

Foreword

Dear Reader,

I am delighted to present the results of a new survey on passive investing, conducted by CREATE-Research.

The survey, which covered a global investor base with AuM of nearly €3 trillion, provides in-depth analytics on recent changes in asset allocation.

Two findings stand out to me in this survey that support the likely continued rise in passive investing from its current share of around onethird of the market for global pension assets:

- 66% of investors see passives as a mature part of their portfolio, and a further 15% are now in the implementation phase
- Amongst passive investors, there's a shift from cap-weighted indices towards smart beta, factor-based, ESG and other thematic strategies

However, in my opinion, the survey responses also hint at broader structural changes in asset management.

Some observers might look at the last decade's rise in the market share of passive funds and conclude that this is a sign of the failure of active fund management, but I don't see it that way. What we have seen is a fundamental reshaping of asset management, with some strategies standardised and made easily accessible at low cost, with the result that investors now have an unprecedented level of choice to help them meet their asset allocation goals. For example, investors today have the flexibility to create portfolios with exposure to specific factors or to easily make ESG allocations. They can pick and choose the best of what the passive and active worlds have to offer to meet their particular needs.

Importantly, this new landscape provides an opportunity for good passive and active asset managers to differentiate themselves from the competition.

We would like to thank CREATE-Research for having dived deeply into this crucial topic and hope you enjoy reading the report.



Nicolas Moreau CEO, DWS

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Acknowledgements

"The real voyage of discovery consists not in seeking new lands, but in seeing with new eyes."

Marcel Proust

The rise of passive funds is an outstanding phenomenon of this decade, giving rise to all manner of alarming predictions about the future of active funds.

So far, the debate surrounding passives has been confined to academia, newsrooms and the blogosphere. To restore the balance, this report canvasses the views of institutional investors in order to present the view from the front line.

A special thanks goes to the 153 pension plans in 25 countries (see box on page III) who participated in our survey. Their practical insights helped deliver a balanced perspective. Many of them have regularly been involved in our global surveys, helping to create an impartial research platform that is now widely used in many jurisdictions.

My grateful thanks also go to DWS for sponsoring the publication of this report without influencing its findings in any way. Their arms-length support has enabled us to present an impartial view on the active-passive debate.

I would also like to thank IPE for their help in carrying out the survey and especially to the editor, Liam Kennedy, for providing invaluable guidance and support throughout the project.

Finally, sincere thanks also go to my colleagues Lisa Terrett for managing the survey and the follow-up interview programme and Dr. Elizabeth Goodhew for her painstaking editorial support.

After all the help I have received, if there are any errors or omissions in this report, I am solely responsible.

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Survey participants by geography and their total AuM

Australia	Germany	Netherlands
Austria	Greece	Norway
Belgium	Ireland	Spain
Canada	Italy	Sweden
China	Japan	Switzerland
Croatia	Jersey	UK
Denmark	Latvia	USA
Finland	Liechtenstein	
France	Morocco	

AuM €2.9 trillion

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Executive summary

Introduction and aims

Game changer or new danger?

That's the question behind the spectacular rise of passive funds throughout this decade.

Their advocates see this trend as being as immutable as the momentum of a supertanker. According to our institutional survey respondents, passives have delivered good returns net of fees.

Their detractors retort that the rise of passives is due to a one-off boost from unconventional monetary policies in America, Europe and Japan. They also question what systemic dangers may be lurking in the background with this relentless concentration of assets in monolithic indices on autopilot.

Thus far, the debate has been emotional and polarising, generating more heat than light and has suffered from

- recency bias, which puts too much emphasis on recent trends to the exclusion of historical experience; and
- saliency bias, which assigns too much weight to the information that is predominantly on display to the exclusion of contrary opinion.

It is essential to develop a clear-eyed view by surveying the actual experiences of long-term investors. Like its physical counterpart, the investment universe is cyclical and adaptive. Styles go in and out of fashion. A time perspective is essential.

Focusing on pension plans worldwide, this report therefore addresses four pertinent questions:

- What is the current share of passives in investment portfolios, and what benefits have these funds delivered thus far?
- Are passives and actives competitive or complementary in the overall portfolio, and what is the underlying rationale?
- How are the respective roles of passives and actives in asset allocation likely to change over the rest of this decade, and what will their drivers be?
- What innovations will be required in passives to enhance their resilience?

These questions were pursued via a global survey of 153 pension plans in 25 countries with a total AuM of €2.9 trillion (details in Figure 1.1 on p.3 and p.III).

The survey was augmented with structured interviews with senior executives in 30 plans. All the information in this report is based solely on the survey and interviews.

The rest of this section presents the survey highlights and the key data findings that support them. More detailed results are given in Sections 2 and 3.

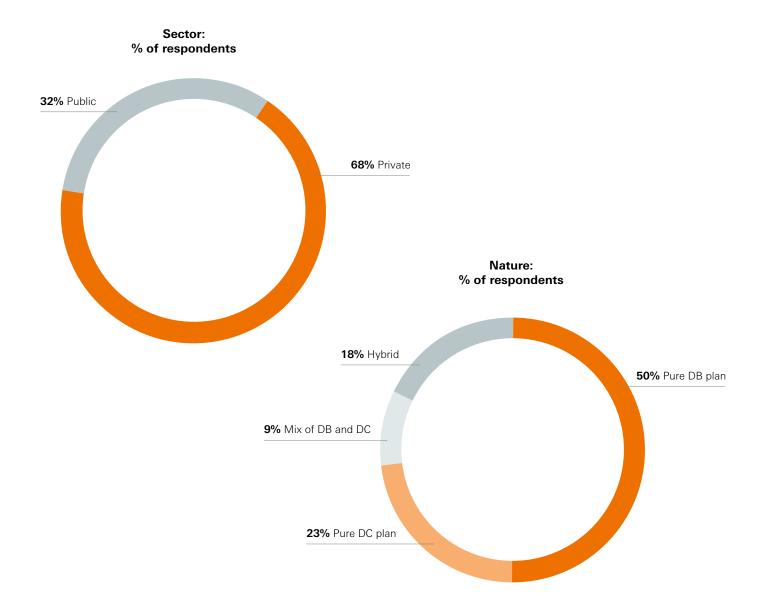
For ease of reading, the terms 'passives' and 'actives' are used throughout this report instead of longer titles such as "passive funds" and "active funds".

"It's not the strongest of the species that survive or the most intelligent, but the one most adaptive to change."

Attributed to Charles Darwin

FIGURE 1.1

What sector does your pension plan cover, and what is the nature of your plan?



Survey Highlights

- With fees becoming the North Star of investing, passives are reshaping the investment universe (58%)*
- Their rise is a foundational change in the way pension plans now manage their portfolios, blending actives and passives, knowing that both are needed (60%)*
- This broader diversification aims to not only minimise risks but also maximise returns to create an all-weather, buy-and-hold portfolio (51%)*
- Passives are not only becoming a core asset class, but are also being used to access specialist asset classes, secular investment themes and cyclical risk factors (48%)*
- Passives have benefitted significantly from the ultra-loose monetary policies of central banks, which have created epochal challenges for actives to up their game (54%)*
- The unwinding of these policies is expected to have some effect on passives, more likely a slowdown in growth than a sharp reversal in their inflows (42%)*
- Far from being polar extremes, actives and passives are complementary.
 Each relies on the other to survive and thrive, like yin and yang in Chinese philosophy (60%)*
- Another test for passives will be when they are judged not on their current inflows but on their resilience when the inevitable correction comes (55%)*
- For now, the real debate is not about actives vs. passives but about how to drive out mediocrity in the investment landscape. The rise of passives has kick-started that process (58%)*.

