For professional investors – marketing communication

AN INVESTOR'S GUIDE TO ACTIVE ETFs

BNP PARIBAS ASSET MANAGEMENT

The sustainable investor for a changing world

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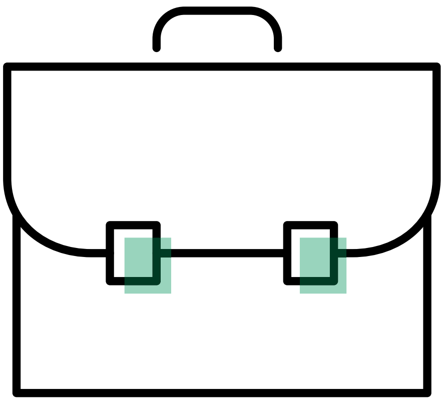
INTRODUCTION

Since European UCITS exchange traded funds (ETFs) were launched 25 years ago, they have become one of the most popular ways for institutions and individuals to invest in diversified portfolios of assets, mainly equities and bonds.

For most of that time, ETFs have been closely associated with passive, index-tracking investment strategies. But with the spread of actively managed ETFs, this is starting to change.

This paper provides an overview of European active ETFs and their role in investment portfolios today.

"ETFs HAVE BEEN ASSOCIATED WITH PASSIVE, INDEX-TRACKING STRATEGIES. WITH ACTIVELY MANAGED ETFs, THIS IS STARTING TO CHANGE"



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WHAT ARE ACTIVE ETFs?

Active ETFs use the same fund structure as passive ETFs. But instead of replicating an index, they hold a portfolio of assets – usually equities or bonds – selected by a fund manager.

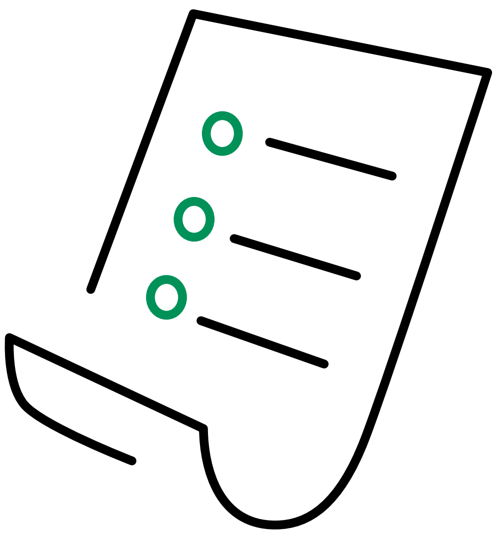
Active ETFs usually try to outperform a benchmark through security selection – though there are exceptions to this rule. For example, in the case of sustainability, some active ETFs select assets that enhance the environmental, social and governance (ESG) profile of their portfolio relative to the benchmark index, while trying to match its performance as closely as possible.

Established rules

Importantly, active ETFs in Europe operate under the same UCITS (undertakings for collective investment in transferrable securities) rules that govern mutual funds, providing investors with the reassurance of an established and proven regulatory regime.

Unlike passive ETFs, which only change part of their holdings to rebalance their underlying index, active ETFs can buy and sell more frequently. But as with all funds, higher portfolio turnover will drive up trading costs and affect returns.

Most active ETFs launched in Europe so far have been domiciled in Ireland (nearly 90% of them).[1] More recently, other European countries including France and Luxembourg have taken concrete actions to encourage the creation of this type of product in their jurisdiction.

