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The role of absolute return multi asset strategies in a defined contribution plan

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Multi asset strategies – particularly diversified growth funds (DGFs) – have found a broad appeal within defined contribution (DC) portfolios due to their potential to provide an attractive combination of growth, diversification, and lower volatility within a single investment vehicle.

However, not all multi asset strategies are the same and the differences in the investment approach across the various styles must be fully understood when considering an allocation within a DC lifecycle strategy.

As a subset of the DGFs universe, absolute return multi asset strategies have the potential to provide the following benefits to DC plans:
- Positive absolute returns in all market conditions over a specified time period.
- Preserve the absolute value of savings and protect them from both equity and interest rate related market risks particularly towards the end of the lifecycle.
- Serve as a core allocation within a default path targeted towards an income drawdown, while also providing flexibility for DC members who want to remain invested in growth strategies for longer (or those who are undecided on how to use their pension savings).
- Serve as a core component within a self-select lifestyle strategy for DC members with low tolerance for risk.

In this paper we look more closely at the use of multi asset strategies and consider the benefits of an absolute return multi asset strategy in a DC portfolio.

The use of multi asset strategies in a DC plan

Most DC lifestyle strategies look similar at the beginning of the savings journey, with the majority of the portfolio allocated to equity beta usually in the form of passive funds. It is towards the end of the DC lifecycle where they start to differ.

A DC plan's investment objectives transition from growth to capital preservation during the lifecycle and become increasingly complex towards the end of the glidepath. At this stage, trustees face several choices: when to start de-risking, deciding the most appropriate de-risking default and level of investment risk. In addition, compared to defined benefit (DB) plans, most UK DC plans are still small and have a limited governance budget to be able to implement and monitor complex diversification and de-risking strategies in-house.

Given the multiple objectives of a DC glidepath in the mid-career and pre-retirement phases (stable growth, capital preservation, and keeping pace with inflation) DGFs became an allocation of choice in the UK as a one-stop solution to all the objectives. According to Pensions and Lifetime Savings Association (PLSA)[1] DGFs are now part of virtually all lifestyle structures, at least for larger schemes, and are used to reduce volatility starting any time between forty to five years before retirement.

However, despite targeting similar objectives of delivering equity-like returns but with lower volatility than global equity markets over time, DGFs can differ significantly in terms of investment philosophy, asset allocation, range of asset classes deployed and the portfolio manager's area of expertise. Therefore, outcomes for members can vary.

Broadly speaking, DGFs can be categorised into passive, dynamic, and absolute return strategies. Passive and dynamic DGFs are typically implemented through a variety of traditional and alternative asset classes, while absolute return strategies can include relative value ideas and hedging instruments to generate returns less dependent on the direction of the market.

Those DGFs only using an asset allocation approach may still derive most their returns from macro-related factors such as equity beta and interest rates. For example, a PLSA report[2] found across 27 DGFs direct equity allocation can range from about 20% to 70%. In the chart below we show that only a small number of DGFs have a less than 0.5 correlation with equity and fixed income.

