Taming Retirement Risks

The Retirement Income Conundrum

24 June 2021

Milliman

Agenda

10:00 – 10:05

Chairman's Welcome

Russell Ward

10.05 – 10.25

Retirement Risks Overview

Investment Risk

Neil Dissanayake

Questions

10.30 – 10.50

Australian Market Update

Longevity Risk

Victor Huang

Questions and wrap up

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Agenda

1st session:

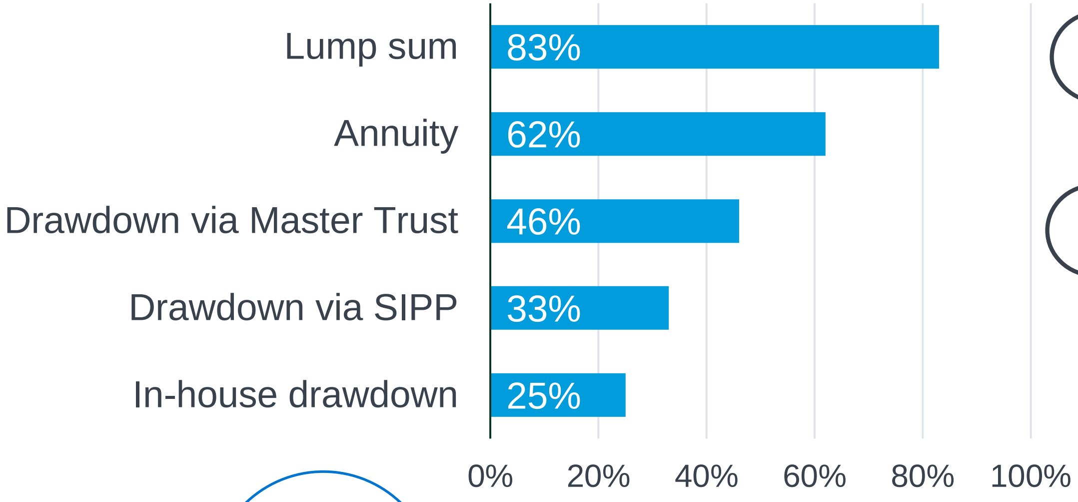
- An overview of retirement risks and choices
- Inflation risk
- Volatility and sequencing risks + risk mitigation solutions

2nd session:

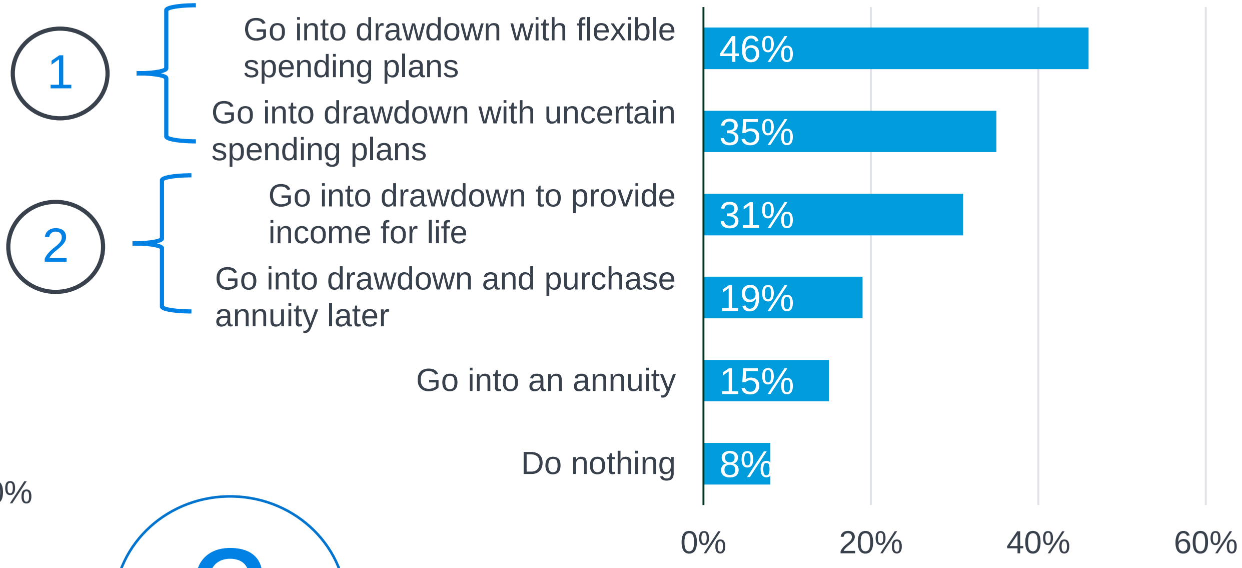
- Update from Australia + longevity risk alternatives

Retirement Choices – Mallowstreet Insight Survey Results

Expected Future Retirement Options Available in 2 years



Expected Usage of Retirement Choices (for Members Not Taking a Lump Sum)



1

A need to provide for flexible investment and risk management horizons

2

Two-thirds expecting income-for-life → a need to balance inflation, sequencing and longevity risks

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Survey of 31 UK pension professionals, DC schemes and Master Trusts

