The Global Retirement Challenge

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STATE STREET GLOBAL ADVISORS

Solving the Global Retirement Puzzle?

Source: SSGA. The information contained above is for illustrative purposes only.
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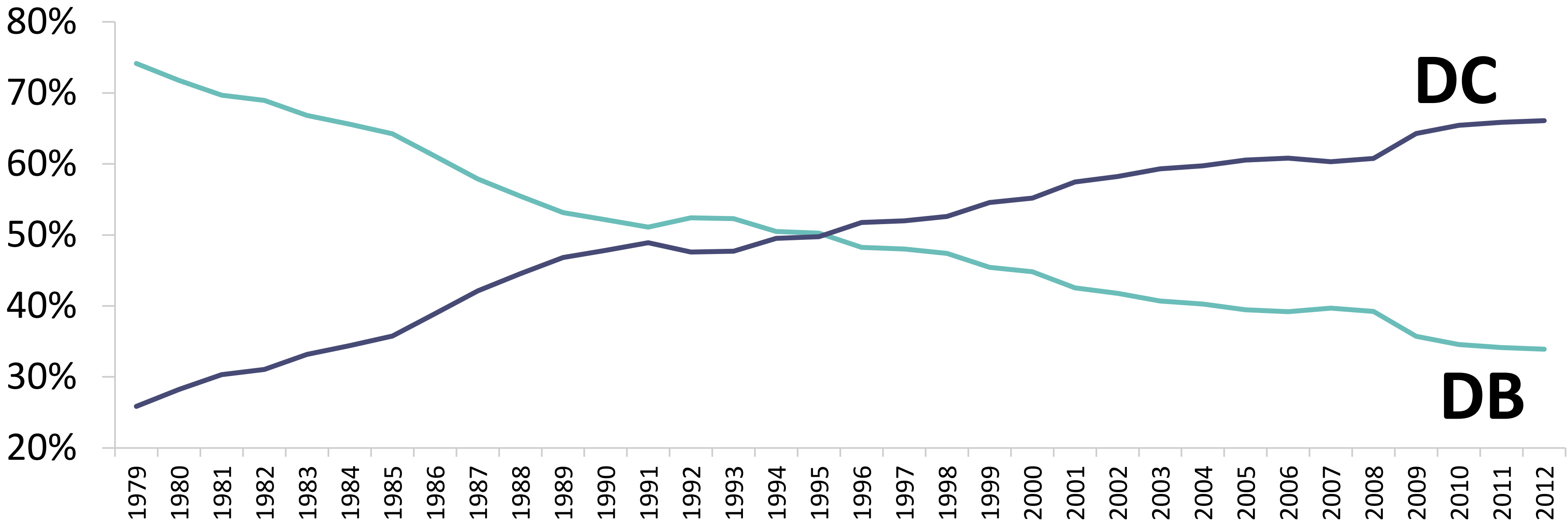
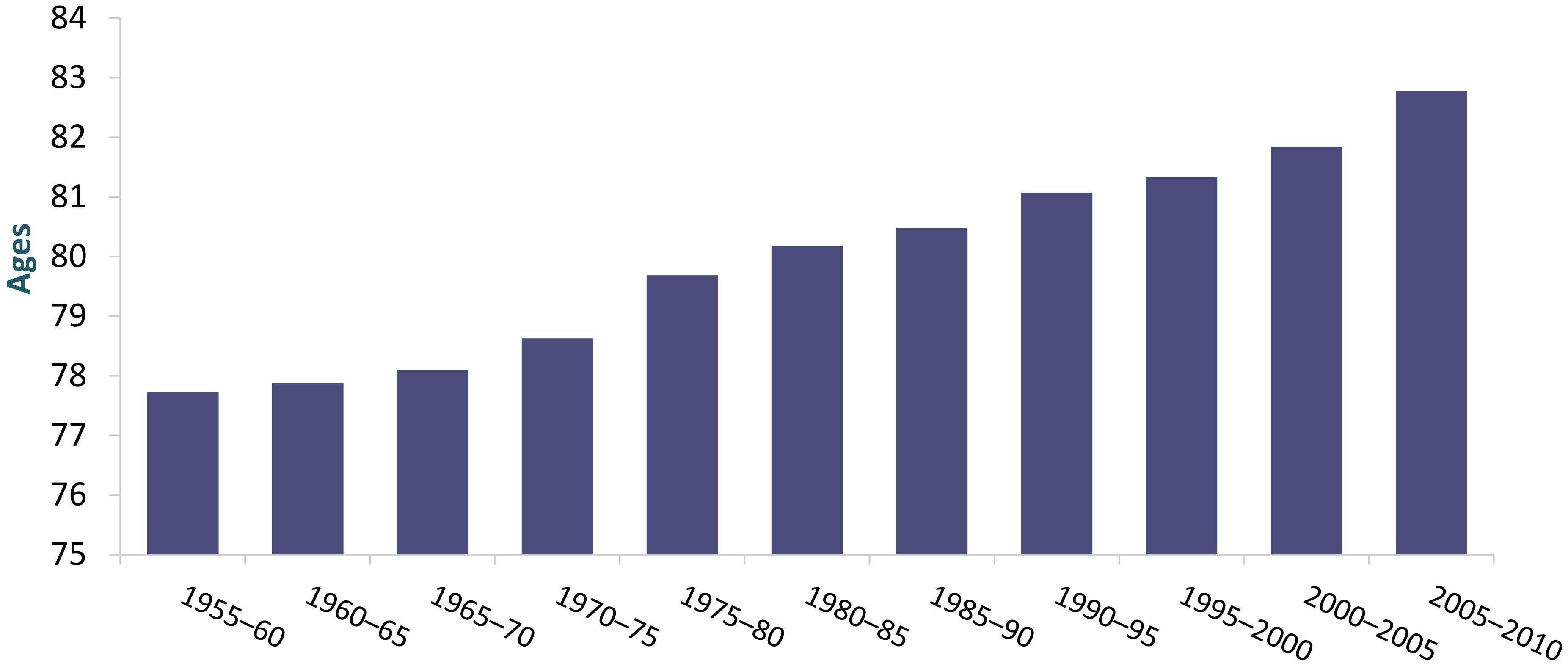
Macro Headwinds – Shifting Liability



