

An update from the Multi-Manager People

BMO Multi-Manager PassiveWatch



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Telephone calls may be recorded.

Welcome to the 7th edition of BMO Multi-Manager PassiveWatch, an annual review and analysis of the passive fund industry. All data is from Lipper Global sectors and is calculated in total return terms in sterling for periods ending 31st December 2020.

This edition's analysis includes:

- 1 **Tops and Bottoms** – a look at the range of performance of passive funds in the main Lipper Global sectors.
- 2 **A decade of active and passive investing** – A decade is a long-time horizon. How did passive investing get on and when was a good time to use it?
- 3 **20 Years** – how have both active and passive funds compared over the long-term?
- 4 **Passive Popularity** – a review of passive fund growth and into which sectors.
- 5 **Industry news** – investing passive developments that have caught our eye.
- 6 **Aspects of Selection** – things to be aware of when selecting passives (smart beta, methodology, tracking error, costs, stock lending etc).
- 7 **The BMO Multi-Manager People view** – how we use and don't use passive.

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Past performance is not a guide to future performance.

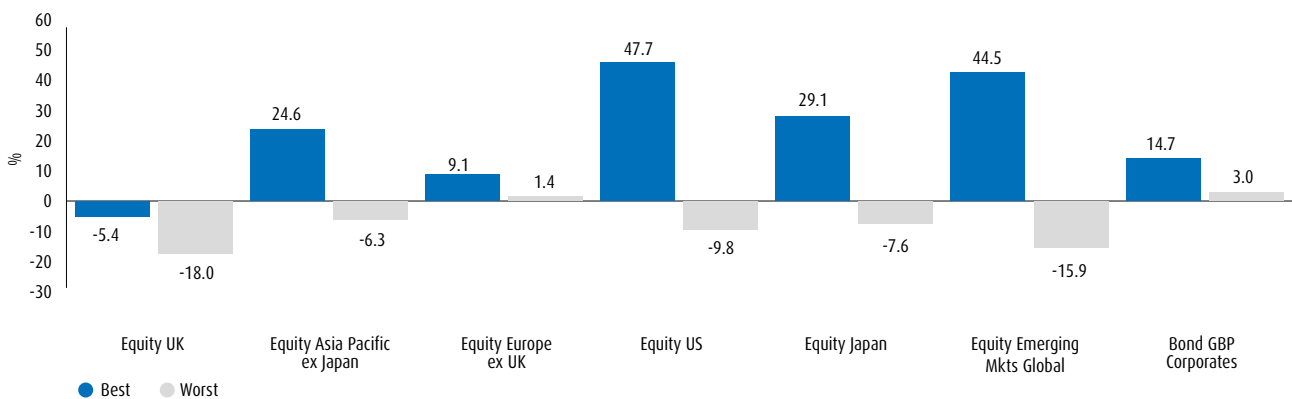
Stock market and currency movements mean the value of investments and the income from them can go down as well as up and you may not get back the original amount invested.

Executive Summary

1. As usual, there is a vast range of performance between the best and worst passive funds due to the choice of index benchmark, charges, dividend policy, gearing, currency, tracking methodology and other features. For example, over just one year the best and worst passive funds in the Lipper Global Equity – Emerging Markets Global sector performance from passives spans a 60% range!
2. For the first time in Passivewatch’s 7 years of publication, an active manager beat passive in the US market over 10 years.
3. The best active equity managers have delivered as much as eleven times their index benchmark over 20 years.
4. Also, over 20 years, the average passive fund has underperformed when compared to a dominant reference index by an average of 62% over the five markets.
5. The huge growth in the number of passives continued, increasing their influence on the average fund returns. Across the seven market groups we survey, in 2000 there were a total of 72 passive funds. By the end of 2020 this had grown to 451, a six-fold increase.
6. 2020 favoured ETFs with acronyms for a theme-hungry market – ESG, WFH, IPO were all hot as were the wordier themes of energy transition and others.
7. But volatility can kill – the leveraged word was a feature of many of the fund closures in 2020.
8. An ‘agnostic’ approach that accepts that, over any sensible investing period, both active and passive can play a role at different times for different markets would seem to be underpinned by the data.