^{*} Cited by percentage of our respondents

Key findings

1 Passive funds have taken root in this decade

Passives are now widely used by our survey respondents (Figure 1.2, top chart). 66% see them as a mature part of their portfolio, and a further 15% are now in the implementation phase. Amongst the rest, 3% are close to decision making, and the remaining 16% are still in the awareness-raising phase. Passives have been implemented via three vehicles (Figure 1.2, bottom chart): traditional indexed funds used by 48% of respondents, segregated accounts by 38% and ETFs by 23%. Thus, passives are already mainstream for the majority of pension plans. Two drivers have influenced this outcome. According to our survey respondents, passives have, on average, delivered superior results net of fees compared with actives in this decade. Passives have also experienced a strong boost from certain dramatic upheavals in the investment landscape over the past 18 years. Both are considered separately below.

a) Superior results

In this decade, the average actively managed fund has underperformed its chosen benchmark, after fees. Success, when it did occur, did not persist in the years that followed according to the survey. If anything, the reported data on performance have deteriorated rapidly when survivorship bias is taken into account; that is, once the results of funds deleted from public records are included. Good active managers

have proved hard to spot in advance. However, for pension plans, it is not enough that actives have not met their return expectations to the extent that they have had to switch to passives as a default option.

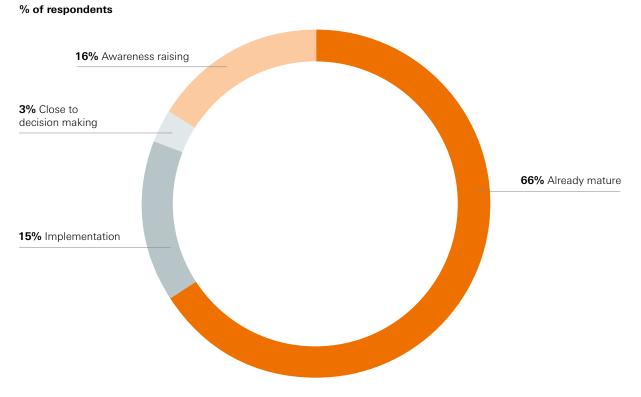
Instead, passives are seen as having four intrinsic merits that render them attractive in their own right (see Figure 2.2 in Section 2).

61% of our respondents see passives as providing a low-cost option in a low-return environment. The fees conventionally labelled as only 1% of assets are now seen for what they are in a 5% market: 20% of returns. 48% see passives as enhancing pension plans' core-satellite approach to asset allocation, with a clear separation between alpha and beta and their respective fee structures. Core strategies seek beta (market) returns via passives. Satellite strategies seek alpha (above-market) returns via actives. 41% see passives providing a balanced portfolio alongside actives. Each has its strengths and weaknesses, as we shall see later on. So the choice is not either/or, but both. Stock picking is not going to go away. But the burden of proof is shifting while passives attract a growing share of pension assets.

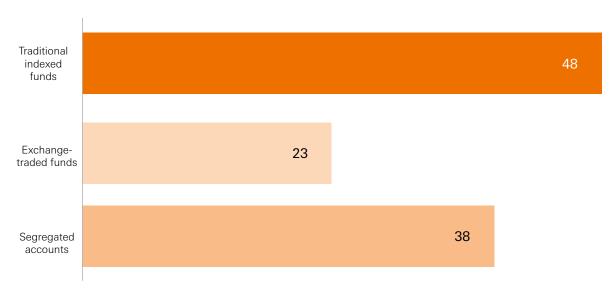
Finally, 25% see passives as providing an ideal vehicle for global asset diversification, so as to capitalise on the favourable growth dynamics of certain countries or specific themes. They obviate the need for manager selection and higher fees while offering liquidity during periods of stress. For now, the rise of passives marks a decisive shift in one crucial respect. In the past, diversification

"With fees that are roughly one-tenth of those charged by active funds, is it any wonder that passives have become a money magnet?"

FIGURE 1.2
In which stage is your pension plan currently with respect to passives? If you already invest in passives, what is your preferred vehicle?



% of respondents



was primarily about risk minimisation. Now it is also about return maximisation. Blending passives and actives permits the dynamic investing that mixes diverse styles at different market phases to extract risk premia.

b) Upheavals in the investment landscape

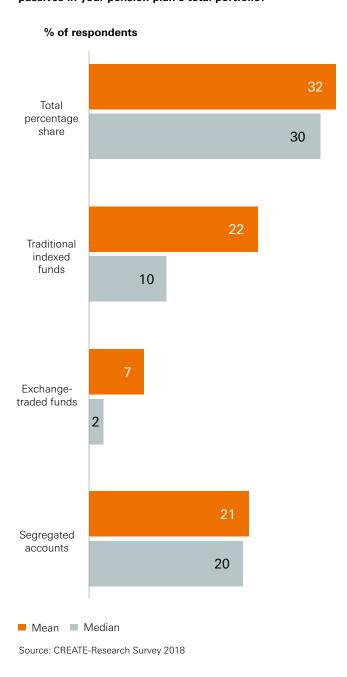
Two of the four worst bear markets over the last 100 years occurred over a short span of seven years in the last decade. Conventional wisdom on risk premia and diversification was sidelined.

First, risk did not generate returns, as equities were outperformed by bonds over extended periods. Second, actual returns diverged markedly from expected returns, as returns became volatile and unpredictable. Finally, diversification failed when it was needed most. But that is not all. During this decade, markets have been further distorted by the quantitative easing programmes of the key central banks. They have artificially inflated market prices and disconnected them from their fundamentals, making it ever harder for active funds to beat their benchmarks. These macro developments have favoured passives, as pension plans have been forced to explore new ways of investing in the surreal environment of zero-bound interest rates.

2 Passives and actives will remain like yin and yang

Passives have gained traction lately, holding nearly a third of pension assets (Figure 1.3). The rate has nearly doubled since the 2008 crisis, according to our post-survey interviews. As Figure 1.3 also shows, most of these assets are held in traditional indexed funds or segregated

FIGURE 1.3
What is currently the approximate percentage share of passives in your pension plan's total portfolio?



"Passives are not futureproof. They have weaknesses as much as strengths."

accounts. The latter have been favoured by pension plans because they provide four benefits: control over asset allocation, a fee structure based on net performance, shareholder activism and a real-time holistic view of all their assets.

However, contrary to media reports, passives are not perceived as an all-weather choice that work in good times and in bad or as the perfect substitute for actives. Instead, pension plans have adopted an eclectic approach that sees the world of investing as cyclical and self-correcting. Like the ocean tides, styles go in and out of fashion, making it essential to recognise the drawbacks of passives as well as their complementarity with actives.

a) Drawbacks of passives

68% of our respondents see passives as buying yesterday's winners and overinflating valuations (as shown in Figure 2.3, Section 2). Securities that cannot be purchased individually based on their own merits are boosted by bulk buying. That helps the good, the bad and the ugly indiscriminately. Their strong inflows tend to overinflate the valuations of index components, disconnect them from their fundamentals and make indices more informationally inefficient over time.

52% report that, as a result, passives could potentially destabilise markets and undermine the very diversification they have long promised. Furthermore, stocks in broader indices like the S&P 500 have ended up with an aggregate weight in pension portfolios far in excess of the one recorded in the index, as the same stocks get replicated by various ETFs that are also in the same portfolio.

42% report that passives make booms and busts more likely due to their strong price momentum in both directions. The problem is aggravated by the fact that, although passives now account for roughly 25% of global assets,

their share of daily trading volume is substantial – almost double that amount.

"Historically, actives and passives have relied on each other to survive and thrive, as market efficiency has varied during each cycle."

Interview quote

b) Existential interdependency between actives and passives

Like yin and yang in Chinese philosophy, actives and passives may seem like diametric opposites - yet they are interdependent. There is no clear water between them. After all, markets cannot always be informationally efficient on account of the implicit 'index premium'. Companies in an index attract new money on account of their inclusion because of their size and not necessarily their intrinsic worth. Hence, as more money flows into passives, the premium rises, making markets more inefficient. This enables active managers to buy undervalued stocks and sell overvalued ones. The result is greater efficiency that helps passives. However, as more money flows into passives, valuations get distorted, creating opportunities for actives.

