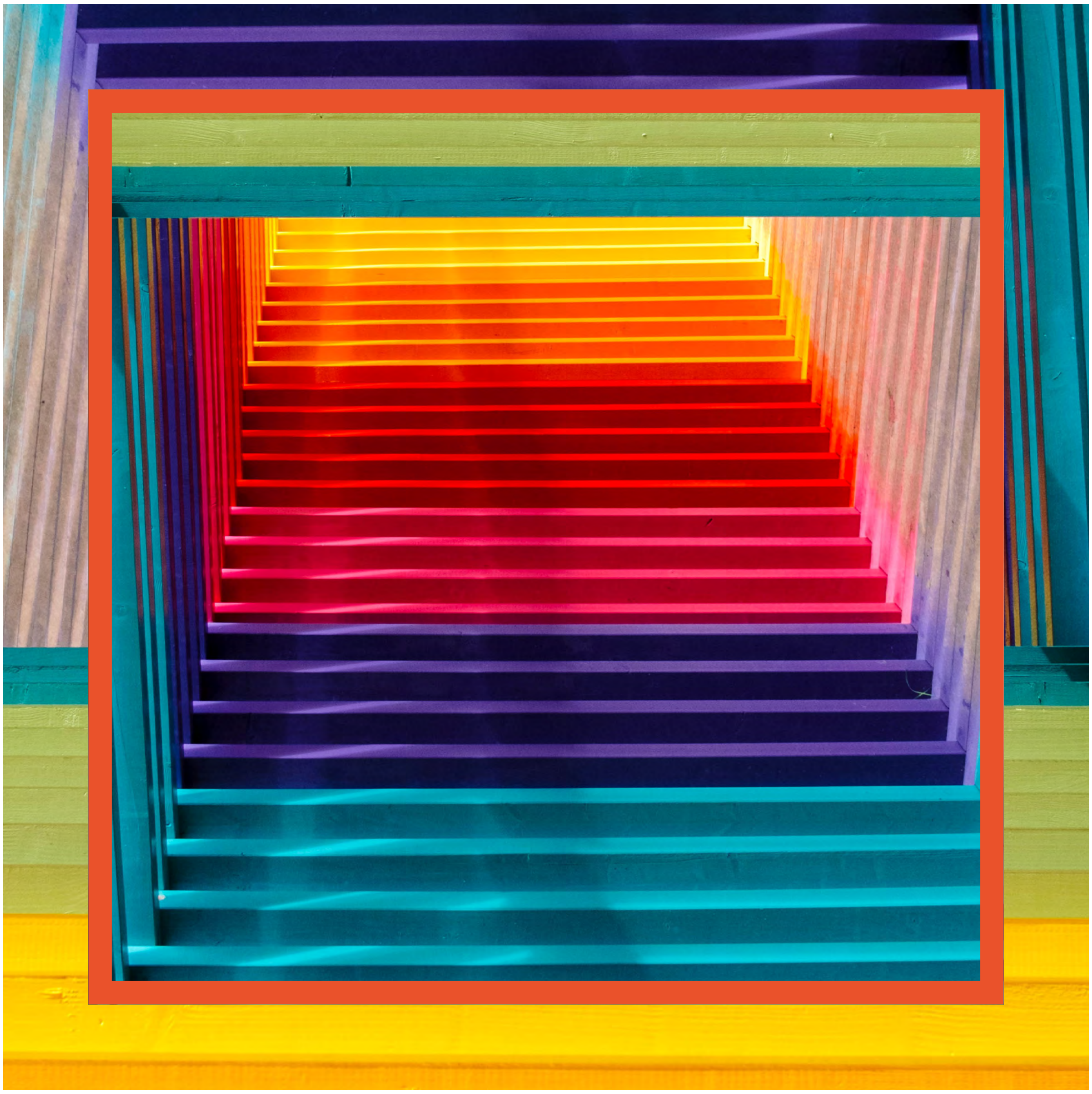
INTRODUCTION TO EFT AND FUNDS INVESTING



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EXCHANGE TRADED PRODUCTS

1. CONCEPT & BRIEF HISTORY

What is an Exchange Traded Product (ETP)?