1 Tops and Bottoms – a look at the range of passive performance in the main Lipper Global sectors in 2020

Best & worst passive returns per sector in 2020



Source: Lipper as at 31-Dec-20.

The returns above are for passive funds only, showing the best and worst performers over one year. The differences range from only 7.7% in the Equity Europe ex UK sector to 60.4% in the Equity Emerging Markets Global sector, highlighting the importance of choosing the index you want and a good passive manager. In fact, the average range between the best and worst passive return across was 31.1% – more than a 10%

increase than the 2019 data.

This divergence between the returns available demonstrates different options to the passive fund buyer. When we delve deeper into each Lipper Global sector, we find that this increased variability in returns is often due to country or style indices, highlighting the opportunity for the ‘active’ passive fund buyer.

2 A decade of passive and active investing

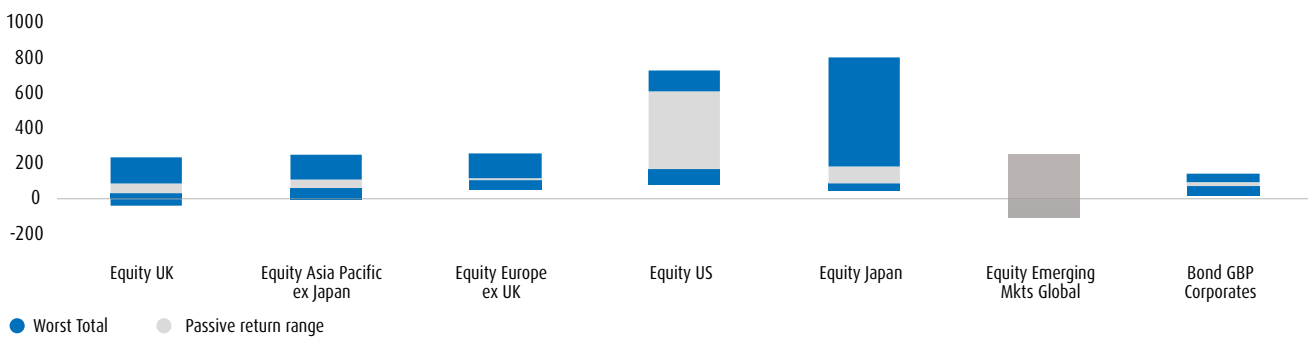
Over the past decade, the range of performance for both passive and active is shown below. From this we can see, as perhaps expected, there is a smaller range of performance for passives, while the highest performers in the active world are almost always very significant outperformers and well worth trying to identify. Even in the US, a market with notoriously difficult major indices to beat, the best active manager bettered the best passive fund by a substantial 120% – the first time it has happened since our publication began in 2014!

The only sector to buck the active trend was Global Emerging

Markets with the FirstTrust Chindia ETF, a passive fund providing sole exposure to technology stocks in the Chinese and Indian stock markets.

Currency hedging can account for much of the difference in returns in some sectors, with leveraged ETFs a factor in some others and sector biases too, such as NASDAQ. Selecting the appropriate index and analysing the costs of the product as a starting point is an obvious but important point to ensure the required market exposure is being taken. The method of tracking and tracking error are also important, something we review later in this paper.

A decade of passive & active investing



Source: Lipper as at 31-Dec-20.