Retirement Risks – Balancing Act

Early retirement

Lack of flexibility

Spending needs

Investment Risk

- Volatility Risk
- Sequencing Risk (impacts on later years)

Later years

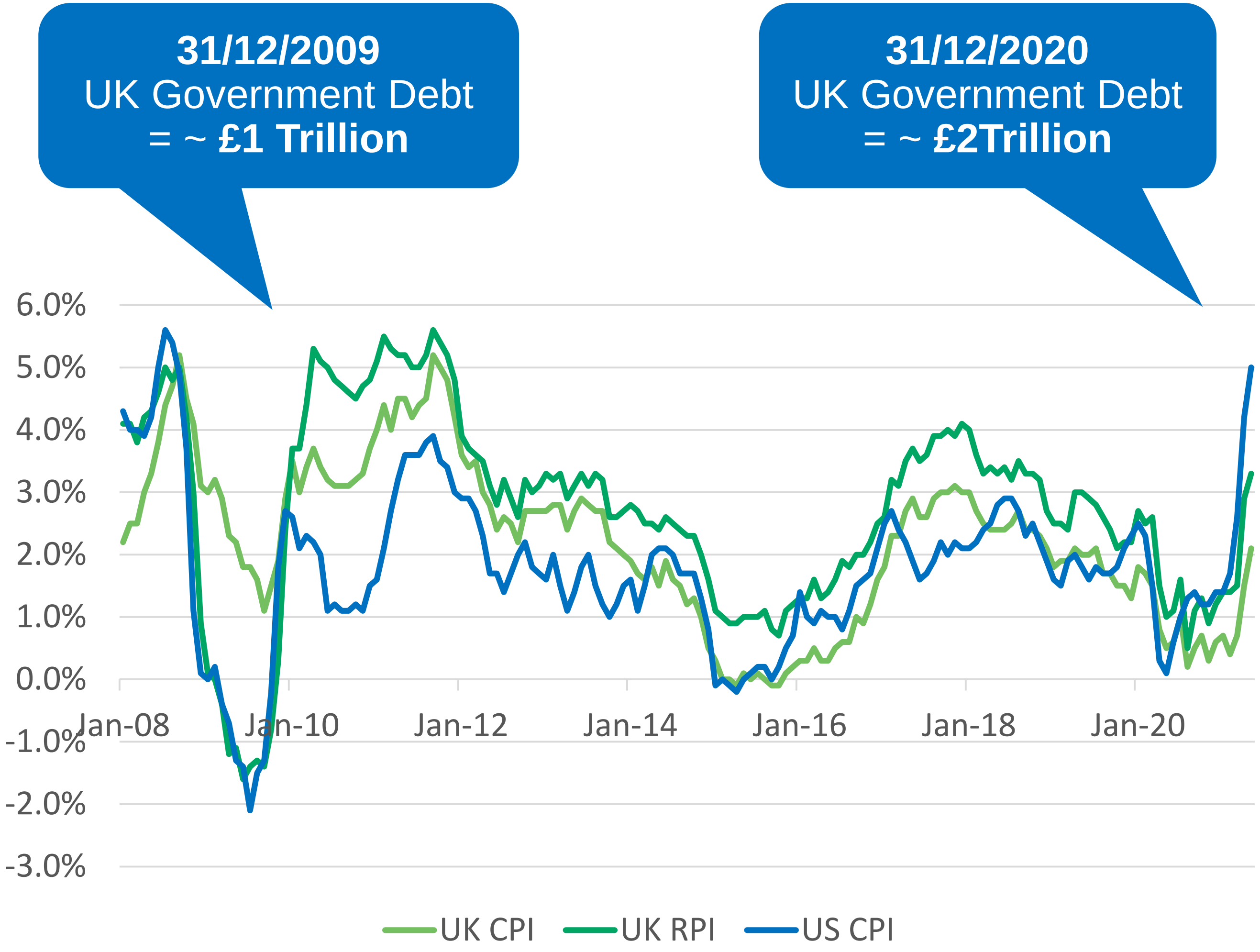
Risk of cognitive decline

Spending decisions

Investment Performance

- Inflation Risk (incurred from early years)
- Longevity Risk

Inflation Risk – Recent Revival



Source: Bloomberg

Andy Haldane, June 2021

(Departing chief economist from Bank of England)

"In my view this is the most dangerous moment for monetary policy since inflation-targeting was first introduced into the UK in 1992 after the European Exchange Rate Mechanism debacle,"

In its November 2020 Economic and fiscal outlook, the OBR noted:

"But the higher stock of public debt and the significant shortening in the effective maturity of that debt this year, - - -, has increased the vulnerability of the public finances to future economic shocks, in particular to a sharp increase in short-term interest rates."