We define as Exchange-traded product (ETP) any type of financial product which tracks an underlying security, index, or another asset. The idea is to provide investors with the same return as the underlying basket of assets, offering diversification through a single investment.

Exchange Traded Products

ETFs

Exchange Traded Funds (ETFs) are the most common type of ETPs. ETFs are funds that track the movements of a stock index.

ETNs

Exchange Traded Notes (ETNs) are unsecured debt securities that track the movements of a benchmark index.

ETCs

Exchange Traded Commodities (ETCs) are a particular type of ETPs that track the movements of an individual commodity or a basket of several commodities.

How popular are ETPs?

The popularity of ETPs has been growing rapidly after the launch of the first ETF in 1993. According to latest figures, the AuM of ETFs reached USD 7.7tn in 2020.

2. CHARACTERISTICS

CONCEPT	**Tracking –** As shown earlier, ETPs are designed to track the fluctuations of an individual asset or a basket of financial instruments.
UNDERLYING ASSETS	**Individual / basket of assets –** ETPs can track numerous financial instruments, from currencies and commodities, to stocks and bonds
PERFORMANCES	**Listing –** Just like stocks, ETPs trade on exchanges, which means that performances are publicly accessible by everyone checking live prices.
TRADING MECHANISM	**Day-to-day trading –** Because they trade on exchanges, their price can vary both intraday or day-to-day, based on the value of the underlying asset they are tracking.
COST	**Passive investment –** ETPs provide investors with a cost-effective way to achieve diversification through a single investment. Indeed, the passive management of ETPs allows for lower management fees than mutual funds.

3. ADVANTAGES & DISADVANTAGES

Advantages

1. **Diversification**
By replicating the returns of a basket of securities such as stock indexes, ETPs allow investors to achieve a significant level of diversification with a single investment.

2. **Cost-efficiency**
Since they are passively managed, as opposed to actively managed funds, ETPs like ETFs charge less management fees.

3. **Liquidity**
Since ETPs are listed on the market exchanges, share prices vary throughout market hours. This liquidity offers investors a compelling opportunity to perform day-to-day portfolio management, efficiently rebalancing allocations when needed.

Disadvantages

1. **Price fluctuations**
Since the price of ETPs fluctuate on an intraday or day-to-day basis, investing in ETPs does not annihilate the exposure to price fluctuations, and can therefore lead to losses.

2. **Liquidity**
Of course, some types of ETPs are more popular than others. Trading volumes may vary, which may hinder the liquidity.

EXCHANGE TRADED FUNDS

1. CONCEPT

What is an ETF?

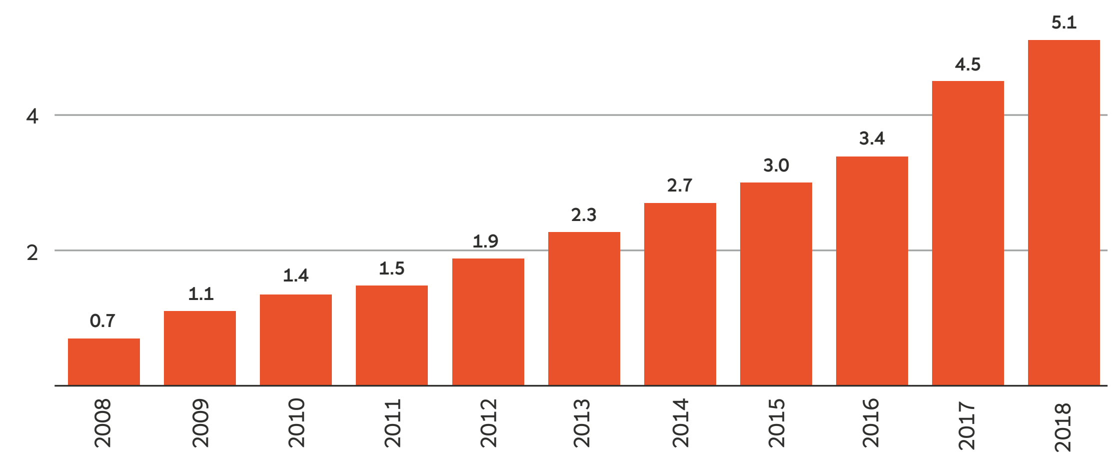
An exchange-traded fund (ETF) is a basket of securities, such as stocks or bonds, that tracks an underlying index.