Historically, this pattern has prevailed more often than not: overvaluation begets undervaluation and vice versa. For example, over the last decade, actives outperformed passives, after falling behind in the 1990s. During this decade, their fortunes reversed with the ebb and flow of the markets. History repeats itself, albeit without a predefined timescale. One does relatively better

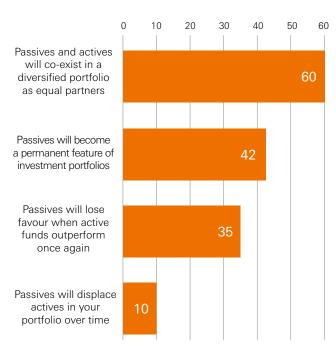
when the other doesn't, only to experience a reversal of fortune as the market cycle turns. Markets work best when investors think and act independently, not all together. When everybody does the same thing, it all becomes unhinged. This much is clear from the diversity of views in our survey results (Figure 1.4).

60% of our respondents believe that passives and actives will co-exist in a diversified portfolio. They also believe that the rise of passives has posed a stark challenge to active managers: innovate and adapt or become irrelevant in the face of Darwinian forces that favour managers who deliver value for money. 42% believe passives will become a permanent feature of their investment portfolios. If and when markets reverse, the swing away from passives will be moderate.

35% believe that any such swing will be much bigger; although not to the point of reversing all the gains in market share achieved during this decade. In previous cycles, when a bull market eventually came to an end, passive funds were left holding stocks and sectors with poor fundamentals. In contrast, active funds were better placed to act on such drivers, pinpointing specific opportunities (and threats), and side-stepping the weak spots. Passive investors could suffer full market losses when the tide turns – possibly more than active investors, who can proactively switch into cash. Notably, only 10% of respondents expect passives to replace actives.

FIGURE 1.4
Overall, which of the following statements summarises your views about passive investing?

% of respondents



Source: CREATE-Research Survey 2018

"With the rise of passives, actives face an epochal challenge to up their game. There will be no return to business as usual."

3 Passives will continue to experience strong tailwinds

Before discussing the growth dynamics of passives and their drivers over the rest of this decade, it is essential to highlight two financial aspects influencing the asset allocation decisions of pension plans in our survey. To start with, a significant proportion of them are in their run-off stage, as the first and largest cohort of post-war Baby Boomers advance into retirement. This much is evident from their cash flow status, defined as the difference between the amount of money coming in and the amount going out.

As Figure 1.5 (left chart) shows, 49% are in 'positive' territory, 10% are in 'neutral' and 41% are in 'negative' territory and favour liquid assets with good returns.

In turn, these numbers have also influenced the risk appetite of survey respondents (Figure 1.5, right chart): 14% report it as 'high', 64% as 'medium',

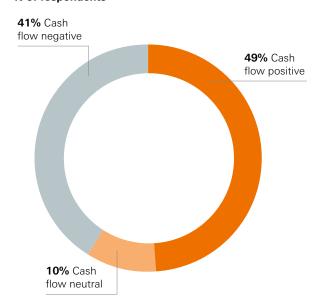
19% as 'low' and 3% as 'minimal'. The implied profile favours asset classes for which pension plans have the requisite governance structures and skill sets. These considerations will continue to favour the rise of passives. But there are also other drivers at work (listed in Figure 2.1 in Section 2).

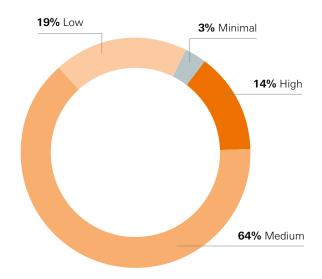
a) Drivers of future growth

58% of respondents cite changing investor attitudes that favour low-fee products, as active funds have been unable to beat their benchmarks during this decade. The traditional 'heads-l-win, tails-you-lose' asset-based fee structure is seen as promoting asset gathering, with no sanctions for underperformance. 55% cite strategic asset allocation – rather than stock selection – as being the main driver of performance. For them, the old adage 'fix asset allocation, and the numbers will follow' remains valid. To underpin this, actions have also been taken to improve execution capabilities to reduce the gap between *ex post* returns and *ex ante* promises. The implied

FIGURE 1.5
What is your pension plan's current net cash flow position? And what is your overall risk appetite?

% of respondents





10

leakage is minimised via passives that avoid poor manager selection, style drift, the hidden cost of excessive trading and higher fees.

48% of respondents cite the rise of risk factor investing facilitated by new digital technology. They no longer see the world of investing as binary: actives vs. passives. To counter the drawbacks of these two styles, they now favour a third way: systematic rules-based investing that combines the best of both. Smart beta is the prominent example that tilts passives towards specific factor premia such as value, size, quality and low variance.

Over time, advances in the velocity, volume and variety of Big Data are expected to deliver ever more investible information and actionable insights. The implied convergence between quants and fundamentals is already seeing the rise of 'quantamentals' that are expected to grow rapidly.

"The swing towards passives has a long way to go. We may be only half way there."

Interview quote

b) Growth over the rest of this decade

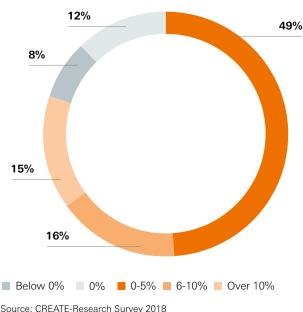
On an asset-weighted basis, the total passive portfolio held by our surveyed pension plans is likely to grow over the rest of this decade at an annual rate of around 6.0% – a rate that is in line with recent experience. The rate will vary between plans (Figure 1.6):

- 8% of respondents report below 0% growth
- 12% report 0%
- 49% report 0-5%
- 16% report 6–10%
- 15% report over 10%.

FIGURE 1.6

What will be the approximate total annual growth in your pension plan's investment in passive strategies over the next 3 years?

% of respondents



Source: CREATE-Research Survey 2018

Currently, the asset class coverage of passives is as follows: equities are covered by 82% of respondents, fixed income by 54%, multi-asset funds by 20%, commodities by 13% and real assets by 7% (see Figure 3.1 in Section 3).

With the exception of fixed income, these asset classes are likely to extend their coverage over the rest of this decade. Just as significant are

"Healthy markets require the Warren Buffets out there picking individual stocks and others exploiting the resulting price efficiency."

projected increases in the holding periods. Over 80% of respondents currently hold traditional indexed funds and segregated accounts for more than two years, while 45% of them hold ETFs for more than 2 years. Each of these categories is likely to witness a rise in holding period over the next three years.

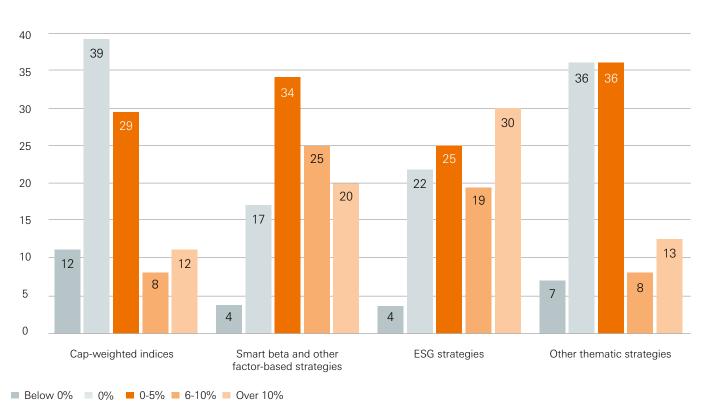
The upshot is that passives are moving into the buy-and-hold portfolios of pension plans. As for the composition of growth, it is more likely to be skewed towards three types of passives: smart beta and other factor-based strategies, ESG strategies or other thematic strategies (Figure 1.7).

The first of these will be targeted for low-cost alpha, and the second for 'social alpha', as climate change risks are increasingly priced in by markets. The third component will target three specific themes: technology, emerging markets and demographics. At the other end, one component is likely to grow relatively slowly: cap-weighted indices. Their shortcomings are becoming increasingly obvious as they attract more money. Smart beta will remain the main beneficiary.

In any event, overall growth in passives over the rest of this decade is not expected to undermine the price discovery role of the markets. For that to happen, the share of passives in global assets

FIGURE 1.7
What will be the approximate annual growth in your pension plan's investment in passive strategies over the next 3 years?