Source: https://obr.uk/coronavirus-analysis/ - Economic and fiscal outlook – November 2020

Inflation Risk – Implications

Nominal Assets

- Fixed Gilts
- Fixed Corporates
- Cash

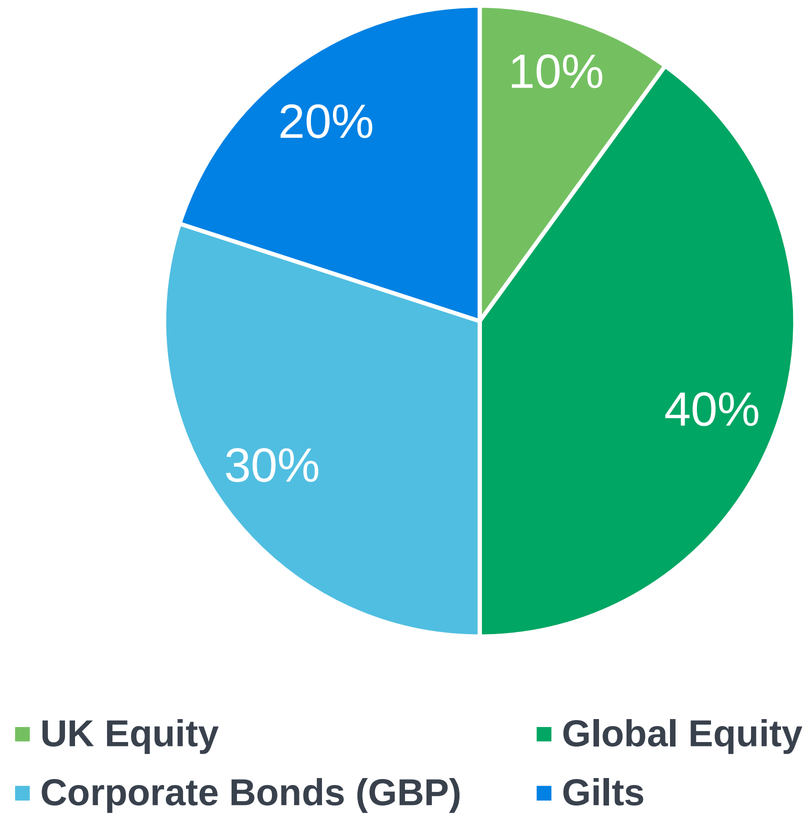
Real Assets

- Index-linked Bonds
- Equities
- Property
- Commodities
- Infrastructure

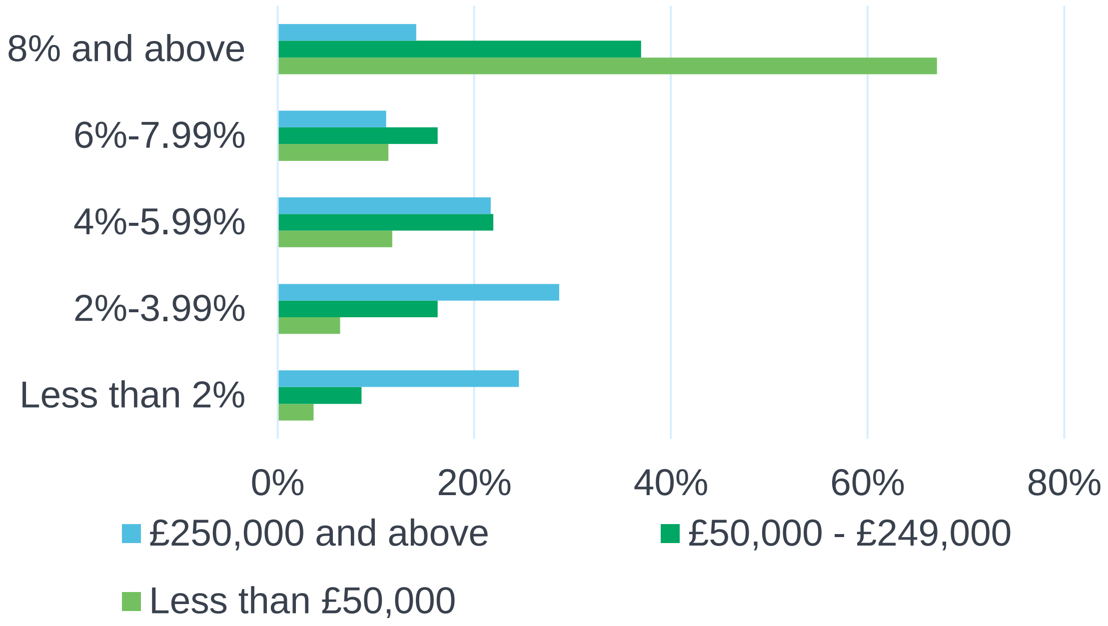
- Fixed income assets pose higher inflation risk → ***a potential need to increase exposure to real assets***
- Fixed gilts have traditionally been the primary risk management tool → ***a potential need to diversify risk management***
- Real assets tend to be higher risk → ***a potential need for more risk management***
- High inflation scenarios could lead to higher volatility for all asset classes → ***a potential need for more risk management***

Asset and Income Assumptions

Retirement Fund Assumptions
(50% equity / 50% bonds)



FCA Industry Data 2019-2020
Distribution of Regular Withdrawal
Rate by Pot Size (total of 355k plans)