How are ETFs traded?

As the name might suggest, ETFs are traded on exchanges, just like stocks.

Therefore, an ETF is a marketable security, which means that it has a live price that may vary throughout the day, as shares are bought and sold on the market.

CASH INVESTED IN ETFs
The dollar amount, in trillions, invested in exchange-traded funds worlwide.



Source:
EY; ETFGI

The growth of ETF

The amount of cash invested in ETFs has been growing remarkably after their mass introduction in the early 2000s, and they continue to gain ground in terms of number and popularity.

2. TYPES OF ETFS

BOND ETFS

Type(s) of securities	Bonds
Description	▪ **A bond ETF tracks an index of bonds and tries to replicate its returns.** ▪ Might include government bonds, corporate bonds, and state and local bonds-called municipal bonds.
Examples	▪ iShares Core U.S. Aggregate Bond ETF ▪ Vanguard Total Bond Market ETF

STOCK ETFS

Type(s) of securities	Stocks
Description	▪ **A stock ETF, or exchange-traded fund, is an asset that tracks a particular set of equities, similar to an index.** ▪ These ETFs can track stocks in a single industry, such as energy, or an entire index of equities like the S&P500.
Examples	▪ SPDR S&P 500 ETF (SPY) ▪ iShares Core S&P 500 ETF (IW)

INDUSTRY ETFS

Type(s) of securities	Multiples
Description	▪ **Track a particular industry such as technology, banking, or the oil and gas sector.** ▪ Might include stocks, bonds ...
Examples	▪ Vanguard Real Estate Index Fund ▪ Financial Select Sector SPDR Fund

COMMODITY ETFS

Type(s) of securities	Commodities
Description	▪ **Invest in commodities including crude oil or gold.**
Examples	▪ Invesco DB Commodity Index Tracking Fund ▪ iShares GSCI Commoditv-Indexed Trust

3. VARIETY AND POPULARITY

Variety of ETFs

ETFs have a number of features that make them a great investment choice for beginner investors.

The first ETFs were introduced in the late 1980s and early 1990s. They were relatively plain-vanilla products that tracked equity indexes such as the S&P 500 and the Dow Jones.

Since then, the range of available ETFs has exploded to include practically every asset classes – stocks, bonds, real estate, commodities, currencies, and international investments – among any sectors you would be looking to invest in.

As of 2021, there were more than 2'460 U.S.-based ETFs, according to NYSE's latest data.

For new investors, this wide variety of ETFs offers a great opportunity to achieve significant diversification effects with a single investment.

4. FEATURES

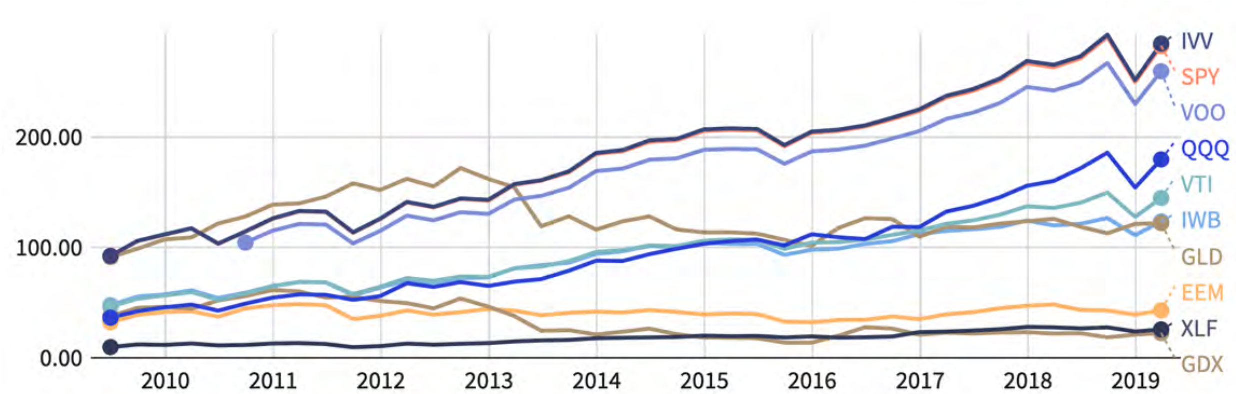
Liquidity

Most ETFs are liquid and, as explained earlier, can be traded throughout the day.

