Pensions Management Institute
Academy

BERENBERG
PARTNERSHIP SINCE 1590

# Berenberg PMI Academy Manual 2024

## Protected Equities

Pensions Management Institute
Moving pensions forward

# Contents





# Introduction

**The United Kingdom's Defined Contribution (DC) pension market is on the brink of a substantial transformation. Over the past decade, membership in DC schemes has experienced a meteoric rise, surging from approximately 1 million individuals in 2012 to an impressive tally of over 30 million as of now.**

In this market the lifecycle model has always played a crucial role. This model dictates that the closer an investor gets to retirement, the more conservative the asset allocation becomes, typically shifting towards bonds and away from equities. This approach, while prudent, has often led to suboptimal asset allocations, particularly in the later stages of the lifecycle. Due to an initially low amount of assets in the later stages and the generally young member age, the investment focus has been on the early stages of this journey, often with little regards to the later stages. With investment pot sizes growing and members getting older, more assets are moving towards the later stages of the lifecycle which is causing fundamental changes within the DC market.

Our Protected Equities Strategy addresses this by being a solution to the DC market which was specifically designed to be the cornerstone of investment portfolios in the later stages.
The strategy aims to deliver real value to portfolios and improve long term investment outcomes.

# The challenges of the later stages

Dependence on Defined Contribution (DC) pots for retirement introduces challenges not previously encountered with Defined Benefit (DB) pensions. Historically, DB pensions provided a consistent monthly amount, a stability familiar throughout one's working life: a single payment each month, free from concerns over investment returns. However, as the reliance on DC pensions increases significantly over the coming years, the design of portfolios, especially in the later stages, becomes crucial.

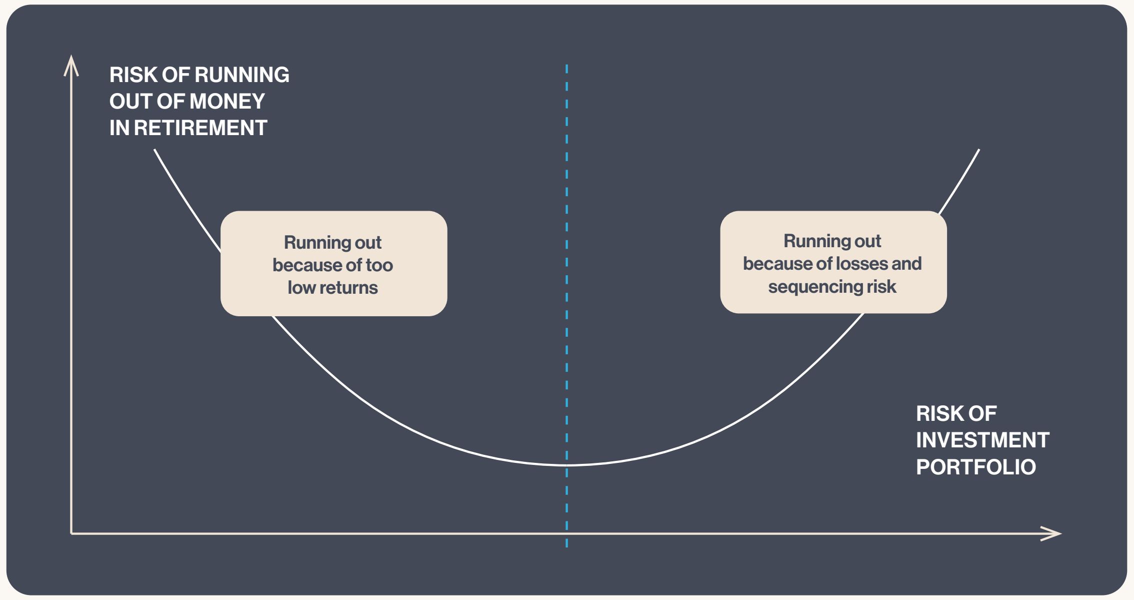
This will determine whether retirement is comfortable or fraught with financial difficulty. Individuals nearing or in retirement face two primary risks: overly conservative investing, leading to insufficient returns and the potential depletion of funds, and overly aggressive investing, which can result in significant losses that undermine the capital base, also leading to potential financial ruin. The low risk tolerance of most retirees means they cannot withstand the equity allocations necessary for generating returns that will sustain them throughout retirement. Compounded by higher inflation, portfolios with low investment returns are more likely to be withdrawn prematurely as living costs rise, placing most retirees in the conservative investment camp. The risk most people in the later stages encounter is not portfolios that are too risky, but portfolios that are too conservative that don't generate enough returns to last throughout retirement.

