property, etc.), markets (geography, sectors, etc.), and strategies (factor, leverage & inverse, ESG, etc.).
Active fund	An investment strategy where the portfolio manager aims to outperform an investment benchmark.
Asset allocation	To spread or diversify the allocation across asset classes or geographies to minimise risk.
Average daily volume (ADV)	The amount of individual securities traded in a day on average over a specified period of time.
Bid-ask spread	The difference in price between the bid – the highest price that a buyer is willing to pay – and the ask – the lowest price that a seller is willing to sell at.
Block trades	An over-the-counter risk-priced trade in order to pass the market risk to the counterparty immediately and mitigate the risk of price movements.
Cash equitisation	Invest surplus cash to maximise returns and/or minimise cash drag (uninvested funds) in a portfolio.
Convenient	Standardised asset classes so they can be traded like a stock on an exchange through a security broker or trading platform.
Cost-efficient	Typically have lower expense ratios than comparable mutual funds and, generally, trading an ETF is less expensive than trading the underlying basket of securities.
Creation	The process of creating new ETF units from an underlying basket of securities and/or cash. This is part of primary market activity.
Diversified	In one trade, an ETF can provide access to a basket of securities.
Exchange Traded Fund (ETF)	Open-end funds that can be bought and sold on a stock exchange.
Hidden liquidity	ETF inventory available on market makers' and other institutional investors' blotters which they have not committed to electronic trading systems.

Indicative net asset value (iNAV)	The estimated intraday net asset value of an ETF. NAV is only calculated once a day, iNAV is an estimate based on the latest price of the ETFs underlying securities (also known as IOPV or IIV). (See NAV for definition).
Interim beta	Tactic to manage temporary shifts in asset allocation to avoid idiosyncratic risk.
Inverse product	A fund structured like an ETF that delivers daily returns that are the inverse (short) of the index it tracks.
Leveraged product	A fund structured like an ETF that aims to magnify the daily return of the index it tracks using leverage.
Liquidity	The degree to which a security can be bought and sold without affecting the security's price.
Liquidity management	A strategic approach to cash flow management by refining portfolio positions without affecting longer-term holdings.
Market maker	A market participant that quotes buy and sell prices for a security.
Net Asset Value (NAV)	The sum of marked-to-market values of the individual portfolio holdings plus the portion of the assets held in cash and cash equivalents, less all the accrued ETF expenses.
On-screen liquidity	The visible amount of ETF shares offered to trade on an electronic trading terminal during normal trading hours.
Participating Dealer (PD)	See "Authorised Participant".
Passive fund	An investment strategy which tracks an index.
Physical ETF	An ETF that replicates index performance by physically holding either all or a representative sample of the securities included in the underlying index.
Portfolio completion	Purchase or sell securities to achieve a desired allocation with exposure to specific area of the market.
Primary market	The marketplace where Authorised Participants (APs) operate to create or redeem ETF units for securities and/or cash.

Redemption	The process of converting ETF units into their underlying basket of securities. This is part of primary market activity.
Secondary market	Where investors buy and sell shares after initial offering.
Smart beta ETF	An ETF that is benchmarked against a non-market-capitalisation-weighted index.
Synthetic ETF	An ETF that replicates index performance by using OTC derivatives, such as swaps.
Tactical adjustments	Actively adjust a portfolio's asset allocation to improve risk-adjusted returns during market stress.
Taxation	A compulsory contribution to the government. A mutual fund or ETF could be subject to taxation at three levels (1) the investment level (2) the fund level and (3) the investor level.
Total Expense Ratio (TER)	Accounts for all the operational and management costs borne by a fund.
Total Cost of Ownership (TCO)	All explicit and implicit charges for an ETF, combining trading and holding costs.
Tracking difference	The difference between the returns of the ETF compared and its underlying benchmark over a given time period.
Tracking error	The volatility of the tracking difference, measured by its standard deviation over a given time period.
Transparent	ETFs regularly publish holdings and the price is updated throughout the trading day.
Underlying liquidity	The degree to which the securities on an ETF's underlying index can be bought and sold without affecting their price.

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