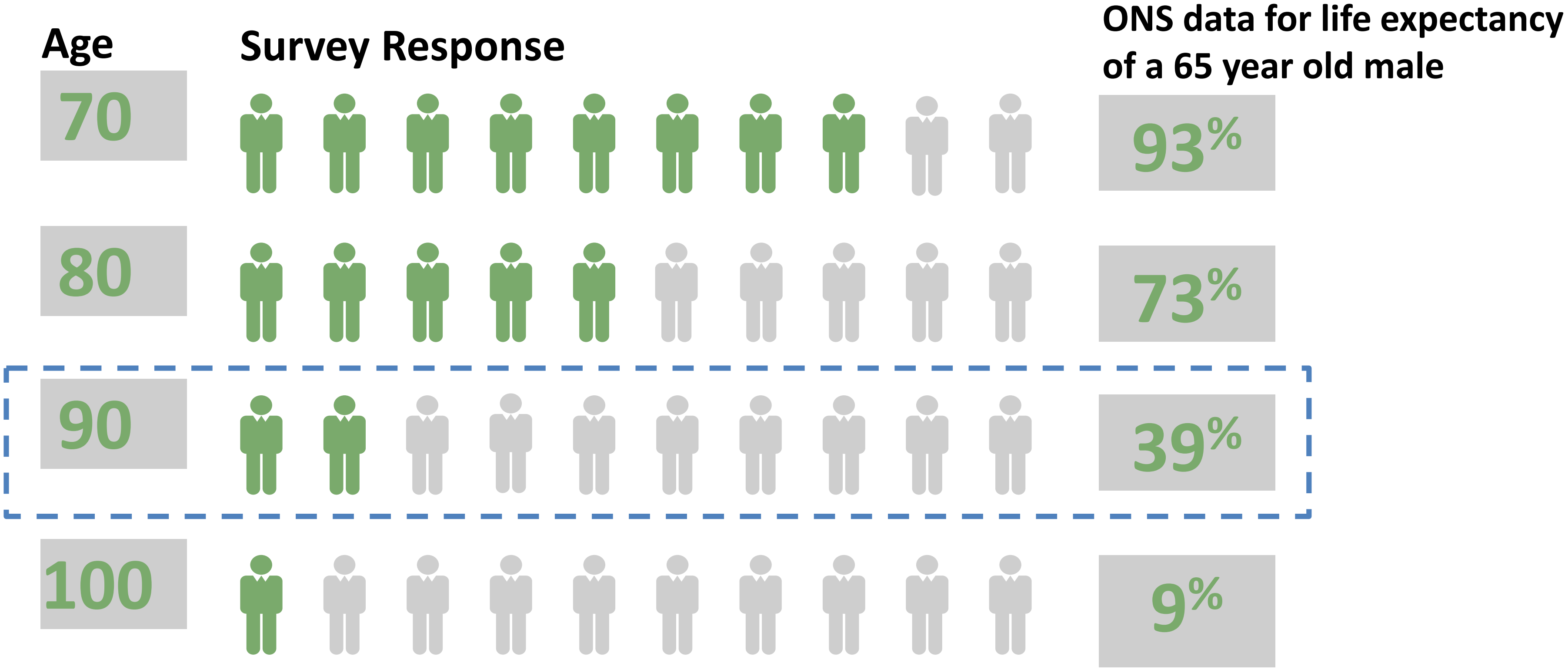
Source: US Department of Labor Employee Benefits Security Administration December 2014, 2012 Data Release Version 2.0