This critical concern arises for those approaching retirement. These later stages (pre and post retirement) of the lifecycle often see an over-allocation to government bonds, money market funds, and low-risk bonds. This conservative approach results in low equity allocations, which is problematic considering a retiree's remaining life expectancy often exceeds 20 years. The lack of growth asset exposure means retirement funds are not optimally invested and could be achieving higher returns. High bond allocations also pose an inflation risk, potentially eroding the real value of assets. However, the challenge lies in the fact that investors nearing retirement are often unable or unwilling to take on the volatility associated with a more aggressive portfolio, necessitating a solution that balances risk and return. A traditional combination of equities and bonds alone is unlikely to provide the balance needed between risk and return, resulting in either too conservative or too risky portfolios. Up to now, not enough has been done to address this problem, especially as the number of DC members along with their pots keep growing and the age of the average member is increasing.

As individuals approach the later stages of their retirement journey, sequencing risk becomes increasingly significant. This risk, tied to the timing of investment returns, is especially acute during the pre-retirement and post-retirement phases. Sequencing risk highlights the danger that the timing of withdrawals from a retirement account can adversely affect the overall return rate. Significant market downturns early in retirement, or while drawing down pensions, can have a disproportionately negative impact. Withdrawing funds during a market dip decreases the capital available for benefiting from subsequent recoveries, thereby worsening the retirement portfolio's long-term health. This emphasises why members in the later stages cannot afford high unprotected equity allocations and often end up having lower growth asset allocations than needed to generate sufficient long-term returns for their retirement. A pitfall that, in the long run, has the same result as being invested too aggressively: It increases the probability of running out of money.



**Sequence risk is the danger that the timing of withdrawals from a pension portfolio will damage the pension fund member's overall return. Pension withdrawals during a bear market are more costly than the same withdrawals in a bull market. Portfolio protection can help safeguard your pension portfolio against sequence risk.**




Designing appropriate portfolios for the later stages is further complicated by a fundamental shift in the investment landscape. The previous era of low interest rates and quantitative easing has transitioned to a period marked by higher inflation and a slowdown of stimulating central bank interventions. This fundamentally changed equity-bond correlations which complicates retirement planning further. Over the last two decades, investors have depended on a negative correlation between equities and bonds for diversification benefits. Typically, bonds have acted as a safe haven during stock market downturns, helping to stabilize returns. Yet, this relationship has become unpredictable, especially in times of inflationary pressures. Positive equity-bond correlations, though unusual in recent history, were common before the era of extensive quantitative easing.

These unstable correlations reduce the efficacy of traditional diversification strategies, leaving portfolios consisting of bonds, equities and Diversified Growth Funds (DGFs) more vulnerable to market fluctuations. Effective diversification should focus on fundamental return drivers, proving its value not in bull markets but during downturns by limiting losses. Typically, diversification fails precisely when it is most needed, as correlations among risky assets increase during periods of market stress. In such contexts, option-based strategies with clear hedging components often stand out as dependable protections.

So, how can investors achieve the right balance between earning sufficient returns and maintaining portfolio stability? Protected equities present a viable solution, enabling participation in the equity market while reducing downside risk. This strategy supports ongoing equity exposure and mitigates risk through options-based hedging, addressing both the growth needs and risk management requirements of investors.