% of respondents



arguably has to exceed 60% from a current base of around 25%, according to our post-survey interviews.

Some respondents also argued that it is the flow and not the share of actives that matters. Irrespective of how high the share of passives is, as long as there are some active traders in the market, price discovery will not be hampered. If a stock is severely mispriced, bargain hunters will soon emerge. What matters is the volume of trading, not the size of the asset base. Prices are set at the margins.

4 Passives will move centre stage in the core-satellite model

Like digital brands, passives will continue to benefit from the 'network' effect, in which a product is perceived as more worthwhile the more people use it. The classic example is the telephone: a growing user base enhances its value to each subscriber.

The network effect also changes the industry dynamics, turning passives into the mainstream. As the amount of assets in ETFs increases, so does their ability to innovate and move around exposures rapidly. They are viewed as uniquely suited to the environment of this decade and

High yield bonds

FIGURE 1.8
Core-satellite model: passives will come to dominate the inner core

Regional equities Hedge funds Investment grade debt Private equity Real estate Real estate Sample core Cap-weighted indices Commodities Exchange-traded funds Private debt Small cap equities Infrastructure Emerging market equities Liquid alternatives Emerging market debt Currency funds

Strategic satellites:

are used and traded by an ever-growing band of investors. Of course, much depends upon how they'll fare in future market corrections. Apart from cap-weighted indices, none of the other passives have been significantly stress-tested by time or events.

For now, the rise of passives is recalibrating the traditional core-satellite model (Figure 1.8). At the start of this decade, the core was dominated by large cap equities and sovereign bonds, as well as by regional equities and investment grade bonds. Growth in passives, however, has since catapulted them into the core portfolio, alongside global equities, US equities and sovereign bonds.

Reportedly, out of the seven most heavily traded stocks today, five are ETFs. Ever more asset classes have been shunted to satellite status as part of the alpha-beta separation. The core is dominated by items trading in deep, liquid markets; the satellites by items trading in less liquid (or illiquid) markets.

"The active approach makes sense in volatile unpredictable inefficient markets"

Interview quote

The precise designation of the asset classes in Figure 1.8 is a matter of debate. The substantive point is that the current index revolution is recalibrating time-honoured investment approaches and pushing passives centre stage – at least for now. At the same time, actives are being increasingly chosen for asset classes amenable to alpha generation.

For passives to retain and enhance their relevance, however, it is essential for the next wave of innovation to secure improvements in three areas (as shown in Figure 3.3, Section 3). 48% of our respondents want to see improvements in

fee models, as rising volume generates economies of scale. This observation applies especially to smart beta whose fees now sit somewhere halfway between pure passives and actives.

47% of respondents want to see improvements that enhance the risk-return trade-off of all factor-based strategies, especially in the discovery, choice, timing and weighting of factors over different phases of the market cycle. 39% want three improvements in multi-asset strategies that blend actives and passives.

Specifically, they want to see fees charged on net performance that reduce the 'netting risk', a deeper understanding of the correlation between component styles and a more effective blending of high conviction and rules-based styles.

However, these suggestions do not detract from the three overriding messages from our survey. First, low fees are now seen as a key source of value creation given that QE has borrowed against future returns. Second, prudent diversification favours both actives and passives. Third, the separation of alpha and beta is now an irreversible structural feature of pension investing.

"Building and holding a diversified portfolio is not an all-or-nothing choice. With passives and actives, we now have complementary sources of returns."



Drivers of growth

Will growth require a balanced portfolio?

As we saw in Section 1, the current momentum towards passives is unlikely to ease during the current decade. But its composition will tilt in favour of strategies that deploy risk factors, ESG or other investment themes in pursuit of decent returns at lower fees. Equally, our survey respondents recognise that passives cannot be an all-weather solution due to certain inherent drawbacks. Actives can go a long way towards compensating for these drawbacks. As a result, prudent investing favours a balanced portfolio that seeks to get the best out of both by blending caution with opportunity.

1 Growth drivers

Figure 2.1 identifies the factors that are likely to drive growth in passives over the next three years. Here, we highlight the four most widely reported factors, which also, which also formed the basis of our discussion in the post-survey interviews.

a) Active managers have struggled to beat their benchmarks

Fees have been singled out by 58% of our respondents as being the key driver, as being the key growth driver, as the large majority of active funds after fees have failed to beat their benchmarks in the past decade.

The minority of funds that did succeed had poor performance persistency. In countries as diverse as America, Australia, Denmark, France, the Netherlands, Spain, Sweden, Switzerland and the UK, the relatively better numbers in the first year eroded rapidly thereafter. The causes are structural as well as cyclical.

Taking them in turn, advances in technology have improved the informational efficiency of markets. At the same time, the number of active managers fishing in the limited pool of alpha has multiplied in all markets.

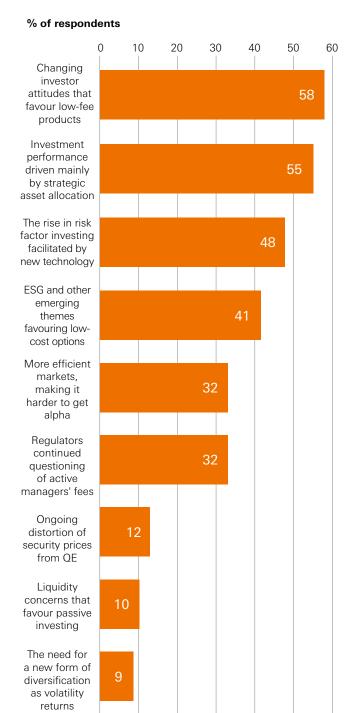
If anything, the alpha pool has reportedly shrunk, as active investors have switched to passives. The leavers are believed to be less informed than those who remain. This is equivalent to the weaker players leaving the poker table. The result is increased competition among the remainers and improved price efficiency. Thus, alpha is seen as turning into an ever bigger zero-sum game in deep, liquid markets over time (cited by 32% of respondents).

The problem has been compounded by cyclical tailwinds from QE in America, Europe and Japan in the wake of the 2008 crisis. The unconventional programme of bond purchases and zero-bound interest rates – designed to drive investors up the risk curve – has created an unintended consequence in all regions. The valuation of all asset classes has been inflated to the point where investment returns have become a monetary phenomenon – influenced far more by the regular largesse of central banks than by corporate earnings from the real economy.

Passive funds have benefitted disproportionately from the resulting price momentum that has conspired against value investing. The bedrock

"Fees have become the North Star of investing."

FIGURE 2.1
Which factors will drive growth in passive investing over the next 3 years?



of investing – long defined by concepts such as fair value, time premium, risk premium, mean reversion and diversification – has progressively eroded. With one single large buyer, bond markets have ceased to function normally too.

However, the tailwinds are easing. The US Federal Reserve is already unwinding its QE programme by continuing its rate hike cycle and running down its balance sheet. The European Central Bank and the Bank of England are likely to follow suit soon. Only 12% of our respondents expect prices to remain distorted by QE over the rest of this decade.

Indeed, correlations between securities within passive indices are declining, and dispersions are getting bigger, especially in the US. Before long, the pendulum swing towards passives may well ease, but not reverse, for one simple reason: QE has borrowed against future returns, creating a low-return environment. More than ever, value creation will rely on fees as well as returns; all the more so as regulators continue to question whether active funds can justify their fees (32%).

The age-old 'heads-l-win, tails-you-lose' assetbased fee structure will remain under pressure, as pension plans' appetite for passives remains unabated. The fee pressure has been most intense in the five largest pension markets: the US, the UK, Japan, the Netherlands and Australia.

"When macro factors are driving markets, asset allocation is far more important than stock selection."

Interview quote

b) Asset allocation remains the key performance driver

55% of our respondents believe that fund performance is mainly driven by strategic asset allocation. Markets favour different strategies at different phases in response to changing macroeconomic factors. This view has been especially prevalent in pension markets with the highest share of passives: the US, Switzerland, Ireland and France.