This is a major advantage over other mutual funds, which are priced only at the end of the business day based on the closing NAV.

Particularly, this is a critical differentiating factor for beginner investors, who may like to exit a losing investment immediately in order to preserve their limited capital.

QUARTERLY ETF SHARE PRICE
Quarterly share price of 10 popular ETFs, 2009 to 2019.



SPDR S&P 500 ETF Trust; iShares Russell 1000 Value ETF; Invesco QQQ Trust Series I; Vanguard S&P 500 ETF; Vanguard Total Stock Market ETF; iShares Core S&P 500 ETF; SPDR Gold Shares; iShares MSC/ Emerging Markets ETF; Financial Select Sector SPDR Fund; VanEck Vectors Gold Miners ETF

Source: Bloomberg

Lower fees

ETFs generally have lower expense ratios than mutual funds. The average mutual fund still has an internal cost well over 1%, whereas most ETFs will have an internal expense ratio typically between 0.30-0.95%. Additionally, many online brokers offer commission-free ETFs, even for investors with small accounts.

Tax-friendly investing

Unlike mutual funds, ETFs are very tax-efficient. Mutual funds typically have capital gain payouts at year-end, due to redemptions throughout the year. On the other hand, ETFs minimize capital gains by doing like-kind exchanges of stock, thus shielding the fund from any need to sell stocks to meet redemptions. Therefore, it is not treated as a taxable event.

Investment management strategy

ETFs enable investors to manage their investments in the style of their choice – passive, active or somewhere in between. Sector ETFs also enable investors to take bullish or bearish positions in specific sectors, or markets.

MUTUAL FUNDS

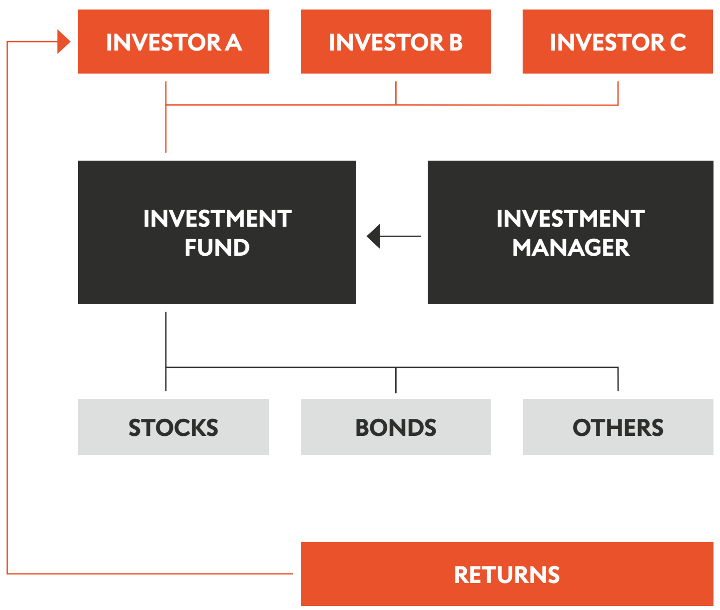
1. UNDERSTANDING MUTUAL FUNDS

What are mutual funds?

Mutual funds are financial vehicles that allow a diverse range of investors to pool money together with the aim of investing in securities such as bonds, stocks, or money-market instruments.

Mutual funds are managed by professionals who leverage their experience and expertise to smartly allocate the available capital and therefore generate capital gains on behalf of investors.

How do mutual funds work?