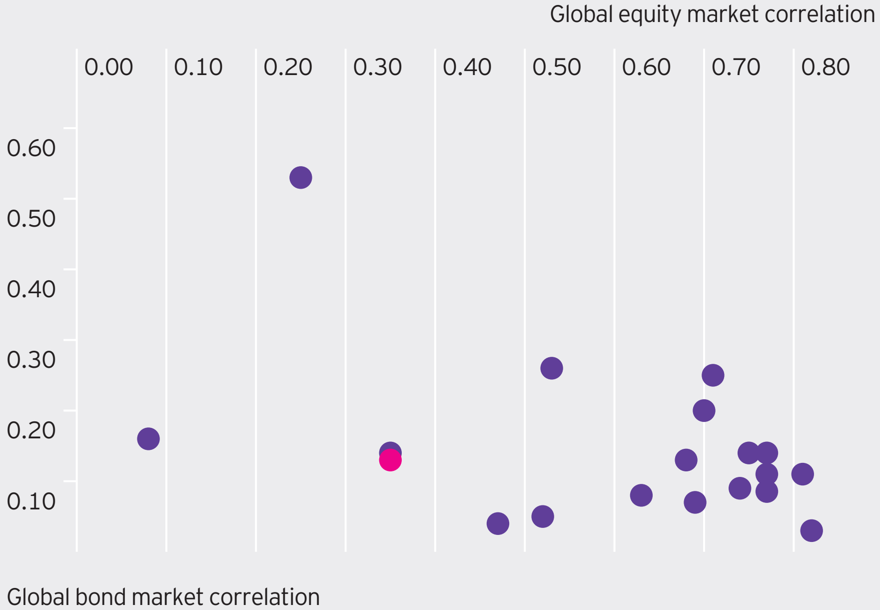
Therefore, a key consideration for selecting a DGF for a DC plan is its diversification characteristics in relation to other return drivers in the glidepath and the risk/return profile relevant for the members in that phase of the lifecycle.

We would argue that an actively managed multi asset strategy targeting absolute returns could be increasingly beneficial towards the later stages of a DC lifecycle, especially if it can show low correlation with broad market returns and a higher potential for capital preservation.

An absolute return multi asset strategy can also help calibrate the overall risk/return profile of the portfolio more precisely by starting in the growth phase and gradually increasing in allocation towards the end of the glidepath.

Figure 1
Global equity and bond correlations of diversified growth funds*

Invesco Perpetual Global Targeted Returns Fund (Z-accumulation class)
DGF peers



Past performance is not a guide to future return. Any reference to a ranking provides no guarantee for future performance results and is not constant over time.
Source: Invesco, Bloomberg and Morningstar. Weekly returns as of September 30, 2017. Period covered: From October 2014 to September 2017. Equity benchmark: MSCI World 100% Hdg GBP , Bond Benchmark: Bloomberg Barclays Global Aggregate Bond Hdg GBP.
* Peer group represented by Diversified Growth Funds (DGFs) from Pensions and Lifetime Saving Association White Paper (where data is available for the time period from October 2014 to September 2017).

1 PLSA. Default Fund Design and Governance in DC Pensions report, September 2013.
2 PLSA. Diversified Growth Funds. October 2015.
3 Willis Towers Watson. Multi-Asset Funds, May 2016; LCP. DGFs – a case of luck or skill? 24 March 2016.

i. Absolute return multi asset strategy's target returns vs equity premium.
Many DGFs claim to target equity-like returns but it has been widely discussed in the pension fund industry whether DGFs have delivered on their promise in recent years, given that equity markets have outpaced most other investment strategies.

We have been experiencing a very lengthy bull market and over the last five years global equities (as measured by the MSCI World) have generated double digit annualised returns. However, over the very long run since 1899, the excess total return of UK equities versus cash has been 5.8% per annum according to the Barclays Equity Gilt Study 2017. So, taking a long-term perspective and currently low growth expectations across major economies, it can be argued that a cash plus 4% to 6% return target is a good proxy for long-term equity returns.

Absolute return multi asset strategies typically deploy an unconstrained investment approach using various styles of investing such as a relative value approach, tapping into unconventional return drivers such as volatility, liquidity and the term structure of bonds and commodities. Diversification is key – Invesco Perpetual's Multi Asset team typically uses between 20 and 30 investment ideas within a single fund while seeking to achieve its return target.

More importantly, by aiming to avoid large negative returns and prolonged periods of underperformance through robust risk management, an absolute return multi asset fund may be able to generate equity-like returns over time.

ii. As DC members approach retirement capital preservation becomes a bigger priority.
As an individual approaches retirement age and his or her pension pot reaches its highest level, the goal of protecting the capital from market drawdowns becomes an increasing priority. Annual data from 1900 to 2016 shows the UK equity market falling by 10% or more in 31 out of those 116 years. Such falls can have dramatic implications on the retirement portfolio value and in turn on the quality of life in retirement. The potentially crucial benefit of investing in an absolute return multi asset strategy at this stage is a greater certainty of outcome, where the range of returns can be more narrow but more predictable.