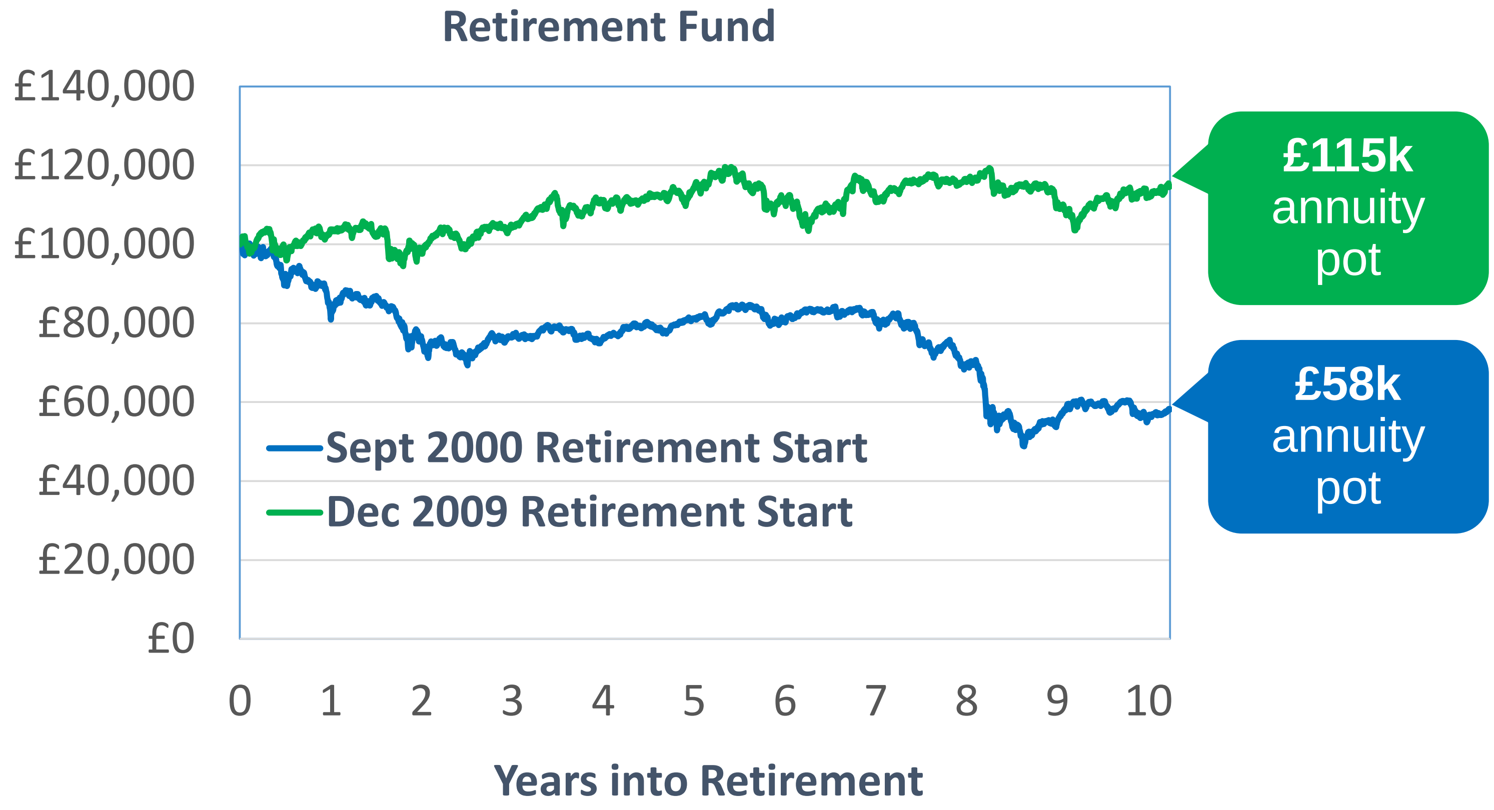
Assumptions for Example:

- **5.8%** regular withdrawal income
  (weighted average for £50k-£250k pots)
- Early retirement (**10 years**) → income drawdown
- Late retirement (**11+ years**) → annuity

Volatility and Sequencing Risk

Example Journey

5.8% + CPI income drawn for 10 years → Annuity



	2000 Start	2009 Start
Income	5.8% + CPI	5.8% + CPI
Investment Return	3.10%	7.65%
Internal Rate of Return	2.47%	7.51%

1) Investment return difference = **4.55%**
2) Impact of cashflows:
   - **2000: -0.62%**
   - **2009: -0.14%**

Sequencing Risk Mitigation Strategies

1st line of defence → Dividend income (i.e. in fund design)

2nd line of defence → Risk management via fund overlay

9 March 2020

Underlying benchmark volatility of daily returns > **20%**

Underlying benchmark peak-to-trough fall > **10%**

Hedges rapidly increasing

(These are illustrative indicators only)