1. **Collection**
   Investors pool their money together

2. **Allocation**
   Fund managers pick securities and invest in them

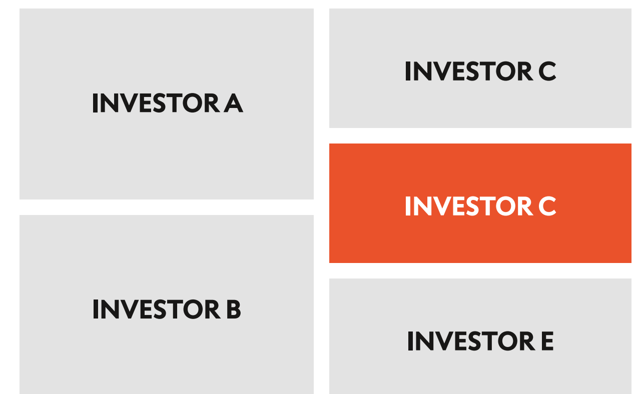
3. **Return**
   Returns generated by securities are passed down to investors

How do mutual funds work?

As explained, mutual fund managers collect capital from many investors, pool this money into a mutual fund vehicle, and then deploy the pooled money by investing in different types of securities, in exchange of management fees.

Portfolio's value

In this context, each investor receives a number of shares that is proportional to the amount invested. However, owning a mutual fund share is different than owning a stock! Indeed, mutual fund shares do not provide owners with any voting rights. Instead, these shares represent a fraction of the portfolio's value. Therefore, shareholders contribute proportionally to the profits and losses of the fund.



How are mutual fund share prices calculated?

Mutual fund shares can be freely bought and sold. Hence, current prices must be determined. **One of the most common way to compute mutual fund shares price is to calculate the fund's Net Asset Value (NAV).**

$$\text{NAV} = \text{Fund's Assets} - \text{Fund's Liabilities}$$

We can then derive the Net Asset Value Per Share (NAVPS) by dividing the NAV by the total amount of shares outstanding.

How are investors remunerated?

There are 2 different ways for investors to earn a return on their mutual fund investments: distribution, and capital gains

DISTRIBUTION	**Dividends / Interests –** Since mutual funds invest in stocks and bonds, both dividends and interest income might be earned. This is the first way that allows investors to earn a return. Indeed, mutual funds often give the choice between either receiving these dividends / interests in the form of distributions, or reinvesting the proceeds to get more fund shares.
CAPITAL GAINS	**Trading gains –** Mutual fund investors can also get a return by selling their mutual fund shares at a higher price than the initial purchase price

How are fund managers remunerated?

In exchange for professionally managing the collected capital, mutual fund managers charge annual fees.

These fees can take the form of management fees, typically ranging between 0.5% and 2% of assets under management, or transaction fees.

2. TYPES OF MUTUAL FUNDS – STOCK FUNDS

SAFE

1

Money market funds
These funds invest primarily in short-term debt products such as Treasury bills. Due to the low level of risk, money market funds are considered as safe vehicles, but do not generate substantial returns.

2

Fixed-income (bond) funds
Fixed-income funds allocate capital into products which generate a fixed and predictable series of cash-flows, such as corporate or government bonds. Risks can vary dramatically according to the type of bonds the fund invests in.

3

Balanced funds
Balanced funds aim at reducing exposure risk trough diversification across asset classes. According to business cycles and market conditions, these funds will allocate capital differently.

4

Stock funds
Stock funds invest in equity instruments, which can be categorized based on the size (large/mid/small-cap), the industry of issuers (industrials, TMT, healthcare, etc), but also the selected strategy (value/growth).