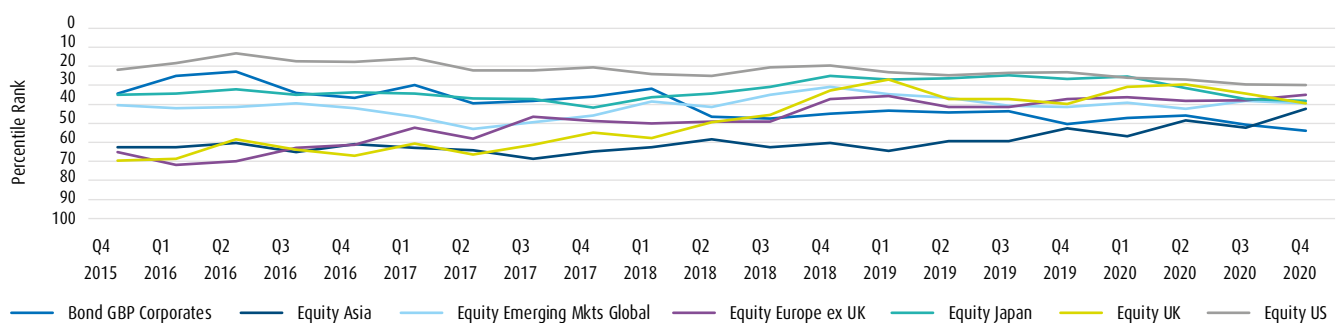
When was a good time to use passive?

We took the largest four passive funds by AUM for each sector, as at 2020 year-end, and calculated a simple mean of their percentile rank on a rolling five-year window, to try and understand when passives outperformed their respective Lipper peer groups and when they did not. The results revealed a wide dispersion between the sectors.

What's striking is how varied the percentile ranks have been in recent periods for all of the major indices. For instance, the four

largest European passive funds ranked as low 71th percentile for five years to the end of Q1 2016. Since then, the passive funds have surged to finishing 35th percentile, proving the recent period to be tough for the average active manager. The hardest place for active management has consistently been the US market, where the average of passive funds has mostly been top quartile over each of the five-year windows reviewed. However, the trend is now less favourable for the US market, showing active managers to have had an improved opportunity of late.

Rolling passive performance



Source: Lipper as at 31-Dec-20.

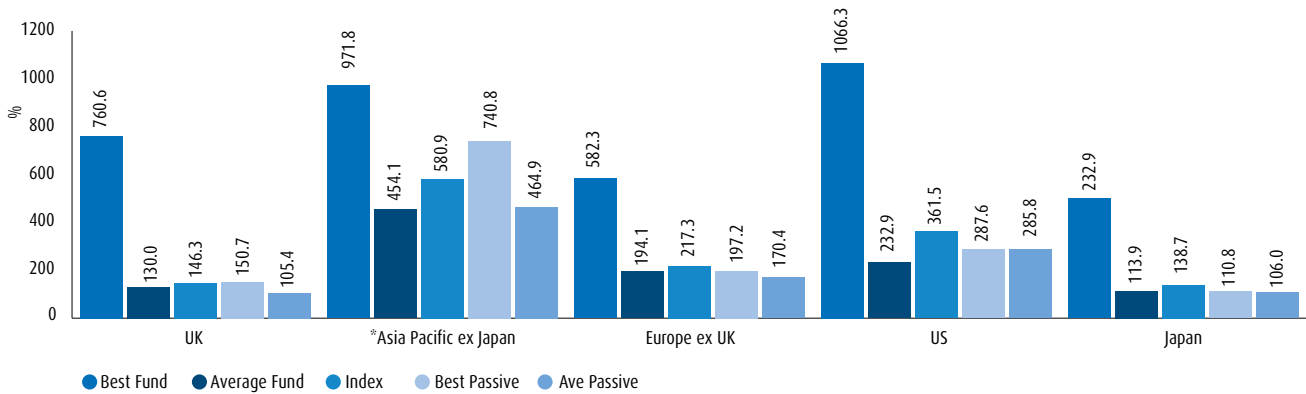
3 Returns over a 20 year period

We reviewed both active and passive funds over a 20-year period. We had to remove Global Emerging Markets and Bond GBP Corporates from the analysis at this point as there were no passive funds on offer in these two sectors 20 years ago.