Therefore, when evaluating the use of a multi asset fund in the pre-retirement phase, both low volatility and low correlations with major asset classes and other DGFs should be considered desirable. To achieve such relatively low correlations, an absolute return multi asset fund require genuine flexibility to access not only a broad variety of asset classes but also different styles of investing. These could include relative value or alternative returns sources such as volatility.

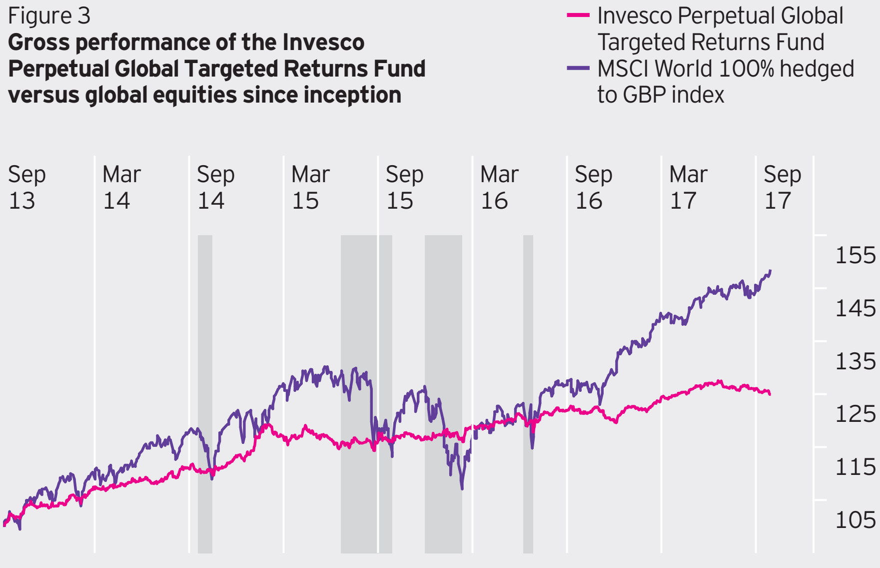
As an example of this, the Invesco Perpetual Global Targeted Returns Fund has managed to deliver smooth returns with minimum correlation with equities since inception (Figure 3). In some periods it has even generated positive returns when the broader equity market experienced a sharp downturn.

Figure 2
Correlation analysis

Asset class	Correlation with Invesco Perpetual Global Targeted Returns Fund
Global stocks[1]	0.39
US stocks[2]	0.30
European stocks[3]	0.42
Emerging markets stocks[4]	0.43
Global government bonds[5]	0.14
Global bonds[6]	0.17
Commodities[7]	0.06
Currency (USD)[8]	0.23

Source: Bloomberg. Period covered: inception of the Invesco Perpetual Global Targeted Returns Fund (9 September 2013) through 30 September 2017. Weekly data used. [1]Represented by MSCI World 100% Hdg GBP index. [2]Represented by S&P 500 Hdg GBP index. [3]Represented by Eurostoxx® 50 GBP Hdg index. [4]Represented by MSCI Emerging Market Net Total Return Local Currency index. [5]Represented by Citi World Government Bond index – Developed Markets (currency-hedged in GBP terms). [6]Represented by Barclays Global Aggregate Corporate Hdg GBP index. [7]Represented by Bloomberg Commodity index. [8]Represented by US Dollar index. An investment cannot be made directly into an index.