# The Protected Equities Strategy: A Game-Changer

Herein lies the beauty of Protected Equities. This approach, which has been used by many institutional investors over the last decades, now presents a compelling proposition for the DC market. It offers investors in the mid-growth and later stages a way to maintain or even increase their equity exposure without increasing their risk profile substantially. Protected Equities is a proven investment approach that allows investors to participate in the potential upside of equity markets while providing a level of downside protection.

Our strategy employs a combination of equities and exchange listed options, that are used for risk reduction purposes, to construct a portfolio that aims to deliver long-term growth with reduced risk. In essence, the strategy seeks to 'protect' investors from the full brunt of potential losses during periods of market downturns. It does this by using options to 'hedge' parts of the equity risk of the portfolio. If the equity market falls, the increase in the value of the options can offset, to some extent, the losses from the equity investments.



# How Protected Equities fit in the Portfolio

**The Protected Equities Strategy comes in two versions tailored to different stages of the lifecycle:**

**Tail risk protection**

Compared to equities, this version is expected to have lower risk with the potential to provide **higher returns than equities over whole market cycles**

*This version can typically be viewed as a complement or replacement to Diversified Growth Funds* or equivalent.*

**High protection**

Compared to equities, this version is expected to have lower risk with the potential to provide **higher returns than global bonds**

*This version can typically be viewed as a complement or alternative to bonds*

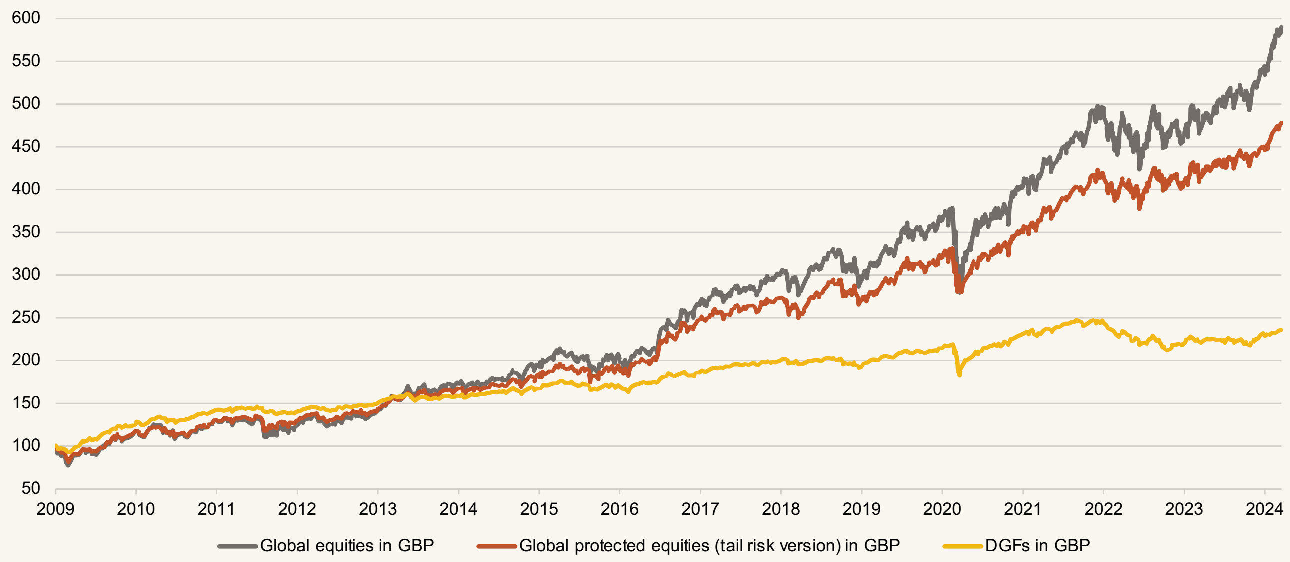
| Parameters | Aims of Tail Risk Version | Aims of High Protection Version |
|---|---|---|
| Drawdown | Limit to less than 20% p.a. | Limit to 10% p.a. |
| Volatility | Around 10-15% p.a. | Less than 10% p.a. |
| Participation in positive equity markets | Around 90% | Around 3% per month |