26 August 2020

Underlying benchmark volatility of daily returns < **10%**

Underlying benchmark peak-to-trough fall < **10%**

Hedges reducing in size

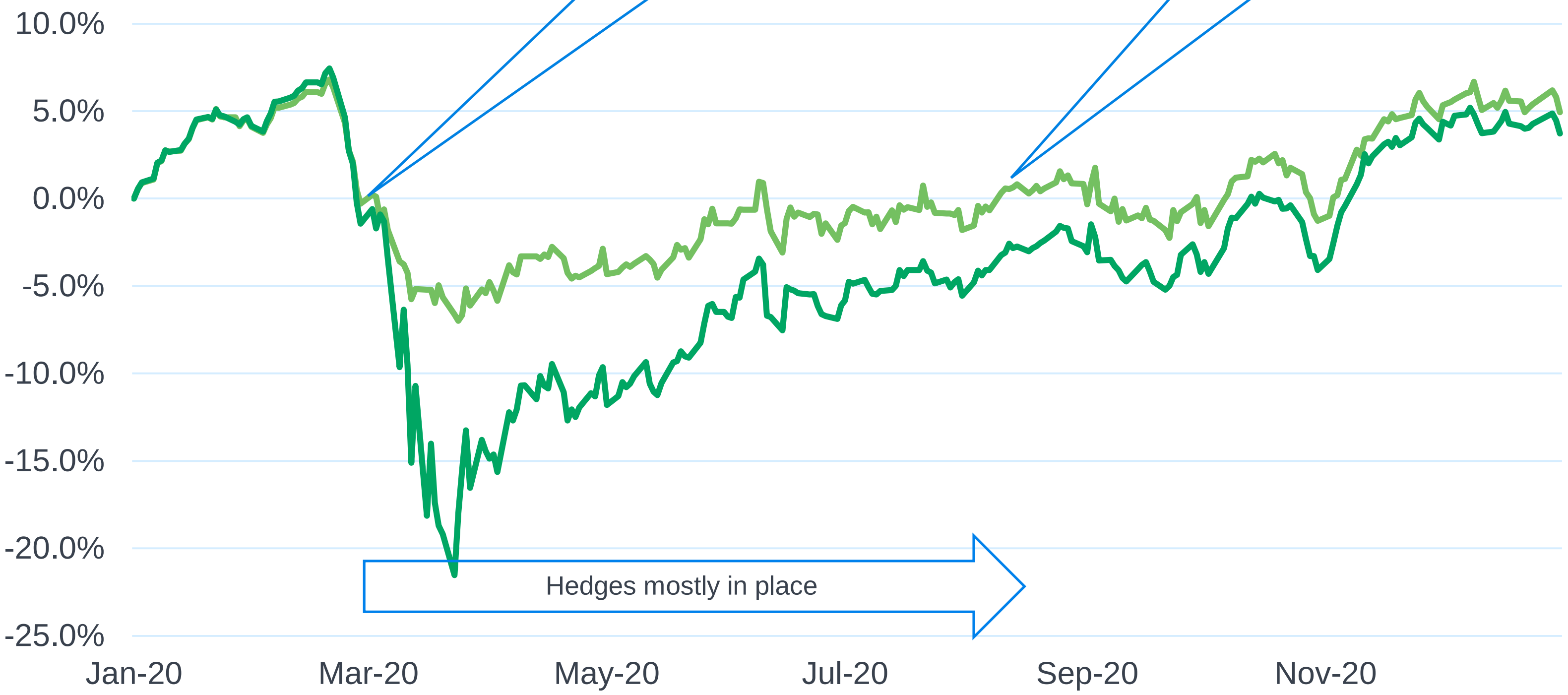
(These are illustrative indicators only)

DC INVESTMENT PLATFORM FUND

Equities
47.5%
(originally 50%)

Cash & Derivatives
2.5%

- **HIGH** risk → **INCREASE** hedge
- **LOW** risk → **DECREASE** hedge
- Systematic, rules-based approach



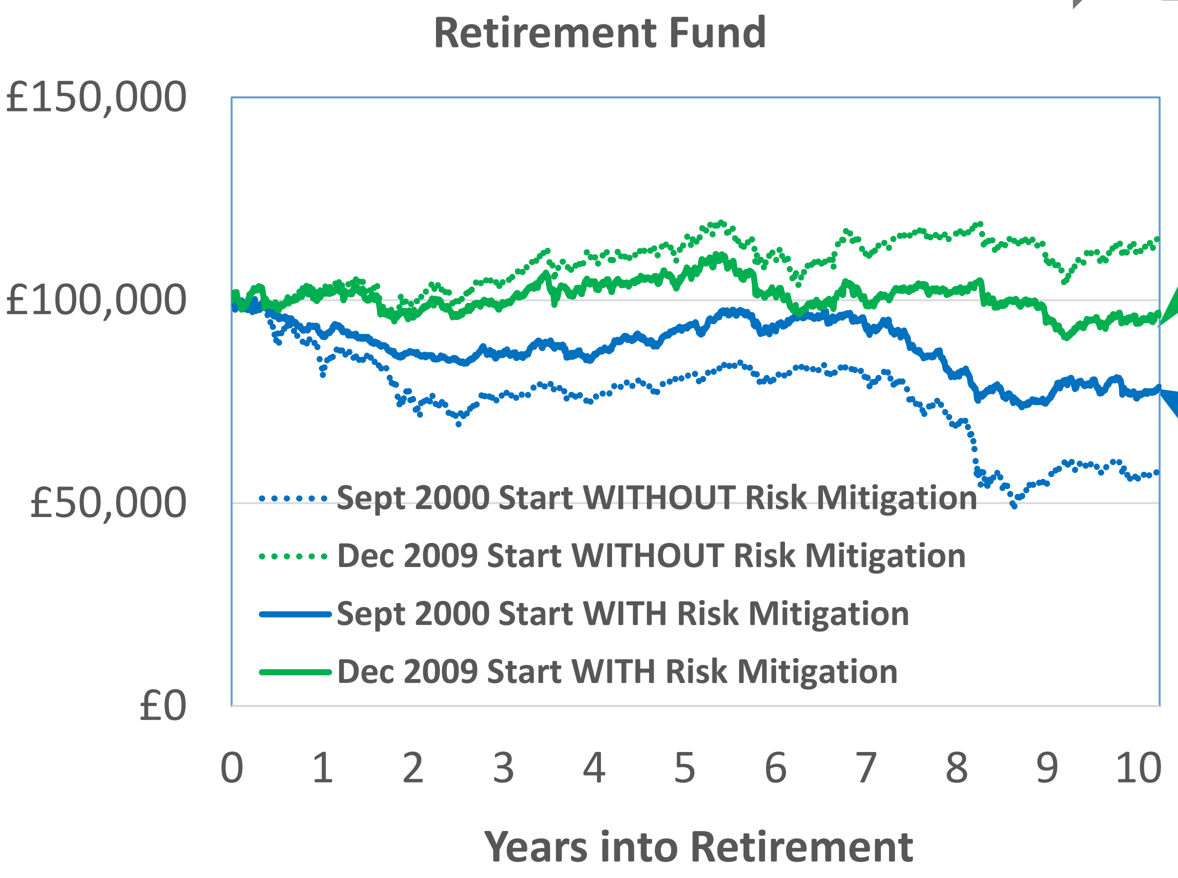
SmartShield High Growth (Live Australian offering)