Macro Headwinds - Living Longer



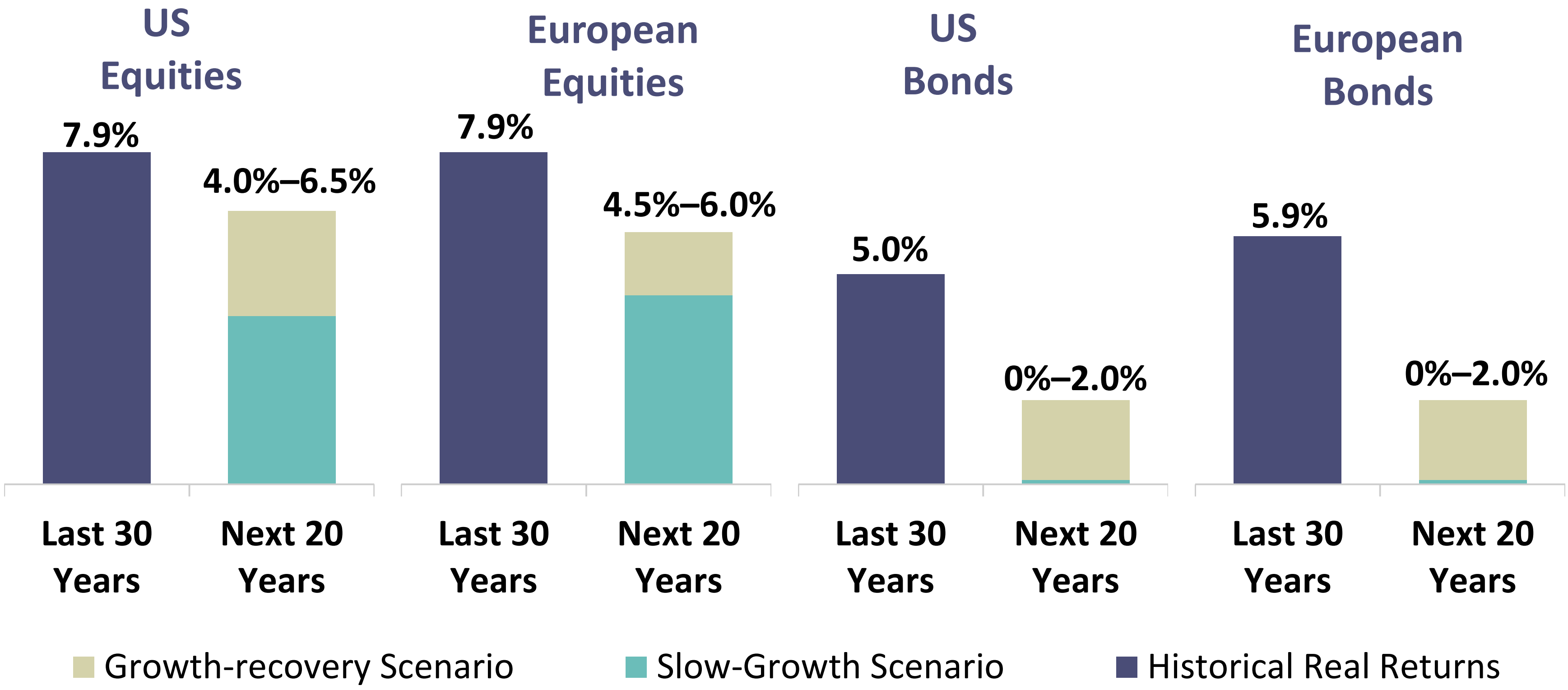
Source: United Nations, Department of Economic and Social Affairs, Population Division (2013). Life expectancy for individuals at age 60.