The version focused on protecting against tail risks aims to limit annual drawdowns to less than 20%, exhibit a volatility of around 10-15% annually, participate around 90% in positive equity market returns, and offer higher risk-adjusted returns than equities. This version is suitable for the growth/mid-growth phases as a complement or replacement to DGF funds but can also be used as an equity replacement in the later stages.

*Commonly known as DGFs.

## Tail Risk Version – start date 2009

Simulated results: Starting after Global Financial Crisis




| | Total Return | Return p.a. | Vol p.a. | Sharpe Ratio | Max Drawdown |
|---|---|---|---|---|---|
| **Global equities in GBP** | 491% | 13.7% | 15.7% | 0.81 | -26% |
| **Global protected equities (tail risk version) in GBP** | 378% | 12.0% | 11.7% | 0.95 | -18% |
| **DGFs in GBP** | 135% | 6.4% | 6.1% | 0.89 | -17% |

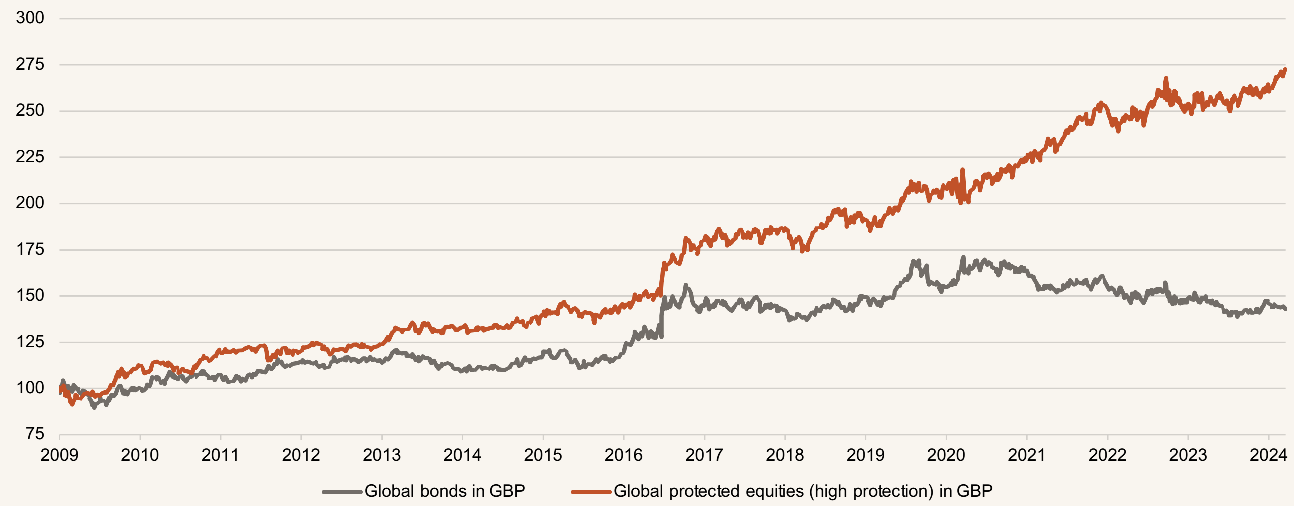
*Source: Bloomberg, BNP, Berenberg, internal calculations.*

The High Protection version aims to limit annual drawdowns to around 10%, keep volatility under 10% annually and provide higher returns than global bonds. This version is ideal for the pre-retirement and post-retirement phase, serving as a complement or alternative to bonds, allowing higher equity allocations and the growth potential needed within this stage of the lifecycle.