We compared the performance of the best fund in each sector against the average fund (both active and passive), the index*, the average passive return and the best passive return.

The most striking observation is the scale of the outperformance of the best-performing fund. In the UK sector, the best-performing active fund outperformed the average passive fund by a multiple of 7.2x. In the Japan it was 4.7x and in Asia the best fund delivered a return just over double the average passive fund. In summary, in every market it would have been worthwhile identifying the best active fund in the market, rather than passive.

20-year returns



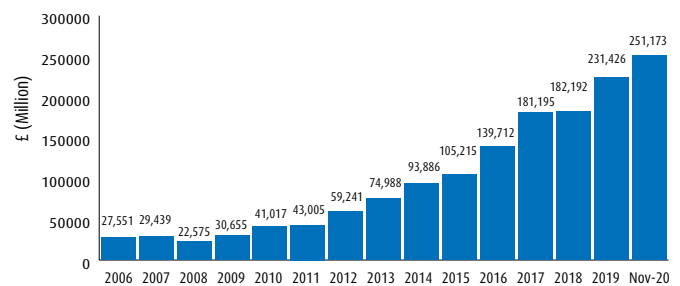
* Indices used: FTSE All-Share, FTSE World Asia Pacific ex Japan TR GBP, FTSE World Europe ex UK TR GBP, S&P 500 TR and FTSE Japan TR. Source: Lipper as at 31-Dec-20.

4 Passive fund growth

According to the latest available figures released by the Investment Association, retail sales of passive funds to the end November 2020 were £17.5bn, an increase of £1.2bn on the entire flow of 2019 despite the volatile markets. Their overall share of industry funds under management rose to 17.9% with a total AUM of £251.2bn.

Passive funds continued to take market share from active managers at a growing pace, but with less than 20% of the total Investment Association assets in passive funds, there would appear significant flows for passive managers to still aim for.

Passive fund growth



Source: Investment Association as at 31-Dec-20.

Sector Trends

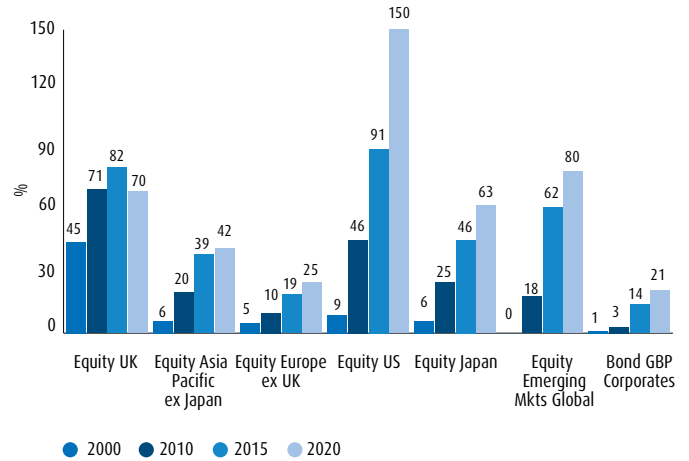
As we have in each edition, we have spent some time analysing seven popular sectors within the Lipper Global universe and share the results below. We looked at growth in passives over 5, 10 and 20 years of data.

The seven Lipper Global sectors analysed were: Equity UK, Equity Asia Pacific ex Japan, Equity Europe ex UK, Equity US, Equity Japan, Equity Emerging Markets Global and Bond GBP Corporates.

There were 1,778 funds in total registered for sale at the end of 2020 in the UK within these seven sectors, which is down slightly from 2019. 451 of these were passive vehicles (439 last year), around 25% of the total, unveiling active funds to be the primary closure of funds in the market.