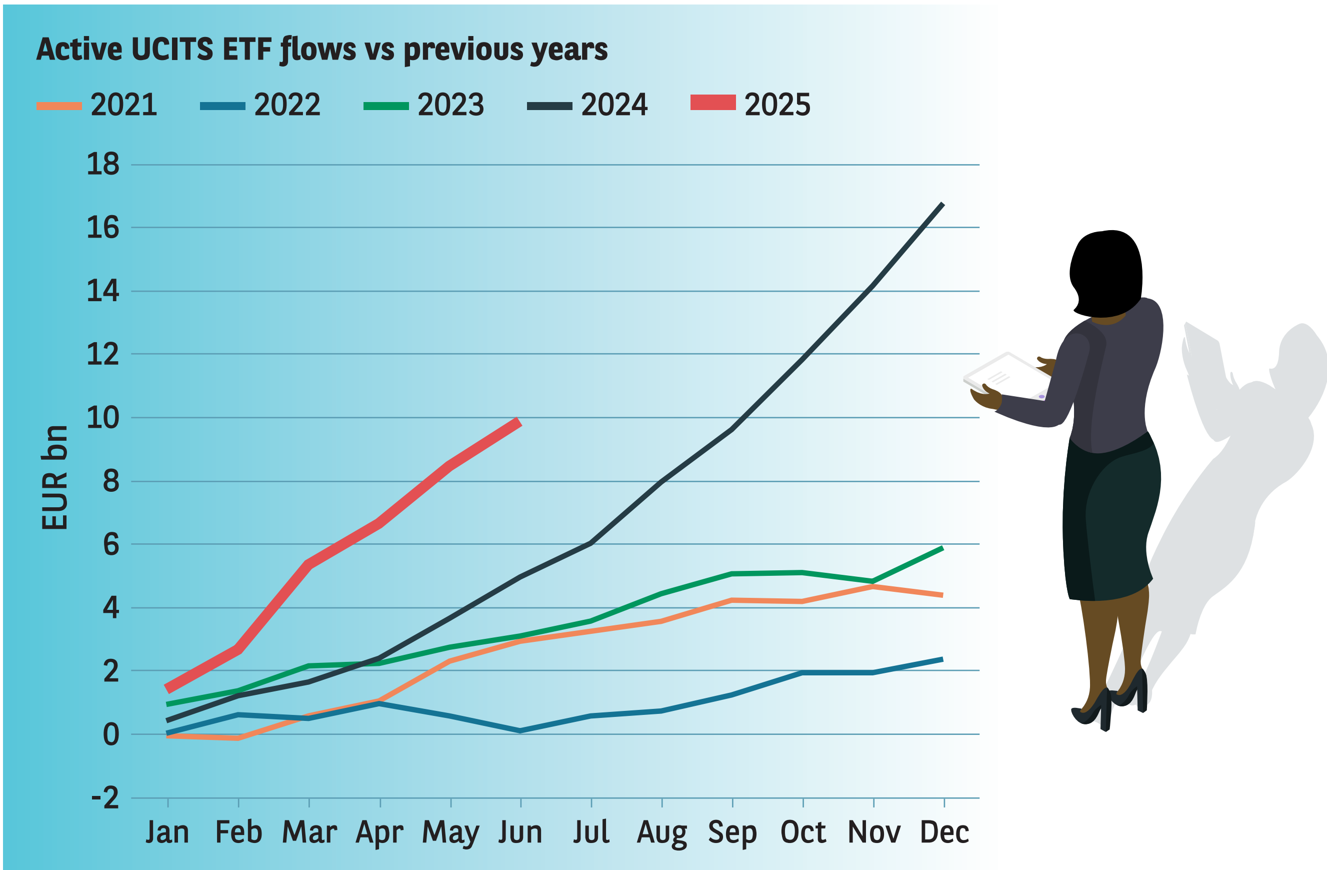


"FRANCE AND LUXEMBOURG HAVE TAKEN CONCRETE ACTIONS TO ENCOURAGE THE CREATION OF THIS TYPE OF PRODUCT IN THEIR JURISDICTION"

1. ETFbook.com

HOW BIG IS THE MARKET FOR ACTIVE ETFs IN EUROPE?

Active ETFs account for about 2.5% of the overall European ETF market, which has assets under management (AUM) of about $2.3 trillion (£1.7tn).[2] EY forecasts it could reach $4.5 trillion by 2030.[3] However, growing interest in active ETFs has led to more launches in Europe over the past two years. As a result, flows into active ETFs are now growing faster than flows into traditional, passive ETFs.



Source: ETFbook.com, BNP Paribas Asset Management, as of 30/05/2025

In the five months to the end of June 2025, net new cash of €147bn (£126.4bn) was invested in European ETFs, with 6.7% of that money going into active ETFs. Active ETFs' share of new money is therefore trending well above their 2.7% share of existing AUM.[4] This growth rate is expected to accelerate over the remainder of this decade. According to a survey of industry executives by PwC, published in March 2025, 65% of respondents expect global active ETF AUM to reach at least $3 trillion by 2029.[5]

2. ey.com. 3. ey.com. 4. ETFbook.com, BNP Paribas Asset Management as of 30/06/2025. 5. pwc.com

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Within the active ETF universe, fixed-income active ETFs have grown especially quickly, thanks to their ability to outperform traditional fixed-income benchmarks. The improved liquidity and trade execution that ETF market makers have brought to fixed-income markets over the past decade have also been important drivers of growth in fixed-income ETFs, both active and passive.

WHY ARE ACTIVE ETFs BECOMING MORE POPULAR?