Morningstar Aggressive Index (Benchmark)

Volatility and Sequencing Risk – with risk mitigation

Example Journey

5.8% + CPI income drawn for 10 years → Annuity



£96k annuity pot

£78k annuity pot

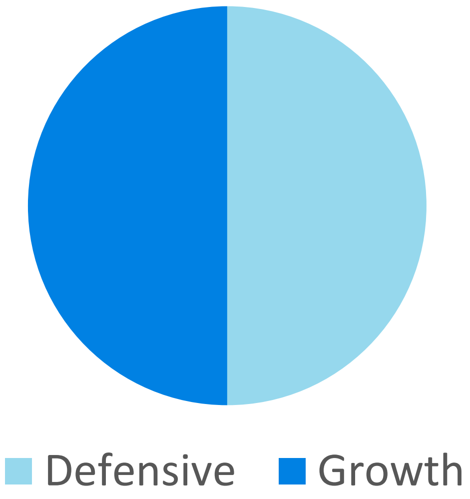
	2000 Start	**2009 Start**
Income	5.8% + CPI	5.8% + CPI
Investment Return	4.82%	6.34%
Internal Rate of Return	4.44%	6.22%

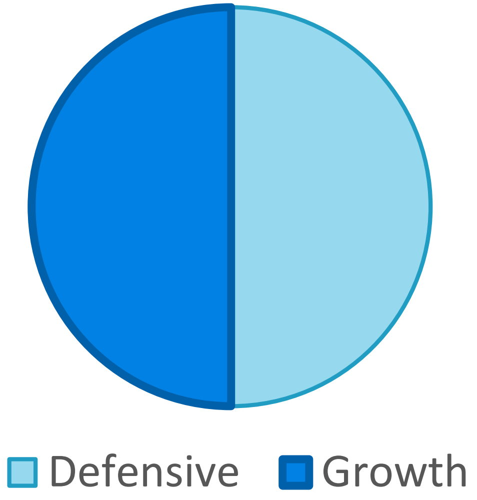
1) Investment return difference = **1.52%**
2) Impact of cashflows:
   - **2000: -0.39%**
   - **2009: -0.12%**

Retirement Choices – Cost vs Benefit

CHOICE offered to employers/members

LOWER INVESTMENT COST HIGHER AVERAGE RETURN	HIGHER AVERAGE IRR or SUSTAINABLE INCOME
WITHOUT Shield	**WITH Shield**





	Metric	WITHOUT Shield	WITH Shield
Drawdown + Annuity	*Average IRR (in example)*	**5.0%**	**5.3%**
Drawdown for Life	*Sustainable Withdrawal Rate (Initial)*	e.g. **2.6%**	e.g. **3.0%**
		LESS *stable*	***MORE*** *stable*

WITH Shield assumes indicative management cost of ***10*** *basis points*

- Dynamic risk management can wrap around growth assets in bespoke fund overlay → **allows flexibility to offer choice**
- Dynamic risk management works independently of strategic asset allocation → **avoids inflexibility of glide-paths to fixed investment horizons**

RESULTS BASED ON SIMULATED OR HYPOTHETICAL PERFORMANCE RESULTS HAVE CERTAIN INHERENT LIMITATIONS. UNLIKE THE RESULTS SHOWN IN AN ACTUAL PERFORMANCE RECORD, THESE RESULTS DO NOT REPRESENT ACTUAL TRADING. ALSO, BECAUSE THESE TRADES HAVE NOT ACTUALLY BEEN EXECUTED, THESE RESULTS MAY HAVE UNDER-OR OVER-COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS, SUCH AS LACK OF LIQUIDITY. SIMULATED OR HYPOTHETICAL TRADING PROGRAMS IN GENERAL ARE ALSO SUBJECT TO THE FACT THAT THEY ARE DESIGNED WITH THE BENEFIT OF HINDSIGHT. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THESE BEING SHOWN. MILLIMAN DOES NOT MANAGED THE UNDERLYING FUND.