Figure 3
Gross performance of the Invesco Perpetual Global Targeted Returns Fund versus global equities since inception



(%)	18.09.14 16.10.14	22.06.15 29.09.15	01.12.15 11.02.16	08.06.16 27.06.16
Portfolio returns (gross)	-0.38	0.37	-0.16	-2.18
MSCI World index (GBP-hedged)	-8.22	-12.26	-15.30	-7.16

Past performance is not a guide to future returns.
Source: Invesco and Bloomberg as at 30 September 2017. Fund inception date 9 September 2013. Global equities represented by MSCI World 100% hedged to GBP index, net total return. Fund performance figures are shown in sterling, inclusive of reinvested income, gross of the Ongoing Charge and net of portfolio transaction costs. The figures do not reflect the entry charge paid by individual investors. Data rebased to 100 as at 9 September 2013. The net performance over the same period for the fund can be found in the Important Information section at the end of the document.

iii. Capital preservation or growth during retirement – why not both?
Since the introduction of pension freedoms in 2015 a pension pot no longer needs to be converted into annuities. Many DC plans now offer an alternative pre and post-retirement investment choice allowing members to remain invested in diversified growth strategies. However, the combined risk of having to draw retirement money when assets are depressed during a market downturn can cause an irreparable damage to one's retirement plan and future financial wellbeing. Thus, in the decumulation phase, a combination of capital preservation and the potential of an investment strategy to generate growth without eroding capital is particularly valuable for a retiree.

The advantages of remaining in low volatility absolute return multi asset strategies compared to cash or annuities are multiple. They provide a potential for further upside, give an individual more flexibility and time to decide how to use their pension pot during retirement. For those retirees who hesitate to make retirement decisions or continue to keep their pot in the workplace DC plan, remaining invested in an absolute return multi asset strategy can result in a meaningful upside. In addition, such an investment strategy allows investors to extend the accumulation stage so that the additional growth element can help protect the individual from the possibility of outliving their assets in retirement.

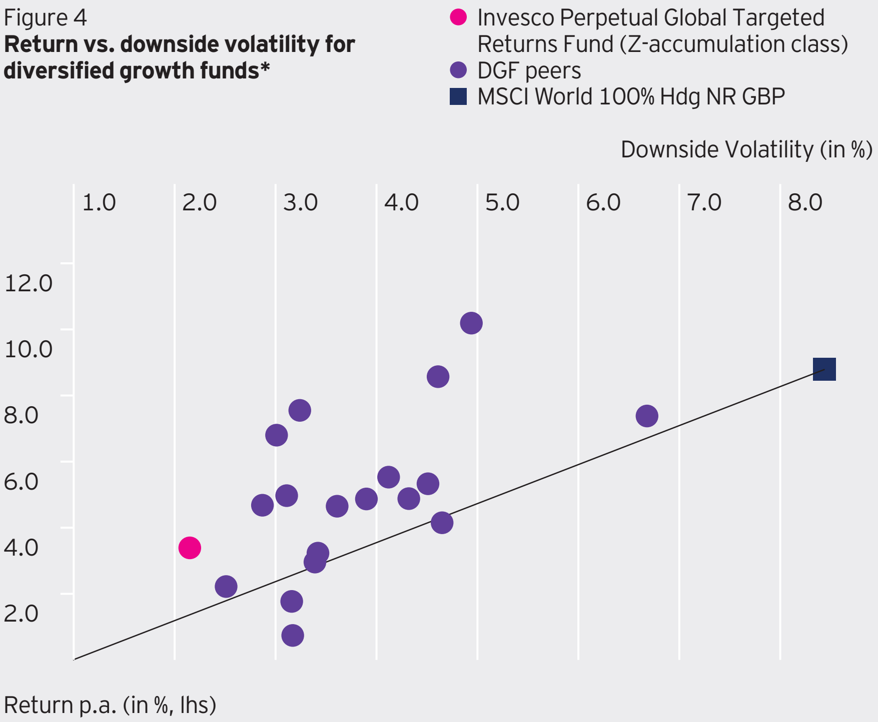
Subsequently, when considering a multi asset fund for the pre and post-retirement stage the downside volatility and Sortino ratio of a multi asset fund would be a better metric than volatility alone. Since the Sortino ratio measures the fund's risk/return profile based on its downside volatility, the higher the ratio, the higher the efficiency of the strategy in generating upside per unit of downside risk. As shown in Figure 4 there is wide dispersion in downside volatility across DGFs although the majority have the same target of 1/2 to 1/3 of equities' volatility. Those DGFs above the line indicate funds with a superior risk/return profile using Sortino ratio than any combination of cash and global equities.