Several factors explain why investors are rapidly adopting active ETFs. Chief among these is the huge success and strong recognition that passive ETFs have gained in recent years. However, there is nothing inherently passive about the ETF structure – it is simply a wrapper that can contain an actively managed portfolio or one that replicates an index.

In addition, active ETFs benefit from being part of Europe's UCITS regulatory framework. The 40-year history of this regulation means that it is well understood and trusted by investors all over the world.

Active ETFs have other important advantages:

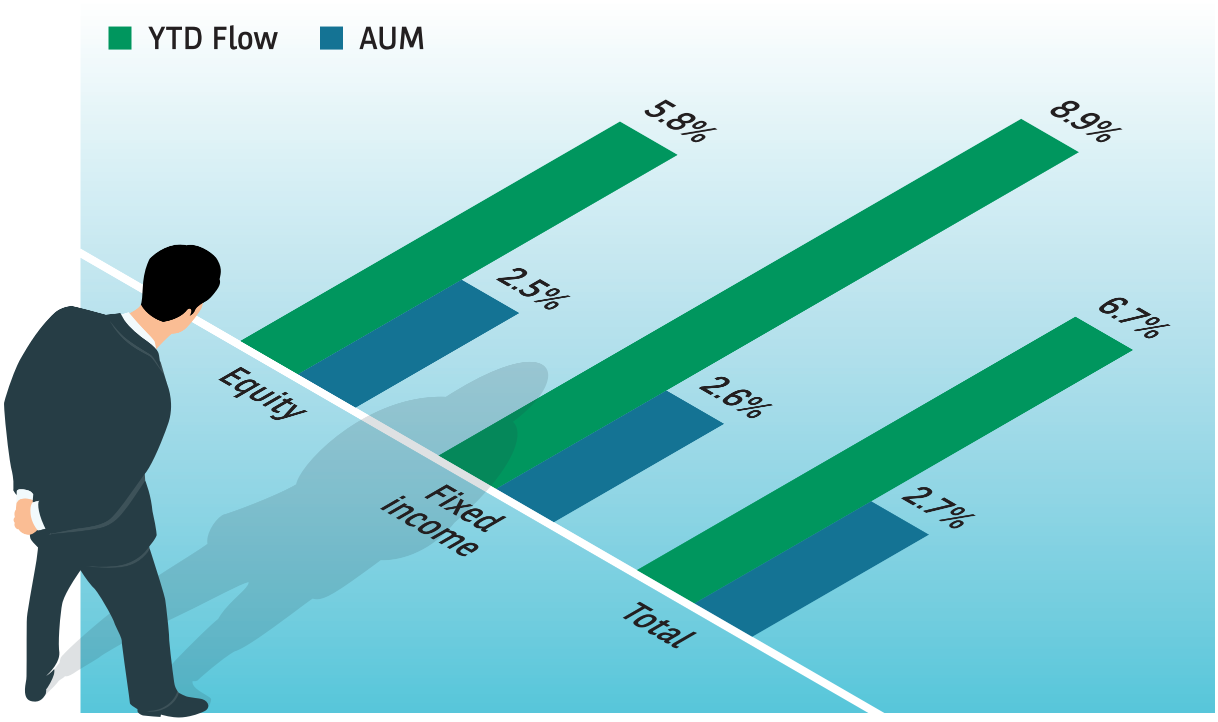
- **Low tracking error:** To date, most active ETFs launched in Europe aim for a low tracking error. This enables investors to target returns that are close to the reference benchmark while also benefiting from, for example, a higher ESG rating or improved diversification
- **Cost:** Management fees for active ETFs tend to be lower than those for mutual funds[6]
- **Ease of dealing:** Active ETFs can be bought and sold throughout the trading day on a range of stock exchanges, rather than being priced once a day like traditional mutual funds
- **Transparency:** Most European active ETFs publish their full list of holdings every day. Although regulations for active ETFs, notably in France and Luxembourg, allow managers to publish their full holdings once a month, in practice most continue to publish daily
- **Distribution:** ETFs are widely available through online brokers, giving active ETFs the opportunity to benefit from a large, well-established distribution system

6. ft.com

Thanks to these features, active ETFs are gaining ground as a way for investors to access active investment strategies with greater transparency and generally lower costs than mutual funds. To date, the most popular active ETFs have offered "enhanced" strategies, which maintain a similar risk profile to the underlying benchmark with additional objectives such as alpha generation or an enhanced ESG score.