Retirement Flexibility

Risk Management Approach	EARLY RETIREMENT	LATER IN RETIREMENT
Glidepath to 100% bonds / 0% equity	Committed to fixed income investments, even if a high inflation scenario occurs	Committed to an annuity at a fixed date
Dynamic risk management of equity risk via fund overlay	**INVESTMENT FLEXIBILITY:** Can be adapted to potentially changing optimal asset allocations	**DECISION FLEXIBILITY:** Potential to choose an annuity now, annuity at a later date, or continue drawdown for life

RETIREMENT OFFERING
Potentially a range of different fund options to cater for different needs; horizons and preferences
Potentially a simpler choice of a single fund, with/without risk management

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Questions

Australian Market

Retirement product landscape

Superannuation Solutions

Typical default retirement products within industry superfunds have been account based pensions. These are often invested in similar strategies to accumulation products. The payout from these products are typically tied to minimum income levels (4-14%) as stipulated by the tax rules (SIS minimums)

These products have generally offered little protection against sequencing risk, longevity risk and often lead to investors under utilizing their retirement savings.

Insurance / Guarantee Solutions

Offered as variable annuity style products (AXA/AMP, MLC, Onepath) or traditional fixed/term annuity products (Challenger, Optimum Pensions). Allianz Retire+ Future Safe product is a hybrid protected term product.

These products generally offer some level of protection against sequencing risk and longevity risk. However, the trade off is generally around fees, complexity and access to liquidity.

Retirement Products

Investment Based Solutions

Platforms accessible via financial advisors offer account based pension products through managed funds, managed accounts.

Managers in this space have marketed specific retirement focused funds that generally focused on generating income through equity/fixed interest.

These products have tended to offer minimal protection against sequencing, longevity and behavioral risks.

New "Innovative" Solutions

Spirit Super: Account based pension that distributes a 'sustainable' level of income each year to members. Address behavioral risks.
Qsuper: Provides regular sustainable payments and longevity pooling to its members. Addressing longevity and behavioral risks
Magellan FuturePay: Provides regular sustainable payments with smoothing (through reserving) and lower volatility investments. Aims to address behavioral and sequencing risks.

Longevity Risk Alternatives

Later years

Desire for longevity risk protection
+ fewer decisions later in life

INCOME DRAWDOWN

ANNUITY

- **100%** bonds/fixed income
- Plus benefit of pooled lives, protects idiosyncratic/systemic longevity risk
- Less cost of insurance capital for guarantee
- Less insurer expenses
- *Pricing risk on annuitisation*

LONGEVITY POOLING SOLUTION

- Diversified range of assets possible
- Plus benefit of pooled lives, protects idiosyncratic longevity risk
- No cost of guarantee. Although exposed to potential falls in income.
- Less expenses. In particular, implementation costs would need scale.
- *Potentially smoother transition*

Longevity Pooling

Initial fund payment

Pooled investment fund *(potentially across multiple schemes)*

“actuarial” management of declared income

Expected increasing income payments for life

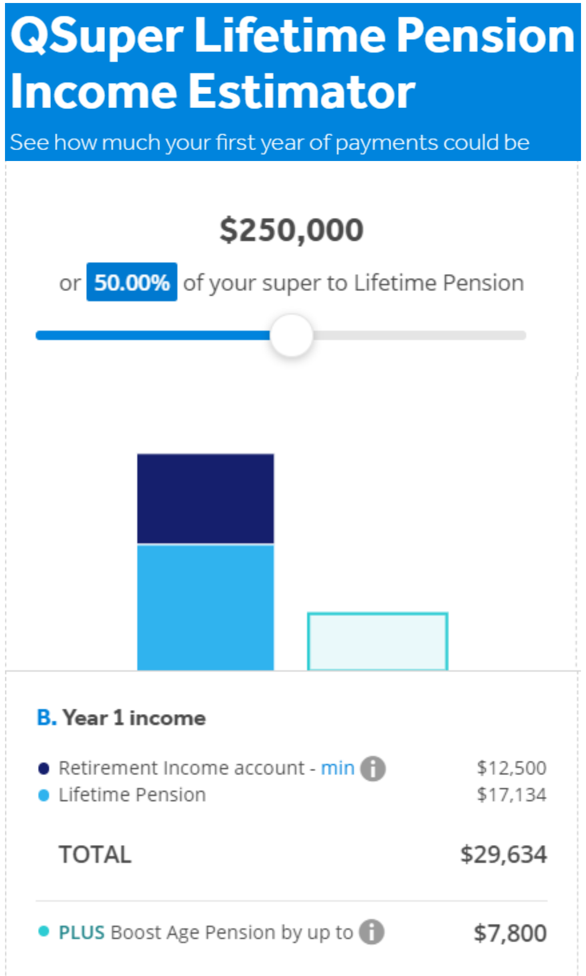
KEY CHALLENGES

- DC investment platform implementation exercise. Operational cost/risk.
- Convincing members of the benefits of collective pooling, and the agreement to cede pension savings upon early death
- Size of pooled lives → income stability
- Sustainability of flow of members
- Cross-subsidy and fairness
- Expectations around income
- Investment risk → income volatility