As active stock picking has proved difficult due to valuation distortions from central bank action, pension plans have sought to improve their asset allocation capabilities in order to make the right calls at different market phases. In the process, they have also upgraded their portfolio execution capabilities, in the belief that any strategy is only as good as its implementation. That is because past experience has taught an enduring lesson: seeing how a given asset allocation might work on paper is one thing, what it delivers in practice is quite another. The ex post returns rarely match the ex ante promises. Back-tested performance has tended to ignore the vital role played by portfolio execution. More often than not, actual alpha has been no more than leveraged beta.

The gap is explained by 'implementation leakage' caused by a host of factors. The most commonly cited ones are poor manager selection, style drift, the hidden cost of excessive trading, weak fund governance and high fees. The resulting improvement in execution has turned the spotlight on passive funds that contribute far less to the yawning gap between expected returns and actual returns. They offer predictability on fees and charges. They avoid poor manager selection. They have no hidden turnover charges.

"ESG and factor investing will now be at the forefront of the index revolution."

c) Factor investing is on the rise

The world of investing is no longer binary: actives vs. passives. A third way – risk factor investing – is in the ascendancy, combining aspects of both these styles (reported by 48% of respondents). It is based on the premise that cap-weighted passives are cheap, but they can be risky, too. By their very nature, their construction overweights expensive large companies at the expense of inexpensive small companies.

The large companies attract new money owing to their sheer size, not necessarily their intrinsic worth. In an upswing, their momentum overinflates market values. In the downswing, it can far overshoot intrinsic value. Thus, cap-weighted indices are deemed risky on account of their embedded bias towards concentration and momentum. Similarly, ETFs are believed to erode diversification benefits and perhaps weaken the price discovery role of markets.

To counter these drawbacks, pension plans are increasingly resorting to a systematic rules-based style of investing used by quant managers for the last three decades. Smart beta is the most prominent example. It involves tilting passive funds towards factor premia like value, size, quality and low variance. Smart beta is the part of generic factor investing that sits in between traditional actives and passives with clear overlaps at each end. Although rules-based, factor investing requires human input as well. It crunches a large volume of data to establish inter-relationships between the chosen factors, their weightings, their timings, their risks and their returns.

Over time, the recent advances in Big Data are likely to make a big impact on account of the velocity, variety and volume of data that can deliver new investible information and actionable insights. From a modest base, factor investing is on the rise in all our surveyed regions, but especially Australia, Scandinavia and the US.

d) ESG risks are being priced in by markets

In the wake of the COP21 Paris Climate Conference, markets have finally started to price in the climate risk in earnest. In turn, pension plans have responded by putting this risk at the heart of their sustainable investing and stewardship goals.

This trend gained extra momentum after two high-profile corporate disasters in the US in the current decade unleashing existential threats: BP's Deep Horizon oil spill in the Gulf of Mexico and Volkswagen's emission cheating scandal. Unsurprisingly, therefore, 41% of our respondents regard passives as a low-cost avenue to pursuing ESG and other themes. After all, their commitments to their plan members are long-term. Their delivery requires a sustainable economy and society. That means finding long-term drivers of value that override the regular volatility spikes.

Four factors are enhancing the appeal of theme funds for pension plans. First, they help focus attention on investment risks that are hard to model because they have only recently been treated seriously (e.g. climate change). Second, in this age of social media, themed funds also help to manage reputation risk, which has raced up the agenda of pension plans. Third, the implied risks also offer opportunities, as they are increasingly priced in by markets.

Finally, there has been a lot of innovation around ESG-based smart beta strategies that slice and dice the ESG universe to suit investor needs. ESG screens are used especially when investing in emerging markets where governance practices differ markedly between and within countries.

2 Benefits of passive funds

For pension plans, the switch to passives in this decade is not a default option, as active funds have not met their return expectations. Instead, passives are seen as having their own intrinsic

merits, which justify rising allocations in which justify rising allocation in pension plan investment portfolios. These merits are listed in Figure 2.2. Four of them stand out.

"There's a one in 20 chance of picking a good active manager. The chances of picking multiple ones are miniscule."

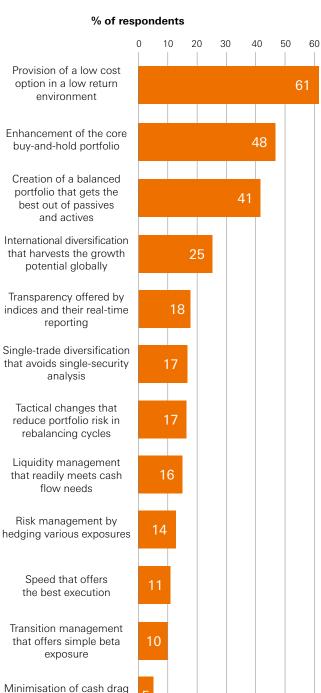
Interview quote

a) Fees are seen as a key source of value creation

Fees have presented a daunting challenge for active funds during the current decade. More often than not, they have detracted from the funds' performance. The onset of a low-return environment has further elevated the importance of fees; all the more so at a time when the debt overhang in the global economy will remain a drag on global growth for the foreseeable future. Unsurprisingly, therefore, 61% of our respondents perceive passives as providing a low-cost option. At the most basic level, this is based on the truism that fees can be a key source of outperformance when compounded over time. But there are other reasons as well.

First, markets have historically been in a bull phase 70% of the time. This explains the pronounced upward trend in equity market indices over long periods, driven by fundamentals. An added feature has been mean reversion. When the upward trend was punctuated by bear markets, mean reversion kicked in before long. On this reasoning, passives are deemed an easier and safer choice worthy of buy-and-hold investing that does not require investors to do a securities search and manager selection, especially since their past performance provides little guide to future outcomes.

FIGURE 2.2
What do you see as the main benefits of passive investing?



Source: CREATE-Research Survey 2018

via cash equitisation

Second, it has been argued that the performance of active investing has been artificially depressed by closet indexing. These are copycats that track a benchmark with little chance of beating it after fees, while still charging active management fees. The resulting regulatory crackdown has forced active funds to declare their 'active share'; namely, the proportion of their stock holding that differs from its benchmark index.

However, there is little evidence as yet that higher active shares deliver superior performance after allowing for survivorship bias; that is, when the performance results of an investment only include the survivors at the end of the period and ignore those who have long departed.

b) Passives are enhancing the core-satellite model

As we saw in the Executive Summary (Figure 1.8), one of the enduring legacies of the 2008 bear market was pension plans' unwillingness to pay alpha fees for beta performance. Hence, there has been a growing division of portfolios into two sets of strategies, each with its own fee structures.

Core strategies aim to provide exposure to asset classes that capture market returns, known as beta. They focus on deep liquid markets that are hard to beat on account of their high informational efficiency. Satellite strategies, on the other hand, aim to harness managerial skills to deliver superior returns, known as alpha. Such strategies focus on markets that are volatile and unpredictable, with low informational efficiency and liquidity.

Thus market risk and interest rate risk are managed in a portfolio's core, while less-correlated idiosyncratic risks are managed in the satellites where unconstrained investing is the norm. The immediate beneficiaries in the core space have been passives: cap-weighted,

ETFs and factor-based. For example, the largest ETF in the market place today – the SPDR S&P ETF (ticker symbol SPY) alone has nearly \$270 billion. The growing dominance of passives is likely to continue. A trend that has been well established in the US is now gaining traction in other pension markets too. Growing awareness about the role of fees is one factor. Just as important is the need to look at the portfolio at a granular level and choose an investment approach that captures the unique risk-return features of different asset classes. After all, it is unwise to propose general investment rules that are meant to be durable in all markets.

"Passives are not only becoming a core asset class, they are also used to access specialist areas such as high yield and hedge funds."

Interview quote

c) Passives complement actives

Far from being polar extremes, actives and passives are complementary and can exist side by side in a balanced portfolio, according to 41% of our respondents. One reason for this is the changing nature of the core-satellite model described above. Another is that actives and passives rely on each other for their survival and growth. Markets cannot always be informationally efficient. As mentioned previously, companies covered by passives attract new money largely on account of their inclusion in the indices because of their size, not necessarily their intrinsic worth.