## High Protection Version – start date 2009

Simulated results: Starting after Global Financial Crisis




| | Total Return | Return p.a. | Vol p.a. | Sharpe Ratio | Max Drawdown |
|---|---|---|---|---|---|
| **Global bonds in GBP** | 43% | 2.6% | 9.3% | 0.17 | -19% |
| **Global protected equities (high protection) in GBP** | 173% | 7.5% | 8.5% | 0.77 | -11% |

*Source: Bloomberg, BNP, Berenberg, internal calculations.*

The Protected Equities Strategy can be used to effectively replace and complement allocations in DGFs as well as bonds within the mid-growth and later stages. When applied efficiently, the Protected Equities Strategy can increase the long-term expected returns of a portfolio without significantly altering its risk dynamics when replacing DGFs or bonds with it. When used in the later stages, it allows for higher growth asset allocations that are needed so that member's pots last throughout their entire retirement.

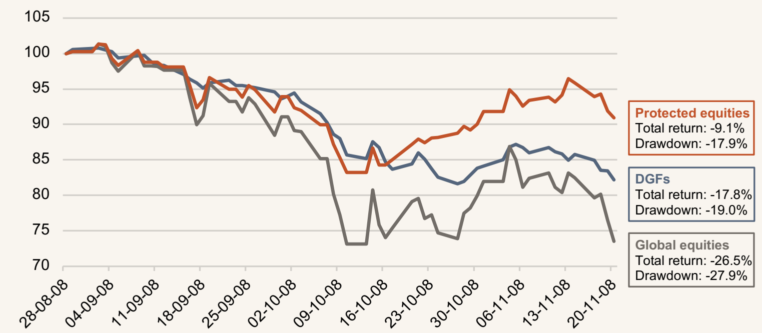
It can also provide an essential diversification away from DGFs, which are especially susceptible during periods of higher inflation and rising interest rates. The performance of many DGFs over the past two decades has fallen short of expectations, failing to provide the anticipated equity-like returns with lower volatility. Often, the returns were markedly lower compared to equities, even while often suffering drawdowns of similar magnitudes. The fee structure of DGFs also tends to significantly exceed that of equity funds. Our historical data and modelling indicate that our Protected Equities Strategy would have outperformed DGFs, offering superior returns with similar risk levels. Moreover, the cost associated with our strategy stands as a mere fraction of the average DGF's fee.

## Comparison to Diversified Growth Funds*

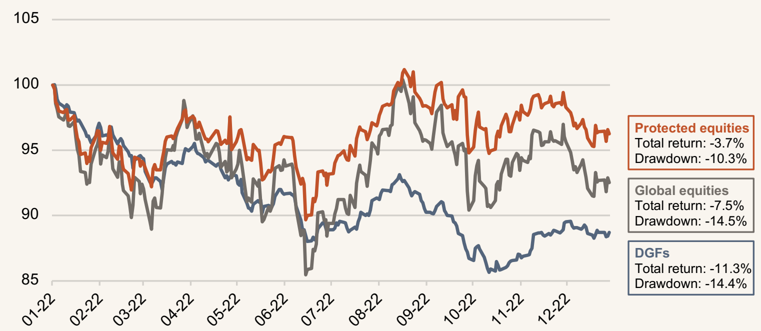
Simulated results: Market downturns

DGFs — Global equities in GBP
Protected equities (tail protection) in GBP

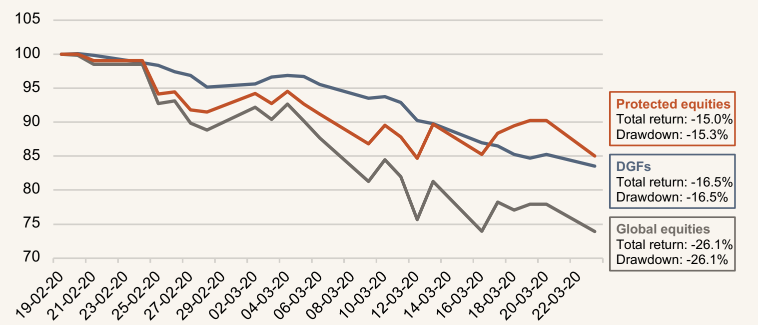
### Lehman crash 2008




### 2022 (Ukraine war, high inflation)




### COVID-19 crash




*Source: Bloomberg, BNP, Berenberg, internal calculations.*
**Commonly known as DGFs.*