QSuper Lifetime Pension

PRODUCT SNAPSHOT

- Pooled retirement product. Designed to address:
  - Longevity risk by providing an income stream for life. Protects members against idiosyncractic longevity risk
  - Inflation risk by the expectation of indexed income stream payments
  - Underutilisation of retirement savings, by converting capital into income.
  - Classed as a 'Innovative Lifetime Income Stream product', so provides advantageous means test treatment
- Income payments:
  - Starts immediately, expected to be for life. Same income rates will be the same for all members, dependent only on age at entry and reversionary benefits.
  - Guaranteed to return 100% of initial capital on death, provided through a group life insurance policy.
  - Calculated based on assumed growth rates, expenses, insurance cost (death benefit), best estimate mortality, demographic assumptions
  - Income payments will adjust each year (it can go down) if any of the above deviates from expectations, same proportional adjustment for all members.
- Investments:
  - All capital invested by members are combined into a pool invested in Qsuper's Balanced investment option.
  - Members are exposed to sequencing risk as per typical ABP.



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SpiritSuper Managed Pension

PRODUCT SNAPSHOT

- Account Based Pension Product designed to address:
  - Longevity risk by controlling the level of income distributed to members based on a conservative probabilistic calculation
  - Inflation risk by the expectation of indexed income stream payments
  - Underutilisation of retirement savings, by converting capital into income.
- Income Payments:
  - Starts immediately, at the % of the initial investment, increasing with CPI each year
  - Income is calculated to provide a high likelihood (probability & shortfall based measure) of lasting until age 90
  - Income payments may adjust each year (it can go down) if the income rate no longer meets the desired probability & shortfall based measures
  - Key benefit is providing a default level of income to avoid under utilisation of retirement assets.
- Flexibility:
  - Full flexibility to make lump sum withdrawals at any time. Future income payments will be impacted proportionally.
- Investment:
  - Invests in balanced fund with a built-in bucketing style strategy.
  - That is, an allocation to cash designed to cover 1 to 2.5 years of income, and allocation to 'diversified investments' to provide growth.
  - Rebalance between growth and cash dependent on investment returns.

Age	Payment rate in the year you start a Managed Pension
60	4.25%
61	4.25%
62	4.50%
63	4.50%
64	4.75%
65	5.00%
66	5.00%
67	5.25%
68	5.25%
69	5.50%
70	5.75%
71	6.00%
72	6.25%
73	6.50%
74	6.75%
75	7.00%
76	7.50%
77	8.00%
78	8.50%
79	9.25%
80	10.00%

Australian Market

Regulatory Landscape

CIPR & Retirement Income Covenant

- Comprehensive Income Product for Retirement" targeted for 1 July 2022.
  - Objective is for Superannuation funds to provide a 'comprehensive income product for retirement'.
  - 2018 Budget made it more attractive to purchase longevity products (only including 60% in the asset and income tests for the Age Pension).
  - Product disclosure to include retirement income stream in addition to account balance
- Minimum requirements for a CIPR product:
  - Deliver a minimum level of income exceeding ABP at minimum rates
  - Stream of broadly constant real income for life
  - Component to provide flexibility to access lump sums/bequests.

Your Future, Your Super

- New bill and reforms targeted for 1 July 2021
- MySuper funds to face an annual performance test:
  - Funds are benchmarked to their reported SAAs, using a series of passive indices over 7 year rolling periods
  - If a fund returns fall 50bps per annum outside of the benchmark will be labelled as an underperformer, with requirement to notify members of this.
  - Failing the test twice in a row will lead to the fund being blocked from taking on new members.
- Impacts investment decisions within Accumulation products.

Australian Example – SmartShield digital tools

STRENGTHEN CLIENT CONVERSATIONS

Demonstrating SmartShield to your clients

We have designed a complementary digital tool, to help you have better, more personalised client conversations, when discussing the suitability of SmartShield with your clients.

Simple to use, the tool is powered by Milliman's financial modelling platform, running thousands of simulations to present you with robust scenarios, for each SmartShield Managed Account portfolio.

Webpage

Demo account

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Questions

Thank you

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Appendix

Key assumptions to volatility and sequencing risk example

- Asset classes modelled using the following benchmarks:
  - **Global equity:** MSCI World (GBP hedged)
  - **UK equity:** FTSE All Share
  - **Corporate bonds:** Bloomberg Barclays Sterling Corporate TR Index
  - **Government bonds:** Bloomberg Barclays Sterling Gilt TR Index
  - **Cash:** 1-month GBP LIBOR
- The risk management strategy modelled is based upon a specific calibration of the Milliman Managed Risk Strategy (more information at www.mric.com). Parameters included targeting a **20%** volatility for equity, and applying protection to a **5-year** rolling horizon.
- Total fee (without risk management) = **0.50%** p.a. charge
- Total fee (with risk management) = **0.60% p.a.** charge (with an additional **0.015%** transaction costs for the strategy)

For more detailed information on the assumptions, please contact Milliman