The main users of active ETFs currently are institutional investors and managers of multi-asset portfolios. These investors use active ETFs as building blocks that bring a low-cost active or thematic tilt to their portfolio relative to the traditional indices. This could involve adding an active component to their allocation, or increasing their exposure to companies with higher ESG scores.

Active UCITS ETFs as a percentage of overall market



Source: ETFbook.com, BNP Paribas Asset Management as of 30/05/2025

WHAT ARE THE KEY CRITERIA FOR SELECTING AN ACTIVE ETF?

In selecting an active ETF, investors need to satisfy themselves on the basic considerations that apply to all ETFs. These include the liquidity of the fund, the transparency around its holdings, the quality of the market makers that quote its shares and the size of the bid-offer spreads. Investors should also be aware that ETFs holding US equities domiciled in Ireland benefit from a lower tax charge on US dividends, compared with funds domiciled in other jurisdictions.

In addition, we would highlight five key considerations for investors when evaluating active ETFs specifically:

1. There should be a compelling rationale for the manager's investment strategy, clearly communicated and ideally backed by academic evidence

2. The fund's back-testing should make clear which sources of return generated any historic outperformance against the benchmark

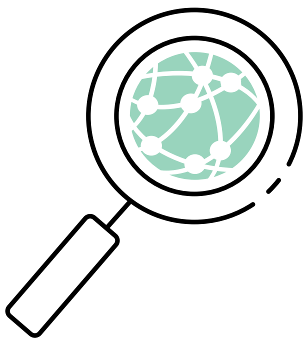
3. The portfolio should avoid major concentrations in particular sectors or countries

4. Modest portfolio turnover is preferable, as this helps to limit trading costs that will detract from net returns

5. Tracking error is a key risk management consideration – but we believe it is also important to choose funds that are exposed to a range of style factors (size, value, quality, momentum and volatility, for example) because they are more likely to perform consistently through different market regimes and to show resilience during recessions

With these factors in mind, we highlight two use cases for active ETFs that combine low tracking error with enhanced investment strategies designed to increase exposure to desired portfolio characteristics.

"CHOOSE FUNDS THAT ARE EXPOSED TO A RANGE OF STYLE FACTORS – THEY ARE MORE LIKELY TO PERFORM CONSISTENTLY"



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USE CASE 1: ALPHA INTEGRATION

Active ETFs typically aim to outperform a reference index through security selection. Active ETFs focused on alpha generation target a specific level of alpha, or returns above the overall market performance. They pursue this by overweighting certain securities with specific characteristics and underweighting or excluding other constituents of their benchmark.

The BNP Paribas Asset Management (BNPP AM) Alpha Enhanced ETF range uses a multi-factor approach developed by our quantitative research and investment teams. This method is already applied to funds totalling approximately €6.5bn of AUM, which have shown consistent performance in various market environments over the past 10 years.

Our multi-factor approach is built around four key pillars:

1. Quality – favouring securities issued by the most profitable and well-managed companies
2. Value – targeting undervalued instruments
3.. Low risk – preferring assets that are known to offer better risk-adjusted returns on average over time
4. Momentum – focusing on securities showing strong recent performance, sentiment or earnings trends

These pillars are economically intuitive, supported by high-quality historical data, and generate acceptable turnover in portfolios relative to anticipated transaction costs and market impact.

With Alpha Enhanced ETFs, this multi-factor strategy is adapted to target a lower tracking error – approximately 1.5% for equity products, 0.5% for Investment-grade credit and 1% for high yield – making them viable building blocks in a core allocation to the major global equity and corporate bond markets.[7]

When complete, the range will comprise:

- **Three active equity ETFs:** US, Europe and global large cap
- **Three active fixed-income portfolios:** US dollar and euro investment-grade credit, and global high yield ETFs

7. BNPP AM, 31/05/2025

USE CASE 2: ESG INTEGRATION

A second popular use case for active ETFs is to enhance the ESG performance of a portfolio relative to its benchmark index by increasing exposure to equities and bonds issued by companies with higher ESG scores. ESG data is used to modify the composition of an underlying index by overweighting companies with stronger ESG scores and underweighting or excluding low-scoring companies.

However, using stock selection to add an ESG tilt to an underlying index involves challenges. First, tracking error can increase the more the modified index diverges from the conventional version. Second, the asset manager needs to apply its proprietary ESG approach in constructing the portfolio so that it meets key thresholds such as specified levels of exposure to sustainable investments or decarbonisation targets. This differs from traditional, passive ETFs that rely on ESG data from the index provider or its data partners.