Hence as more money goes into passives, markets become more inefficient, and the so-called index premium rises. This enables active managers to buy undervalued and sell overvalued securities. Thus, active investing creates the efficiency that helps passive funds. Yet, as more money flows into passives, they become less efficient; valuations become distorted, creating opportunities for actives. Their historical data reveal a clear cyclical inverse pattern.

In any case, there is no such thing as purely passive funds, as decisions on implementation can lead to different exposures. It all depends upon how market exposures are structured. Every exposure entails an active choice. For example, cap-weighted versus equally weighted is an active decision, as is periodic rebalancing.

d) Passives facilitate global diversification

As part of the evolving core-satellite model, pension plans are exploring new asset classes and product themes so as to achieve broad diversification. The healthy growth dynamics of the emerging markets has been of special interest, as has been the relentless rise of the tech titans – Facebook, Amazon, Apple, Netflix and Google – in the US.

Such interest rests on the view that in this new era of high volatility/low returns, there will always be isolated bright spots influenced by megatrends. Hence, 25% of our respondents see passives as providing the ideal vehicle.

For small- and medium-sized pension plans, with limited governance budgets and skill sets, passives obviate the need for manager selection and high fees. They also provide ready exit routes by offering liquidity during periods of market stress. Indeed, many plans in our interview programme displayed a distinct international bias in their passives exposure and a regional bias in their actives exposure.

"The paradox of cheap passives is that it can turn out to be a big expensive mistake when markets abruptly go into reverse gear."

In addition to the above four benefits under distinct headings, a number of other subsidiary benefits have been identified by our survey respondents, as shown in the lower half of Figure 2.2. These benefits range from transparency and ease of portfolio rebalancing at one end to transition management at the other. They all underline two simple points.

First, passive investing is not just about lower costs. Its rise is a foundational change in the ways pension plans now manage their portfolios. Second, this rise has altered the role of diversification. In the past, it was all about risk minimisation. Now it is also about return maximisation. Blending actives and passives within a given portfolio marks a big step towards dynamic investing that mixes different styles of investing. This evolution is more advanced in the US than in Europe and Asia, but is expected to spread.

It is unwise, however, to propose general investment rules that work in all market conditions. After all, many past innovations have proved only as durable as the forces that promoted them.

3 Drawbacks of passive funds

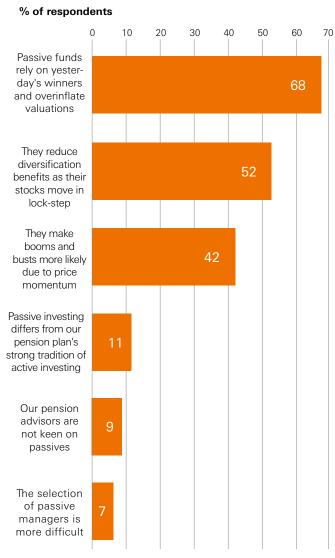
Investing is part science, part art. There are no all-weather styles. Safe havens are scarce. Passives are no exception.

Every style works until it does not. Initially, its strengths invite fresh inflows. Over time, these distort valuations that, beyond a certain point, turn strengths into weaknesses. This much is clear from the history of innovations over the past 55 years. This measured assessment is duly reflected in our survey results. It recognises that passives have been an ideal vehicle for capitalising on the sustained upward price momentum in the markets in this decade largely due to QE. But it is also aware that all that glitters is not gold. Three drawbacks are singled out (Figure 2.3).

a) Passive investing could lead to overinflated valuations

Passives mean buying yesterday's winners and taking a set-it/forget-it approach that appears to ignore the cyclical and self-correcting nature of markets (cited by 68% of our respondents). Passive investing also chase every security in the market they track, regardless of its price.

FIGURE 2.3
What do you see as the main drawbacks of passive investing?



In previous cycles, when a bull market eventually came to an end, passive funds were left holding overpriced stocks after not monitoring cyclical shifts in earnings growth, currency trends and the fundamentals of their member companies. As a result, they suffered bigger losses. Also, by buying bulk, regardless of style focus, passives don't discriminate between stocks. Their big inflows invariably inflate valuations of the index components, disconnect them from their fundamentals and make indices more inefficient.

Markets work best when investors think and act independently, and not in unison. They eventually suffer when every investor does the same thing. Generally, passives achieve their highest popularity in an ageing bull market or near market peaks. Investors become complacent after a long rally, amplifying future declines.

Finally, passives in general and ETFs in particular are deemed as undermining the traditional price discovery role of financial markets – especially on account of their overtrading and the 'index premium'. In contrast, active funds who receive favourable information about a stock will buy it and those who receive unfavourable information will sell it. Either way, prices will change. This discrimination implies that active funds are 'price makers' who channel capital at healthy companies by diverting it from unhealthy companies.

However, there is much debate on this point. The consensus view among pension plans is that a rising share of passives in the markets will not hamper price discovery per se. That is because it is the flows and not the amount of funds that matter. No matter how high the share

of passives, as long as there are active traders in the market, price discovery will not be hampered. Besides, active managers are not discovering or setting prices or seeking to establish how much a stock is worth. Instead, they are simply trying to ascertain if it is worth more or less than the price it is currently trading at. Even so, it is worth noting that the explosive growth of ETFs has attracted regulatory attention on this score.

b) Passives reduce diversification benefits

Passives could potentially destabilise markets and undermine the very diversification they have long promised, according to 52% of our respondents. With the rise of passives, the number of stocks that investors need to invest in to achieve sensible diversification has doubled over the past 15 years. The correlation between stocks has increased as the constituent stocks move in lock-step. Bulk buying has made the indices' underlying stocks more prone to 'sentiment' risk. Indeed, every stock in broad indices like S&P 500 and FTSE 100 has ended up with an aggregate weight far higher than the one recorded in the broad index. This is because the same stocks are also replicated in various ETFs.

Indeed, the overall weight of stocks in various ETFs now far exceed the stocks' share in the broader indices, in many cases giving rise to two tendencies connected with returns. First, their return dispersion has reportedly got narrower, as they have moved in lock-step. Second, their correlation has been rising in this decade as components move up and down at the same time.

"There are times when it pays to tilt your assets towards passives and times when it makes sense to be more active. It's all about horses for courses."

"ETFs are reducing the benefits of diversification, as their component stocks move in lockstep."

Interview quote

c) Passives could make booms and busts more likely

Lately, the valuation gap between stocks in and outside of indices has swollen notably due to their disproportionate exposure to highly favoured stocks during bubbles. As more money has flooded into passives, systemic risk has risen, according to 42% of our respondents. In contrast, active funds are better placed to act on fundamental drivers of performance, pinpointing specific opportunities (and threats) and side-stepping the weakest spots. While the share of global assets in passives hovers around 25%, their share of daily trading is substantial – almost double that amount. This has raised concerns about how they will fare during a potential liquidity event. The dislocations that occurred in ETF exchanges in August 2015 and February 2018 raised warning flags and understandable concerns.

Moreover, changes to an index fund are often made at excessive valuations in anticipation of the index inclusion. So-called reconstitution events, when the index composition changes in response to predefined rules on inclusion, always create further price distortions. New additions to the indexes had reported price increases of up to 40% prior to their inclusion, preventing them from being a juicy source of alpha for opportunistic investors. Once included, however, passive investors have no choice other than to purchase them regardless of price. All trading is 'informationless' momentum: it buys high and sells low. It also ignores style and size drift.

Overall, unexpected events can overamplify the outcomes. Passive investors can suffer full market losses when the tide turns – possibly more than active investors who can proactively switch into cash. The pertinent question is, therefore, why active managers are not able to take advantage of the resulting inefficiencies? Currently, the key reason is that passive investors are influencing the prices because they are the net buyers in most markets. And non-passive sellers are the large net sellers. As a result, the current momentum behind passives remains strong.



Key areas of future growth

Which innovations are essential?

Section 2 showed that passives will continue to enjoy tailwindsfor the rest of this decade. That will strengthen their existing asset class coverage while also extending it into other asset classes. Growth will also lead to an increase in the holding period to allow for longer periods during which mean reversion can kick in after a market correction. Passives will remain an essential feature of the core portfolio, forcing active managers to up their game.