## Key findings

- DGFs performed similar to equities in crashes, offering very little diversification and protection during downturns, often exhibiting low volatility with high drawdowns
- Protected equities (tail protection) outperformed both DGFs and equities during crisis

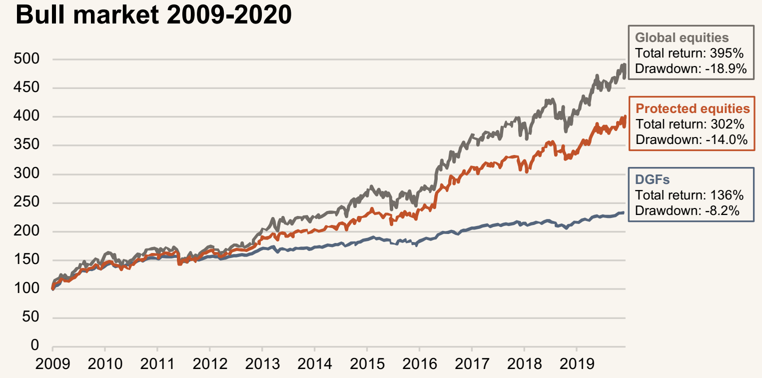


## Comparison to Diversified Growth Funds*

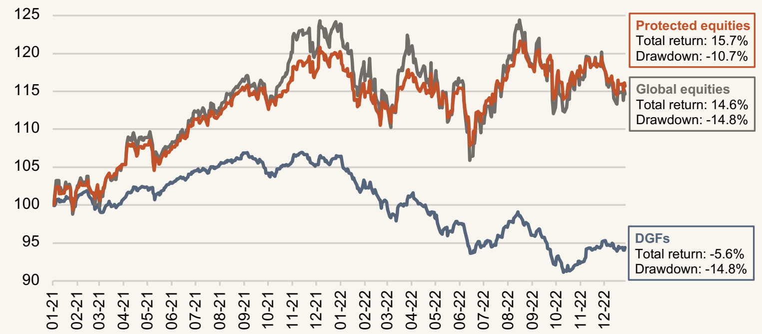
Simulated results: Market rallies & Mixed markets

DGFs — Global equities in GBP
Protected equities (tail protection) in GBP

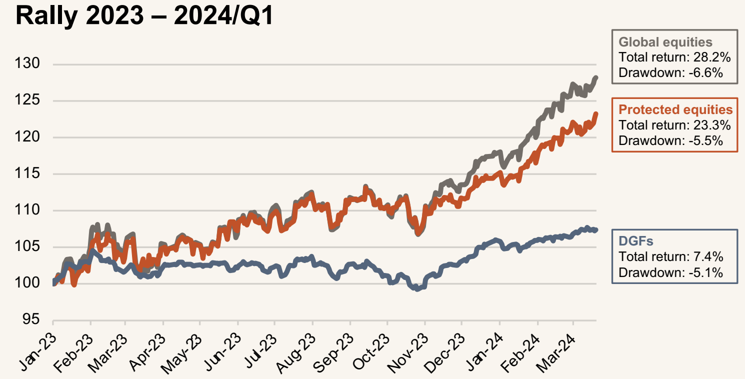
### Bull market 2009-2020




### Mixed markets: Rally 2021 and correction 2022




### Rally 2023 – 2024/Q1




*Source: Bloomberg, BNP, Berenberg, internal calculations.*
**Commonly known as DGFs.*