At BNPP AM, we apply an active approach to selecting portfolio holdings based on our internal ESG[8] data, backed by direct engagement with companies through our Sustainability Centre. We then optimise the portfolio weights to minimise tracking error relative to the benchmarks. The current BNPP AM ESG Enhanced ETF range comprises a euro government bond fund that has a minimum of 30% of sustainable investments via green bonds, with tracking error of six basis points.

We also offer an SFDR[9] Article 9 Euro corporate bond ESG Enhanced ETF that has 100% sustainable investments and a tracking error of 11 basis points, relative to Bloomberg's Investment Grade Euro Corporate Bond Index.[10]

For investors looking at equity exposure, we have launched ESG enhanced ETFs based on the following indices: MSCI World, S&P 500, MSCI Europe and MSCI Japan.

These ESG enhanced equity ETFs follow a set of ESG criteria that includes a minimum of sustainable investments between 45% and 60% and a decarbonisation target of around 50%, while maintaining a low tracking error of 1%-1.5% relative to the underlying indices.

8. ESG assessments are based on BNPP AM's proprietary methodology which integrates all 3 aspects of E, S & G. 9. SFDR: Sustainable Finance Disclosures Regulation. Regulation 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosure in the financial services sector. Article 8 products promote environmental or social characteristics; article 9 products have a sustainable investment objective. 10. The Bloomberg Euro Corporate Bond Index is a broad-based benchmark that measures the investment grade, euro-denominated, fixed-rate corporate bond market. Inclusion is based on currency denomination of a bond and not country of risk of the issuer. The Euro Corporate Index is a component of other flagship indices, such as the Euro Aggregate and multi-currency Global Aggregate Index. The Euro Corporate Index was launched on 1 June 1998.

THE FUTURE

Active ETFs are gaining popularity thanks to their ability to generate alpha or enhanced ESG characteristics, as well as more prosaic factors also associated with passive ETFs such as lower costs and greater transparency. The market is still in its infancy and will inevitably face challenges as it matures. However, in time, we expect active ETFs will become an integral part of global investment portfolios.

“WE EXPECT ACTIVE ETFs WILL BECOME AN INTEGRAL PART OF GLOBAL PORTFOLIOS”

INVESTMENT RISKS

These investments are subject to market fluctuations and the risks inherent in investments in securities. The value of investments and the income they generate may go down as well as up and it is possible that investors will not recover their initial outlay. The funds described are at risk of capital loss.

Interest rate risk: The value of an investment may be affected by interest rate fluctuations. Interest rates may be influenced by several elements or events, such as monetary policy, the discount rate, inflation, etc.

Credit risk: This is the risk that may derive from the rating downgrade of a bond issuer to which the sub-funds are exposed, which may cause the value of the investments to go down. Sub-funds investing in high-yield bonds present a higher-than-average risk due to the greater fluctuation of their currency or the quality of the issuer.

Counterparty risk: This risk relates to the quality of the counterparty with whom the management company does business, in particular for the settlement/delivery of financial instruments or the conclusion of financial forward contracts. The risk reflects the counterparty's ability to honour its commitments (payment, delivery, repayment, etc.).

Liquidity risk: There is a risk that investments made in sub-funds may become illiquid due to an over-restricted market (often reflected by a very broad bid-ask spread or by substantial price movements), or if their "rating" declines or their economic situation deteriorates.

Derivatives risk: The use of derivatives by the funds includes various risks. Those risks are (without limitation), the lack of secondary market liquidity under some circumstances, valuations risks, the lack of standardisation and regulation, the risk of leverage, the risk of counterparty.

Risk linked to equity markets: The risks associated with investments in equities (and similar instruments) include significant fluctuations in prices, negative information about the issuer or market and the subordination of a company's equities to its bonds. The value of investments and the income they generate may go down as well as up and it is possible that investors will not recover their initial outlay.
Environmental, Social and Governance (ESG) investment risk: The lack of common or harmonised definitions and labels integrating ESG and sustainability criteria at EU level may result in different approaches by managers when setting ESG objectives. This also means that it may be difficult to compare strategies integrating ESG and sustainability criteria to the extent that the selection and weightings applied to

investments may be based on metrics that share the same name but have different underlying meanings. In evaluating a security based on the ESG and sustainability criteria, the Investment Manager may also use data sources provided by external ESG research providers. Given the evolving nature of ESG, these data sources may for the time being be incomplete, inaccurate or unavailable. Applying responsible business conduct standards in the investment process may lead to the exclusion of securities of certain issuers. Consequently, the sub-fund's performance may at times be better or worse than the performance of relatable funds that do not apply such standards.

VIEWPOINT

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