1 The coverage rate: current and future

The asset class coverage of passive funds is somewhat uneven. Three asset classes appear to currently dominate (Figure 3.1, left chart):

- equities (cited by 82% of our respondents);
- fixed income (54%); and
- multi-asset class funds (20%).

"During this decade, our allocations to passives have almost more than doubled."

Interview quote

a) Equities

Equities have the highest coverage for a number of reasons. To begin with, passive investing started with equities back in 1976 on account of their simplicity, transparency, liquidity and timeliness. Over time, these inherent features acquired added significance, as pension plans became ever more cost-conscious when actives struggled to beat their benchmarks.

Furthermore, equities have long been a key source of value creation for pension plans. Their fund governance and skill sets have been well aligned to this asset class. The arrival of passives in the equity space has been viewed as a major innovation in what is a familiar area of pension

plan expertise. Their lower cost and index construction have been all the more welcome since they put less burden on the governance budget while minimising the drag on net returns.

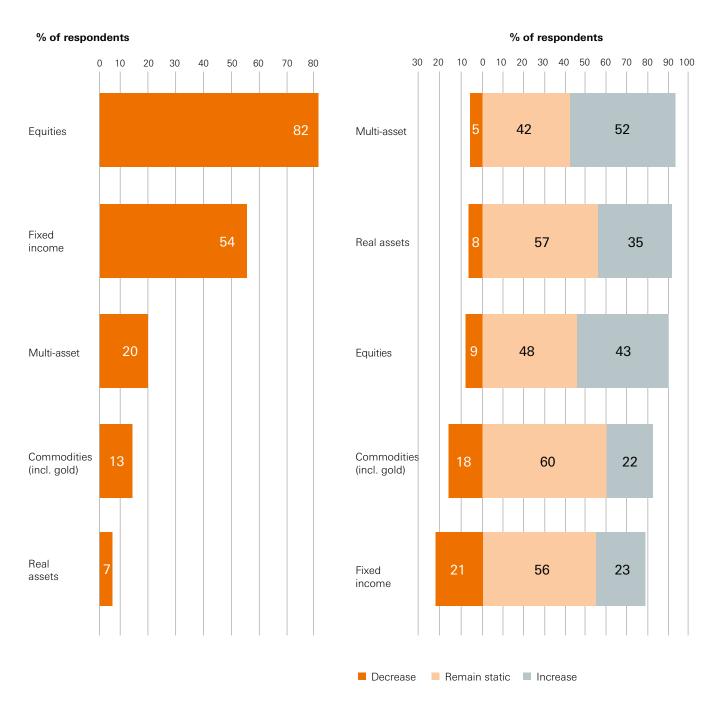
Finally, as QE has put a rocket under equity markets, it has distorted valuations in the course of the decade to the point where bottom-up stock picking has been undermined. For investors of all types, passive investing made far more sense in an environment where valuations are influenced more by central bank largesse than by economic fundamentals.

Indeed, the majority of pension plans participating in our post-survey interviews singled out QE as the dominant factor behind the explosive growth of passives in recent years. Its unwinding will ease this growth to the point where passives and actives co-exist (see Executive Summary; Figure 1.4). Only a third of respondents expect passives to lose favour, when actives start to outperform once again.

Although, QE has been hugely consequential for passives, its reversal over time will undoubtedly have some effect and likely slow down the growth in passives rather than cause a sharp reversal.

Indeed, 43% of our respondents expect equity coverage to increase over the next three years, while only 9% expect it to decrease (Figure 3.1, right chart). The biggest increases are expected in Australia, Japan, the Netherlands, the UK and the USA.

FIGURE 3.1
Which asset classes are currently covered by your plan's passive investments? How is that coverage likely to change over the next 3 years?



b) Fixed income

The coverage rate for fixed income is relatively lower at 54%, mainly because the majority of active bond funds have regularly beaten their benchmarks over 3-year, 5-year and 7-year periods. As a result, active bond funds have not featured as prominently in the active-passive debate. Their reported outperformance is due to the heterogeneity of the bonds universe, comprising passive, economic and non-economic investors. The third category accounts for about 50% of the universe - covering central banks, commercial banks and insurance companies. By law, they are obliged to hold high-quality bonds of specific maturities due to regulatory requirements. As a result, they are often forced sellers of 'fallen angels' when bonds get downgraded periodically by rating agencies. This setting favours active managers who hold high-quality bonds.

Another reason cited in our interview programme was the scope for 'adverse selection' associated with cap-weighted bond indices. These indices confer the highest weight on the most indebted companies or governments. This approach can have a troubling twist: the most influential, or largest, components may also have the biggest debt loads, which can be a sign of deteriorating finances.

Hence, alternative weighting schemes are emerging with a fee structure .that is not yet as favourable as that of passive equities. Unsurprisingly, therefore, the growth in fixed income passives will be very modest at best: 23% expect its coverage to 'increase', while 21% expect it to 'decrease' (Figure 3.1, right chart).

c) Multi-asset funds

At 20%, the penetration of multi-asset funds is also currently relatively low for one simple reason. They hold substantial legacy assets in long-term buy-and-hold vehicles that have been traditionally managed in active funds. In their first stage of evolution, they were confined to traditional 60:40 equity-bond funds.

In the last decade, they entered their second stage with the widespread adoption of life-cycle funds (e.g. target date funds) with a dynamic glide path for asset allocation as their investors approach retirement age. In both stages, the use of passive funds has been modest.

However, multi-asset funds are now transitioning to their third stage as ever more pension plans switch from defined benefits to defined contribution due to funding pressures.

Two innovations are evident. First, in countries like France, Germany, Japan, the Netherlands, Sweden and the UK, DC plans are beginning to use passive funds in their life-cycle offerings. Currently, they cover both passive developed market and emerging market equities. Over time, this is likely to spread to other asset classes as well. Two other asset classes with low coverage currently - commodities and real assets - are also likely to see an improvement in their coverage, especially real assets. 35% expect the coverage of real assets to 'increase' while only 8% expect it to 'decrease' (Figure 3.1, right chart). This improved coverage will be driven largely by DC plans seeking to broaden their asset diversification via low-cost options.

"Multi-asset funds using passives are especially attractive since they considerably reduce the expense of manager selection."

2 The holding period: current and future

"Passives are increasingly treated as part of the buy-and-hold portfolio."

Interview quote

At the start of this decade, the dominant tendency among pension plans was to divide their portfolios between buy-and-hold assets and opportunistic assets. Passives typically fell into the latter category. At the time, few expected the markets to rally so soon after the 2008 crisis and reach fresh highs in the ensuing years.

However, as the decade progressed and the rally became established, pension plans' perceptions of passive funds became more favourable. As we saw in the Executive Summary (Figure 1.8), passives now constitute an essential element of the core portfolio. This trend reflects the belief that 'time in the market' is more important than 'timing the market'. Indeed, timing the market is seen as a fool's errand. However, that does not mean that opportunism has gone away. This much is evident from our survey data on the current length of holding periods and their future changes (Figure 3.2).

a) Indexed funds

One of the key findings of our survey is that 80% of respondents hold indexed funds for more than 2 years, while another 14% hold them for 1-2 years. Only 6% hold them for less than a year (Figure 3.2, top chart). Notably, 29% expect holding periods to rise over the next three years, while 6% expect them to fall (Figure 3.2, bottom chart). The data refute the idea that pension plans are becoming short-termist in their approach to passive funds;

quite the opposite. If anything, the data support the view that passives are being seen as part of the core portfolio with longer time horizons. Pension plans with funding deficits and/or negative cash flows were more vocal supporters of passives. Others argued that, for the foreseeable future, beta will be the main source – as much as 70% – of wealth creation, and hence it should be the focal point of asset allocation.

b) Exchange-traded funds

Compared with indexed funds, the holding periods of ETFs are markedly lower. 45% of our respondents hold them for more than two years, 20% hold them for 1-2 years, and a notable 35% hold them for less than a year (Figure 3.2, top chart). The relatively lower holding periods have been attributed to two factors.