Another critical element of a multi asset strategy is its approach to risk management and how the broad range of risks within the strategy are actively managed in order to ensure that it can deliver on its low volatility and downside mitigation promise. The more sophisticated the strategy, the more different levels of risks a multi asset portfolio is typically exposed to, such as individual holdings risk, portfolio construction, counterparty risk, model risk, key person risk. This means that the overall portfolio needs to be carefully monitored for intended and unintended risk exposures and the downside volatility target should be as important as a return target.

iv. Absolute return DGFs may be attractive to risk-averse DC members.
Many DC plans offer more than one lifestyle strategy, typically, a choice between aggressive, moderate, and conservative strategies. While most plan members may be comfortable to go along with the zigzags of the equity markets on the DC journey, or be unaware of them, those who are risk averse may experience an emotional shock and disengage from participating in the market after seeing a large capital loss, even if only on paper.

Also, DC members with low potential future income or lumpy DC plan contributions may be particularly sensitive and vulnerable to large capital losses. Thus, a higher allocation to an absolute return DGF within a conservative lifestyle strategy or as a self-select option may help to provide growth at lower volatility for those DC members with lower risk tolerance.

Figure 4
Return vs. downside volatility for diversified growth funds*



Past performance is not a guide to future return. Any reference to a ranking provides no guarantee for future performance results and is not constant over time.
Source: Invesco, Bloomberg, Morningstar. Weekly returns as of September 30, 2017. Period covered: From October 2014 to September 2017. Equity Benchmark: MSCI World 100% Hdg GBP, Performance is net of fees and in GBP.
* Peer group represented by Diversified Growth Funds (DGFs) from Pensions and Lifetime Saving Association White Paper (where data is available for the time period from October 2014 to September 2017).

To summarise, absolute return multi asset funds can play a meaningful role in a DC plan providing genuine diversification and capital preservation benefits, especially for those closer to retirement and beyond. However, the ability of such funds to deliver on the benefits is highly dependent on the portfolio manager's skills, dedicated resources, and risk management process. DC plan managers and trustees should be prepared to invest time into thorough research and understanding such strategy – the benefits to their DC members can be well worth the effort.

About the Invesco Perpetual Global Targeted Returns Fund

The investment proposition of the Invesco Perpetual Global Targeted Returns Fund is to generate positive returns through the economic cycle (specifically, a gross return of 3-month LIBOR plus 5% per annum) with less than half the volatility of global equities over a rolling three-year period. The Invesco Perpetual Multi Asset team believes it can achieve this through building a truly diversified and robust portfolio of investment ideas, which can come from any asset type anywhere in the world.

Crucially, this unconstrained research agenda is combined with a rigorous approach to risk management, which is embedded in the investment process. Every idea is risk-tested on a standalone basis and in combination with the rest of the portfolio. This also applies when ideas are removed from the portfolio and so we hope to ensure that the diversification benefits of the portfolio are maintained at all times.

There are several layers of risk management that are embedded in the investment process of our Invesco Perpetual Multi Asset team, ranging from back-testing and stress-testing - to idea implementation and independent oversight.

1. **Back-testing:** We use a risk-management system which analyses historic data aiming to ensure two things. Firstly, that we are taking enough risk to achieve our targeted return. Secondly, that the diversification within the fund is sufficient to keep fund volatility below our volatility target.