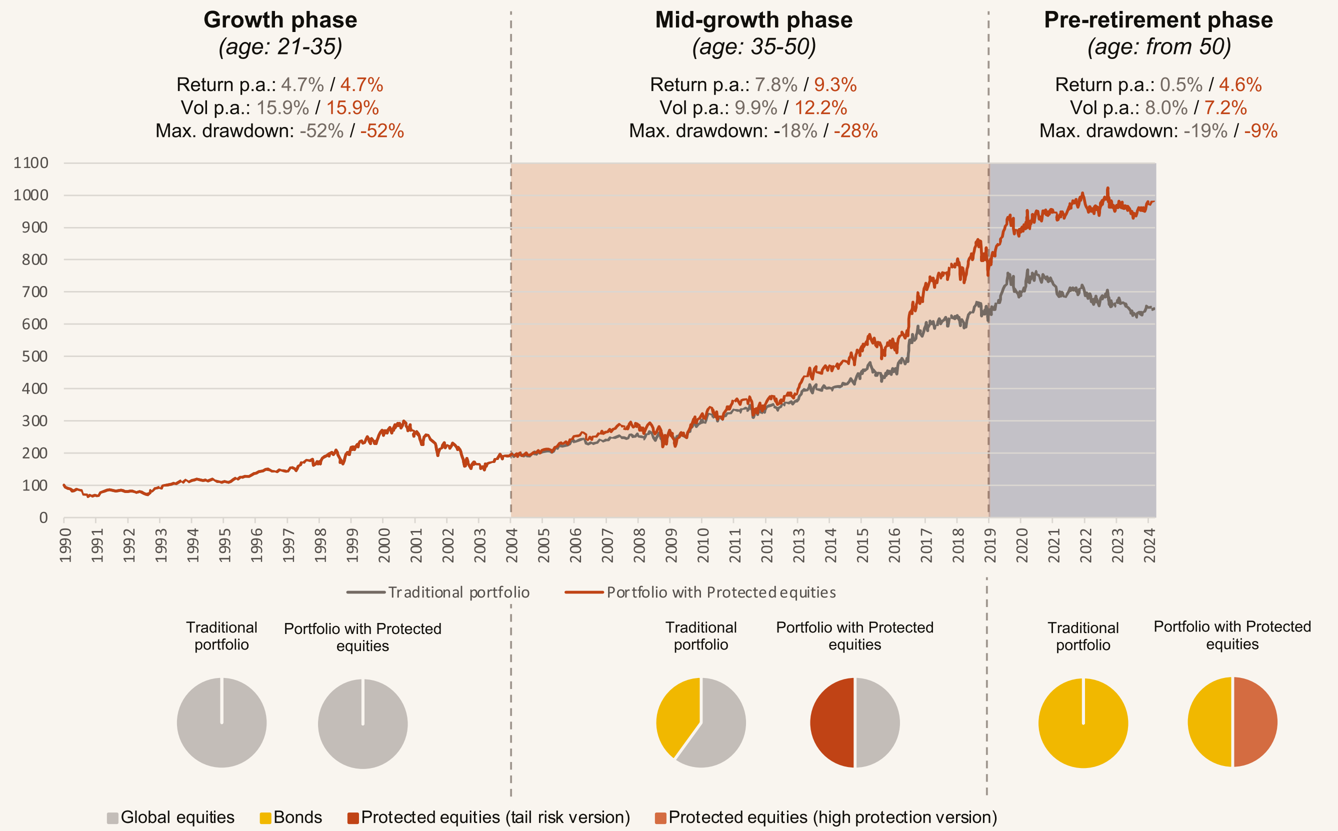
## Key findings

- DGFs strongly underperfomed equities and protected equities in most bull markets, historically offering similar levels of equity downside with much lower upside performance
- Protected equities (tail protection) outperformed DGFs significantly in bull markets with slightly lower drawdowns in bear markets

The difference higher growth asset allocations can make on long term investment outcomes can be illustrated by a simulated "notional member journey" that compares a traditional allocation of equities, bonds and DGFs to an allocation that contains Protected Equities, which allows for more growth assets with similar levels of portfolio risk.