First, ETFs enable investors to slice and dice the investment universe to pursue specific themes over the market cycle. Second, they provide the intra-day liquidity and transparency that facilitate dynamic investing as well as hedging in the face of untoward events.

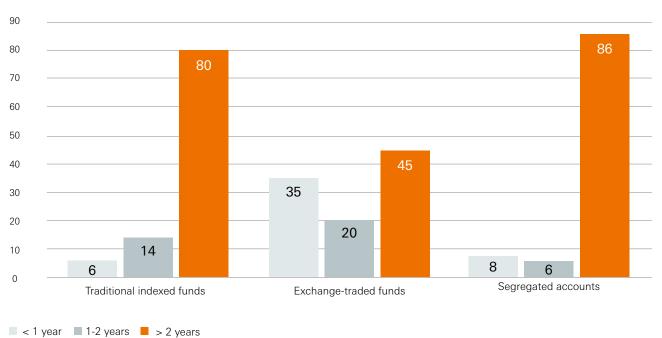
"Segregated accounts enable us to do shareholder activism while holding passives."

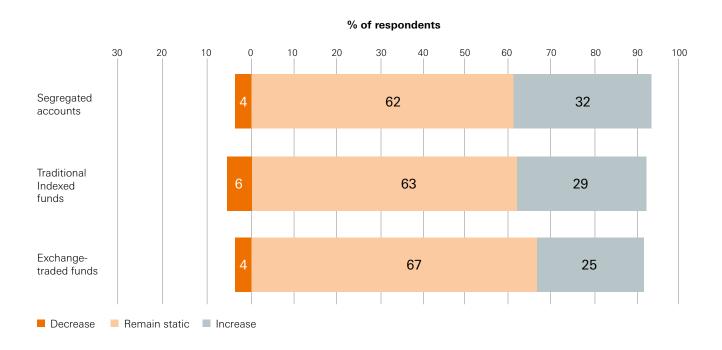
Interview quote

For many pension plans, these attributes have proved an ideal vehicle for riding specific themes during the unusual risk-on/risk-off cycles during the first four years of this decade, when there was more volatility than in the previous forty years. Events such as the 'fiscal cliff' in the US and the Greek crisis in Europe caused unusual turbulence. ETFs proved an ideal vehicle for riding it out. Notwithstanding that, 25% of our

FIGURE 3.2
What is currently your approximate holding period for the three categories of passives? And how will that period change over the next 3 years?

% of respondents





respondents expect the ETF-holding period to increase over the next three years, and 4% expect it to decrease (Figure 3.2, bottom chart).

c) Segregated accounts

Currently, 86% of segregated accounts holding passive funds have a holding period of more than 2 years, 6% have a period of 1-2 years, and 8% have a period less than 1 year (Figure 3.2, top chart). The rise of segregated accounts rests on their three benefits.

First, they have offered pension plans complete latitude on asset allocations: a choice of indices and their regional or sectoral coverage. Any performance fees – especially for smart beta strategies – are calculated at the end of the mandate period, not year-on-year. This allows an implicit fee clawback in bad years.

Second, they have enabled pension plans to be engaged directly as active investors; unlike pooled funds, which rely on asset managers to partake in shareholder activism indirectly on their behalf. The aim is to ensure that companies covered by their holdings are constantly engaged in value creation, while prudently managing their reputation risk.

Third, such accounts have also provided a real-time holistic view of all assets held by a plan, their correlations and their risks. The accounts provide a deeper understanding of a pension plan's entire balance sheet, as required by Solvency II rules in certain European jurisdictions. These advantages explain why 32% of respondents expect to increase their holding period, while only 4% expect to decrease it (Figure 3.2, bottom chart).

3 Areas requiring innovation

That passives will become an important part of the core portfolios of pension plans is not in doubt. But as we saw in Section 2, pension plans still harbour three concerns: relying on yesterday's winners, eroding the value of diversification and making booms and busts more likely. These are inherent features that asset managers cannot do much about. However, there are areas where asset managers can innovate in order to enhance the appeal of passives. Four were identified by at least one in every five survey respondents (Figure 3.3).

a) Fees and charges

48% of respondents want to see innovation in fees and charges. For all their advantages, passives are a rules-based commoditised form of investing that is highly scalable. Hence, with their continuing growth, pension plans want to see the scale benefits passed on to their investors in the form of lower fees and charges. This observation especially applies to strategies that constitute the third way of investing: smart beta based on risk factors.

Growing competition among vendors has reduced the fees of cap-weighted funds and ETFs. Pension plans are now looking for a competitive fee structure in other areas, too. The fee structure's power of compounding in a low nominal return environment cannot be exaggerated. It ranks as one of two top sources of value creation.

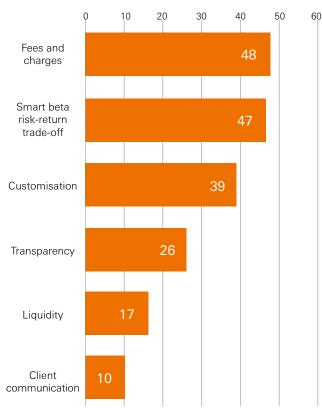
"The mechanics of smart beta need a lot of improvements to deliver better risk-return features."

b) Risk-return trade-off

The other source cited by 47% of respondents is the risk-return trade-off. Again with capweighted funds or ETFs, the value proposition is simple: market beta. However, with smart beta, the proposition is more demanding: commoditised alpha. It requires the managerial skill that is essential in selecting old factors, finding new ones, weighting them, rebalancing them and timing them. It also requires the use of Big Data and machine learning, as we saw in Section 2. Current concerns about smart beta are threefold.

FIGURE 3.3
In which product features do providers of passives need to deliver innovation to make them more attractive for your pension plan?

% of respondents



Source: CREATE-Research Survey 2018

First, smart beta exposes itself to risks other than those it is targeting. The factors typically targeted include value, momentum and volatility. But that leaves out a raft of risks that are always lurking in the background, including factor overcrowding.

Second, value strategies tend to target distressed companies. When their stock prices drop, the tendency is to buy more to restore the original weight in the belief that mean reversion will generate handsome gains. In the current decade, , as QE has distorted market prices, mean reversion has not been so common. This challenge applies equally to other factors, too.

Third, many pension plans believe that the main source of outperformance in smart beta is mostly based on the timing of rebalancing. Hence, the bulk of the innovation effort needs to be directed at improving the whole science of factor investing.

"Better understanding of correlations within multi-asset funds is vital."

Interview quote

c) Customisation

Those pension plans that now firmly accept passives as a part of their core portfolio also perceive them as an instrument of diversification in a broad-based portfolio of bonds and equities, developed and emerging economies and liquid and illiquid assets. Their indices are now perceived as ideal candidates in a blended customised multi-asset portfolio from a single asset manager. Using mostly passive funds, pension plans want innovation to target three benefits similar to the ones currently offered by active fund managers in their multi-asset funds. First, they want fees

charged on the net performance of all the strategies covered by each vehicle. This is unlike single strategy funds where fees are charged separately for each strategy, thus creating so-called 'netting risk'.

Second, pension plans want asset managers to develop a deeper understanding of changing correlations between different asset classes. This enables portfolio managers to identify problematic correlations or exposures and take pre-emptive action in a timely manner. Arguably, multi-asset managers should view their world more objectively than their single-strategy peers whose business models are tied to a specific strategy.

Third, multi-asset investing should offer their managers greater latitude to hold more concentrated positions in their best-ideas portfolios that can potentially deliver the most attractive risk-adjusted returns via long-short strategies.

d) Transparency

26% of respondents cite transparency as an area of innovation. Style drift remains a concern. While it is inherent to the way indices operate in practice, pension plans would like more information on its extent and likely impact in traditional cap-weighted funds or ETFs.

Of greater concern, however, is smart beta. Some pension plans believe that smart beta is not all that smart, but merely an extension of what has long been known as enhanced indexing. Nor is it clear how a rules-based approach like smart beta can capitalise on price anomalies in markets caused by investors' behavioural biases. Until now, these have been best exploited by high-conviction investing.

Greater transparency on both counts will go a long way towards allaying investors' concerns.

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