2. **Stress-testing:** However, the team is always cognizant of the fact that backward looking data may not be the most reliable tool for predicting future markets and that their central view of what the world may look like could be wrong. For this reason, the team also tests the portfolio against a selection of possible, if not probable future scenarios, which subject the portfolio to relatively extreme market events and stresses the diversification qualities of the fund.

3. **Implementation:** The team's ability to run a truly diversified and robustly risk-managed portfolio is enhanced through the use of derivatives. These provide a level of flexibility that increase the number of implementation routes either as an efficient way to reduce risk, to enhance income and/or gain pinpoint exposure to a particular theme or investment idea. The team keeps things simple and considers its use of derivatives to be conservative given several strict guidelines.

4. **Firm-wide risk oversight and risk management:** Invesco employs a multi-faceted approach to oversight and risk management that is deeply embedded in its culture, organisational governance, and business structure. The Invesco Perpetual Multi Asset team's processes are therefore bolstered and overseen by multi-dimensional independent controls.

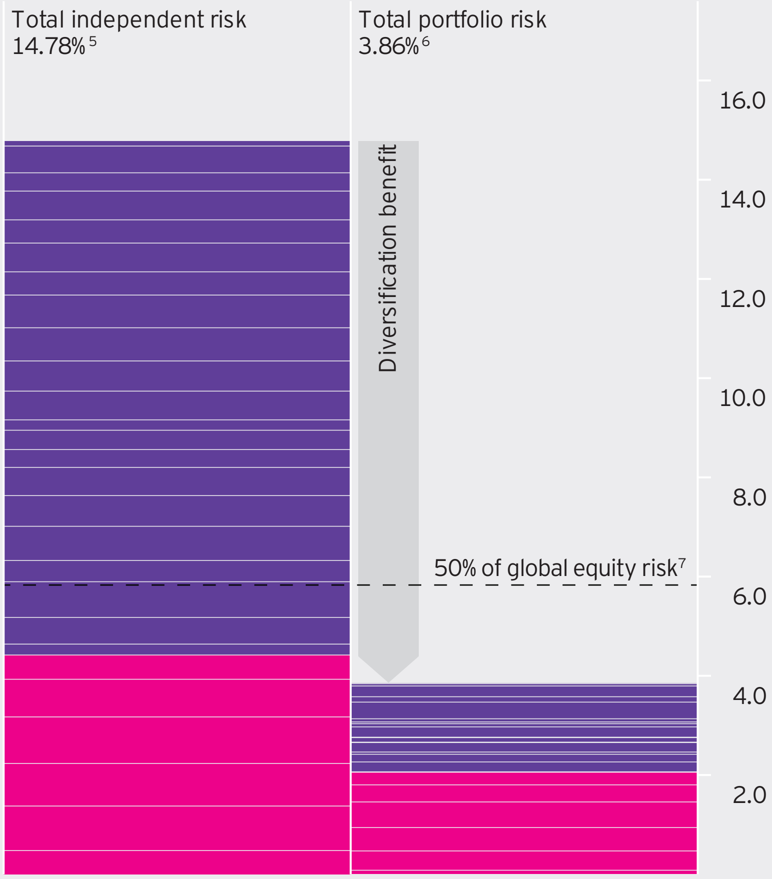
Figure 5
Expected diversification from combining investment ideas

Ideas expressed through Invesco Perpetual/ Invesco strategies

Credit - Selective Credit
Equity - European Divergence
Equity - Global
Equity - Selective Asia Exposure
Equity - UK
Credit - US High Yield

Other investment ideas

Commodity - Commodity Carry
Commodity - Commodity Short
Currency - Chile and Mexico vs Australia and New Zealand
Currency - Indian Rupee vs Chinese Renminbi
Currency - Japanese Yen vs Korean Won
Currency - Long EM Carry
Currency - Russian Ruble vs Canadian Dollar
Currency - US Dollar vs Canadian Dollar
Currency - US Dollar vs Euro
Equity - Dispersion
Equity - Japan
Equity - US Large Cap vs Small Cap
Inflation - Short Real Yields and Inflation
Inflation - US vs UK
Interest Rates - Australia vs US
Interest Rates - Selective EM Debt
Interest Rates - Swap Spreads
Interest Rates - Sweden
Interest Rates - Yield Compression
Volatility - Asian Equities vs US Equities



Source: Invesco as at 30 September 2017. For illustrative purposes only.