Of the 451 passive funds existing today within the seven Lipper Global sectors, 353 of them were in existence five years ago and 193 were around ten years ago. The sector with the highest percentage growth in the number of funds available was Equity US, which has grown from nine funds 20 years ago, to 150 to choose from today.

Number of passive funds



Source: Lipper as at 31-Dec-20.

In which sectors are passives most populous?

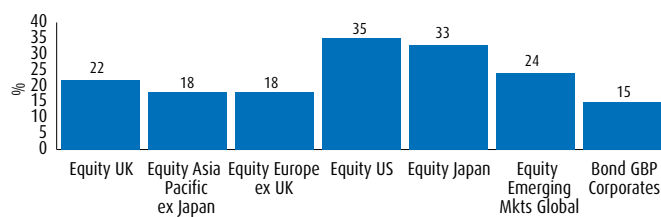
Out of the seven sectors we looked at, the one with the highest proportion of passive funds is now Equity US, replacing Equity Japan, with 145 of its 428 funds (34%) passively managed. The sector with the lowest proportion of passive funds is still Bond GBP Corporates, where 14 of 131 funds (11%) were passively managed.

We are unsurprised by the US market regaining top spot given it is the birthplace of passive fund management, and it remains a hotbed of passive fund innovation. Whilst the S&P 500 remains

the most tracked index in US, the rivalling proportion of passive funds in Japan is more attributed to the market there having two well-known indices to track, Nikkei-225 and Topix, which leads to a disproportionate number of tracker indices on offer.

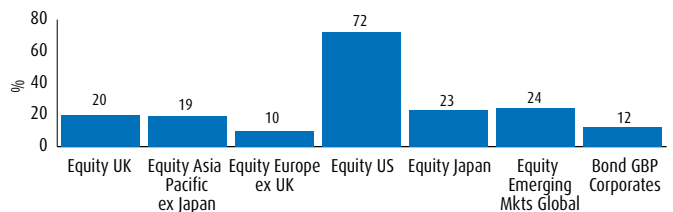
Consistent with last year, there remains a huge number of indices being tracked. If we look at the UK for example, although the two most common indices are the FTSE 100 Total Return and FTSE All-Share Total Return, there are a further 19 indices being tracked.

Passive funds as a proportion of sector



Source: Lipper as at 31-Dec-20.

Indices per market



Source: Lipper as at 31-Dec-20.

5 Passive News: A review of developments we have noticed over the last 12 months

The clients went in 2-by-2 (\$billion), Hurrah! Hurrah!

Actively managed ETFs, a relatively new arm of the ETF universe, grew in popularity over 2020 – none more so than those managed by ARK Invest. The New York based group (albeit all working remotely) began the year with less than \$3bn assets under management in five ETFs focused on leaders, enablers and beneficiaries of innovation.

After surging on average by 116% through 2020, by year-end, the group led by CEO Catherine Wood were managing over \$50bn in assets, with around two-thirds held in their active ETF suite – a tenfold increase on the beginning of the year. Through December, their flagship fund, ARK Innovation ETF, was trading more shares daily than the majority of the US mega cap stocks, in no small part due to its considerable weighting in Tesla.

Leverage can be destructive

The exchange traded machine continued to crunch through funds, with a new record of 253 closures during 2020, way in excess of the 126 that closed in 2019. When trawling through the wreckage, we couldn't help but notice the number of leveraged products in 2020 – a reminder of the destructive power leverage can be to the downside in periods of market stress. The VelocityShares 3x Long Crude Oil ETN (Exchange Traded Note) is an obvious example of a product that destroyed capital quickly, as the oil price plummeted in April.

Passive ESG

Investors continued to favour ETFs with a conscience through 2020, as assets poured into products focusing on good environmental, social and governance practices. 31 dedicated socially-responsible ETFs were launched in the year, with Blackrock's iShares ESG MSCI EM Leaders drawing in some \$800m since launching in February.

In addition, funds dedicated to renewable energy topped the ETF league table with Invesco's Solar ETF and WilderHill Clean Energy ETF delivering surely-not-sustainable returns of 223% and 196% respectively.