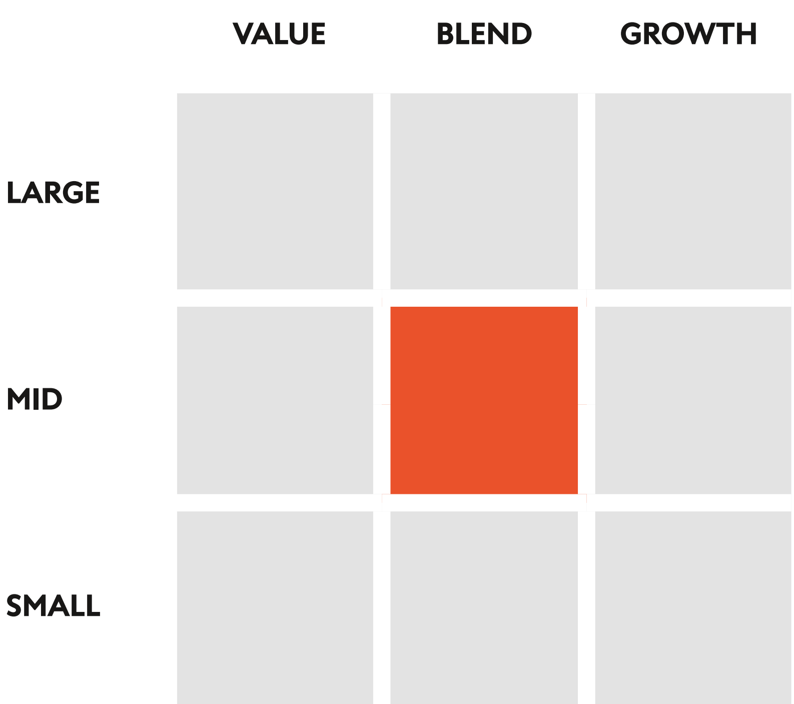
RISKY

What are stock funds?

This is the largest and most common type of mutual funds. As the name suggests, stock funds invest primarily in stocks. To help investors select the stock funds that best fit their own investment objectives and risk profile, these vehicles are often categorized based on several criteria.

How are stock funds classified?

Beyond the simple industry categorization, investors often use the following matrix to classify the broad universe of equity that exists. Of course, each and every one of these types has its own risk–reward profile, that investors should take into consideration.



Source: Investopedia

Classification matrix

As previously explained, the below matrix can help investors tailor their selection of stock funds.

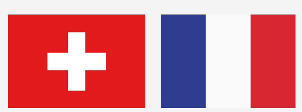
	VALUE Stocks trading below intrinsic value	**BLEND** Compromise between value and growth investing	**GROWTH** Stocks with better-than-average growth prospects
LARGE Market capitalization exceeding USD 10bn	Johnson & Johnson Walmart ExxonMobil	**Undervalued large-cap firms with high-potential**	Microsoft salesforce NVIDIA
MID Market capitalization between USD 1bn and USD 10bn	EVERSOURCE CORTEVA agriscience MOTOROLA SOLUTIONS	**Undervalued mid-cap firms with high-potential**	amedisys HOME HEALTH • HOSPICE • PERSONAL CARE
SMALL Market capitalization below USD 1bn	SkyWest AIRLINES LIVEPERSON e+	**Undervalued small-cap firms with high-potential**	UNISYS TRONOX VirnetX

What are bond funds?

Bond funds invest available capital in debt instruments such as corporate and government bonds, but also other debt instruments. Bond funds aim at generating a relatively safe and periodic return for investors, through both interest payments and capital gains by buying undervalued bonds and selling them at a profit.

How are bond funds classified?

Bond funds are often classified based on both the bond issuer type (corporates/governments) and the bond rating (investment grade/high-yield) given by rating agencies, which leads to different risk–reward profiles.

	INVESTMENT GRADE Bonds issued by gov./firms with a rating above BBB- from S&P	**HIGH-YIELD** Bonds issued by gov./firms with a rating below BBB- from S&P
CORPORATE Bonds issued by a company	Johnson & Johnson Microsoft	Ford OXY
GOVERNMENT Bonds issued by a national government		

3. ADVANTAGES & DISADVANTAGES

Advantages

1 **Diversification**
Significant diversification effects can be achieved by investing in mutual funds rather than in a few stocks independently, since mutual funds typically invest in 100+ securities.

2 **Professional portfolio management**
By investing in mutual funds, investors' money will be managed by experienced investment professionals.

3 **Accessibility & convenience**
Mutual funds often have low minimum ticket (typically around USD 2'000) which allows small investors to get access to them. Moreover, they are traded only once a day based on their closing NAV, which partially eliminates the risk of large price variation.

Disadvantages

1 **Costs & quality of management**
Management fees can sometimes be high, while not guarantying the quality of portfolio management.

2 **Lock-up periods**
Some mutual funds impose long-term lock-up periods (5-8 years) which forces investors to keep their money in.

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