[5] Independent risk - the expected volatility of an individual idea as measured by its standard deviation over the last three and a half years.

[6] Portfolio risk - the expected volatility of the fund as measured by the standard deviation of the current portfolio of ideas over the last three and a half years.

[7] Global equity risk is the expected volatility of the MSCI World Local index as measured by its standard deviation over the last three and a half years, 11.66% as at 30 September 2017.

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Supplementary information
Invesco Perpetual Global Targeted Returns Fund performance versus global equities (MSCI World Index) (%)

	18.09.14 16.10.14	22.06.15 29.09.15	01.12.15 11.02.16	08.06.16 27.06.16	Since fund inception 09.09.13
Invesco Perpetual Global Targeted Returns Fund (gross)	-0.38	0.37	-0.16	-2.18	26.04
Invesco Perpetual Global Targeted Returns Fund (net, Z-accumulation class)	-0.45	0.10	-0.40	-2.23	21.49
MSCI World Index (GBP-hedged)	-8.22	-12.26	-15.30	-7.16	48.44

Past performance is not a guide to future returns.
Source Invesco and Bloomberg as at 30 September 2017. Fund inception date 9 September 2013. Global equities represented by MSCI World 100% hedged to GBP index, net total return. Gross fund performance figures are shown in sterling, inclusive of reinvested income, gross of the Ongoing Charge and net of portfolio transaction costs. Net fund performance figures are shown in sterling, inclusive of reinvested income, net of the Ongoing Charge and portfolio transaction costs. The figures do not reflect the entry charge paid by individual investors. Data rebased to 100 as at 9 September 2013.

Data as at 30 September 2017, unless otherwise stated.

The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested. Past performance is not a guide to future returns.

Where individuals or the business have expressed opinions, they are based on current market conditions, they may differ from those of other investment professionals and are subject to change without notice.

As with all investments there are associated risks. Please obtain and review all relevant materials carefully before investing.

Unlike some retirement products, an investment involves stock market risk. The value of an investment will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested. Any income will fluctuate and is not guaranteed for life. There may be tax implications in relation to making an investment and if investors are considering their retirement options, or are unsure whether this product is suitable for them, they should seek advice from a financial adviser and use the government's free Pension Wise service at www.pensionwise.gov.uk.

Invesco Perpetual Global Targeted Returns Fund
The fund makes significant use of financial derivatives (complex instruments) which will result in the fund being leveraged and may result in large fluctuations in the value of the fund. Leverage on certain types of transactions including derivatives may impair the fund's liquidity, cause it to liquidate positions at unfavourable times or otherwise cause the fund not to achieve its intended objective. Leverage occurs when the economic exposure created by the use of derivatives is greater than the amount invested resulting in the fund being exposed to a greater loss than the initial investment.

The fund may be exposed to counterparty risk should an entity with which the fund does business become insolvent resulting in financial loss. The manager reduces the counterparty risk through the use of collateral management.

The securities that the fund invests in may not always make interest and other payments nor is the solvency of the issuers guaranteed. Market conditions, such as a decrease in market liquidity for the securities in which the fund invests, may mean that the fund may not be able to sell those securities at their true value. These risks increase where the fund invests in high yield or lower credit quality bonds and where we use derivatives.

For the most up to date information on our ICVC funds, please refer to the relevant fund and share class-specific Key Investor Information Documents, the Supplementary Information Document, the Annual or Interim Reports and the Prospectus, which are available using the contact details shown.

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