WFH ETFs

With much of the office-based workforce stuck at home for the majority of 2020, there was certainly a rich opportunity in stocks that could benefit from consumption and technology shift.

ETF provider Direxion launched the world's first working-from-home ETF in July, giving investors dedicated exposure to companies whose revenues are tied to the growth in cloud computing, cybersecurity and online connectivity. Companies such as Zoom (no doubt everybody took part in a family quiz) and Twilio (software behind cloud-based calling) feature in the top ten positions.

Blackrock iShares took this a stage further with their 'Virtual Work and Life Multisector ETF', which targets companies that empower not only working remotely, but support a virtual way of life across entertainment, wellness and learning. Whilst we don't wish underperformance on any given fund range, we would certainly like to get back to more face-to-face interactions at some point in the near future!

Even the central banks started buying passive funds

It wasn't just the usual suspects who invested in passive funds in 2020, the Federal Reserve jumped in on the action too. During the market stresses of March 2020, the central bank pumped liquidity into the financial system by purchasing corporate bond ETFs. This action, coupled with the readiness to buy a substantial volume, was a critical turning point for market returns, by signalling to investors they would not allow corporate debt costs to continue to climb. This subsequently allowed a wave of company debt issuance and investors to finance companies in their time of need.

Whilst the Fed used iShares products to facilitate their programme, Blackrock only earned a fraction of their usual fees on the ETFs, agreeing fees of less than 2 basis points on the first \$20bn.

A Renaissance for the post-IPO ETF

In [last year's edition](#), we covered the mini-boom and bust of the Renaissance IPO ETF – a product designed to track the performance of listings in the past two years. With the major market issuance in recent years coming from technology-based businesses, it was unsurprising theses fund outperformed the broader market. However, whilst the S&P 500 finished the year up 15%, the IPO ETF closed the year up a whopping 99.6% – a huge outperformance from companies that are new to the listed market.

6 Aspects of Selection – things to be aware of when selecting passives (methodology, tracking error, costs, stock lending etc.)

What factors can cause slippage in tracking or a high tracking error?

The biggest factors affecting the fund's tracking error are the tracking method employed by the manager (discussed below), the skill of the manager to track the chosen index within the constraints of their methodology and the accrual of ongoing charges, including the management fee, of the fund.

When the tracking fund is set against an index that assumes no annual fees, the ongoing charges alone mean that the fund is destined to underperform. If we consider ongoing charges for passives within a typical range from 0.05% to 1.50% per annum, the impact of these different charges would compound over a 10-year period to 0.501% and 16.054% respectively, and to 1.005% and 34.69% over 20 years.

Another factor that should be considered in regards to the fund's tracking error is cash flow management (avoiding any potential cash drag/dilution caused by cash flow going into or out of a fund) – sometimes managers use index futures to minimise this effect, but as there aren't many liquid futures contracts available (in the UK, the FTSE 100 contract is by far the most liquid), the replication may not be accurate, potentially causing tracking slippage.

Taxation is also a potential issue, including withholding tax on any dividends received on the underlying shares.

Tracking methodology?

There are various different approaches that can be taken by a tracking manager to achieve a return similar to the index being tracked. Each of these methods have their own pros and cons.

1. Full replication

This method involves the fund holding all the stocks within the index in the same proportion as that index. For funds tracking the FTSE All-Share, this involves holding all 636 companies in the index. The main positive of this approach is that the resulting tracking error should be very low. Negatives include high costs due to the amount of dealing required to maintain the correct weights, particularly when factoring in illiquid stocks and changes to index constituents.

2. Stratified sampling

This approach involves buying the largest shares of an index in the same proportion and then holding a sample of shares from different industry sectors within the index, rather than holding every index constituent. The main positive here is that the dealing costs will be much lower as a result. Potential issues include a risk of a higher tracking error due to potential market cap and sector biases, or even stock-specific issues impacting returns versus the index.