The early growth stage is the same for both portfolios and hence the performance is the same. Moving into the mid-growth phase, protected equities are added to the portfolio. In the later stages, the performance difference becomes very profound as many portfolios in the later stages barely contain equities.

## Notional member life cycle
Simulated results: 1990 – 2024




*Source: Bloomberg, BNP, Berenberg, internal calculations.*



# Protected Equities for the DC Market

The Protected Equities Strategy addresses all the essential requirements for funds within the DC market, including low cost, ESG and climate considerations, high liquidity and transparency, an attractive value for money proposition, and ease of access via various platforms. It is daily priced and can be traded daily, and as can be evidenced, it satisfies all DC-related regulatory reporting requirements.

As the DC market evolves, there is a growing demand for value-adding products, particularly in the later stages of the lifecycle. In summary, the Protected Equities Strategy offers several compelling advantages:

- **Risk Mitigation:** The strategy is designed to limit the potential down-side risk of equity investments. By using exchange listed options, the strategy can provide a buffer against losses during market downturns.
- **Growth Potential:** Despite its defensive nature, the strategy still allows investors to participate in the growth of equity markets. This is vital, especially for investors in later life stages who still need growth to ensure their savings last throughout retirement.
- **Flexibility:** The Protected Equities Strategy comes in different versions tailored to various risk tolerances and investment horizons. This flexibility enables it to be a viable strategy for different stages of the investment lifecycle.
- **Inflation Protection:** With its equity component, the strategy offers a degree of protection against inflation, a feature particularly beneficial in today's environment of rising prices.

In the face of sequencing risk and changing market dynamics, Protected Equities allows pension investors to navigate the twin challenges of achieving sufficient growth to outpace inflation and preserving capital against the erosive effects of market downturns. This strategy is especially pertinent for those in the later stages of their retirement journey, where the traditional equity-bond portfolio diversification model falls short. By incorporating protected equities, investors can enhance their portfolio's resilience against sequencing risk, ensuring that their retirement savings are not only preserved but have the potential to grow, even in the face of adverse market conditions.

The Protected Equities Strategy has been used by institutional investors for decades due to its appealing balance between risk and return. It's an approach that has stood the test of time, and with its recent availability to the DC market, it can serve as a powerful tool in improving investment outcomes of members throughout their journey to and through retirement.

## Important Information & Risk Warnings

### IMPORTANT INFORMATION



### BACKTEST ASSUMPTIONS: DGF COMPARISON

Relevant information and parameters

#### General Information

- Past performance is not a reliable indicator for future performance
- Backtests are not a reliable indicator of future performance
- Backtests are simulated results that are based on a number of assumptions that have limitations and are not realised returns
- The returns include transaction costs but exclude management fees which are negotiated on a case-by-case basis

#### Backtest Information

- **Source:** Bloomberg, BNP, Berenberg, internal calculations
- **Time period:** 5/1/2006 to 27/02/2023
- **Currency:** All figures are in GBP and unhedged
- **Rebalancing:** Quarterly rebalancing
- **Overlay:** 10p /20c: -10% Put delta, 20% Call delta: tail protection, 40p/25c: -40% Put delta, 25% Call delta: high protection
- **Global equities:** Global equities: MSCI World tracker (initial weights: 50% SPX, 20% SX5E, 15% NKY, 15% UKX)
- **Protected equities:** Global equities plus option overlay
- **DGFs:** SLABRBD LX Equity, NOGDBIG LX Equity, BABGMCG LN Equity, MRLTGAI LN Equity, SCHDGWI LN Equity, MDVGM2S ID Equity, ABDGPZA LN Equity, BGDGANA LN Equity (equal-weight portfolio)

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