3. Optimisation

Similar to sampling in that instead of holding all constituents of a benchmark, the manager holds a sample of stocks; different in that a sample of representative stocks are bought and when held together in a portfolio have similar risk/reward characteristics, and the mix is highly correlated to the index. This method is relatively cheap to construct but can result in a higher tracking error.

4. Synthetic replication

With this method, the manager does not buy the physical shares of a company in the index but instead enters into a swap arrangement with an investment bank. This method is important for asset classes such as commodities as it is impractical to buy the physical exposure. This method offers a low tracking error and typically low fees but does introduce counterparty risk as a potential drawback.

Smart Beta

Active managers through much of investment history have often been characterised by a style of investing, such as 'Value' or 'Growth'. In recent years, systematic tracking strategies known as 'Smart Beta' have been increasingly used by investors to access the styles or factors. However, investors should remember they are rules-based products and are not likely to spot deteriorating fundamentals of underlying businesses, something which active managers are more accustomed to identifying.

Other things to be aware of:

Stock lending:

When considering a tracking fund, consider its ability to lend stock. This is where the manager would lend stock to a third party in return for a fee, which then gets paid into the fund. Whilst fees from this practice can add a few basis points of performance, there is an element of counterparty risk introduced which needs to be considered.

Not all asset classes are ideal for passive investing in our view:

- Property is one example of this. Whilst it is possible to track REITS and property equities, the same cannot be said of gaining passive exposure to bricks and mortar investments. One of the main characteristics and attractions of property as an investment is its low correlation to asset classes such as equities and bonds. This diversification benefit is more

prevalent in bricks and mortar investments whereas property equities tend to be highly correlated (at least in the short term) to equity markets.

- Despite the huge rise in assets under management held in fixed income passive products, we still believe corporate bond investing is an area which is best obtained through a carefully selected active manager. This is primarily due to the construction of the passive indices, which often mirrors the rules of an equity passive fund, wrongly in our opinion. For instance, in a passive equity fund, when a stock price rises and the company is considered larger, all-else-equal, the larger proportion of the fund it comprises. Winners are therefore rewarded. However, in many credit passive funds the largest security tracked is often determined by the amount of debt outstanding. As a result, businesses with the most leverage outstanding are often those most highly tracked – not a characteristic which we necessarily want our portfolios to be exposed to.

7 The BMO Multi-Manager People View – how we do and don't use passive products

Many investors chose exclusively between holding passive or active funds, often citing the higher fees of active funds as off-putting. We have always held the view that if you pick the right active fund, the excess performance should easily compensate for the extra 50bps or so of annual cost. After all, the net returns (performance after fees & costs) of an investment are what ultimately matter to the client, rather than just the annual management charge.

However, we do believe that passives can have an important role to play as part of an overall portfolio (primarily as a means of reducing overall cost and adding diversification). We also recognise that they are destined to underperform the index they are designed to track – a function of fees levied over time and tracking error.

How do we use them?

Within our BMO Multi-Manager Lifestyle portfolios for example, between 12–19% of the portfolios are exposed to passive vehicles, with the remaining three quarters in carefully selected active funds that we would expect to outperform an index over the medium to long term. Within our Lifestyle range, we are currently at the lower end of our historical passive exposure since our management of the funds.

| | BMO Multi-Manager Lifestyle 3 | BMO Multi-Manager Lifestyle 4 | BMO Multi-Manager Lifestyle 5 | BMO Multi-Manager Lifestyle 6 | BMO Multi-Manager Lifestyle 7 |
|----------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Number of Passive Holdings | 4/29 | 3/32 | 4/33 | 3/30 | 3/26 |
| % of Passive Exposure | 13.8 | 12.0 | 17.6 | 15.8 | 19.0 |

Source: BMO Global Asset Management as at 31-Dec-20.