Underestimating Longevity



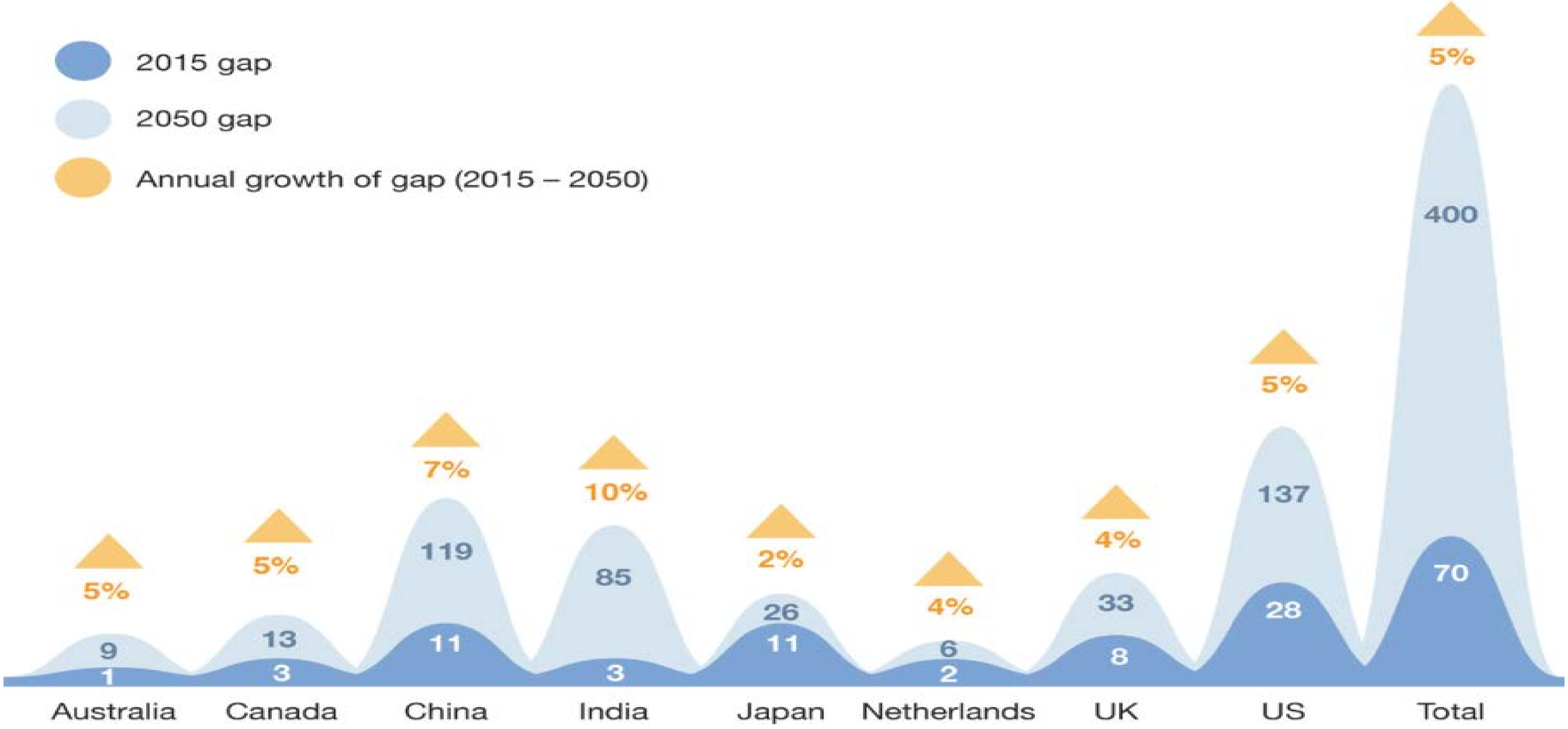
Source: Ignition House research for the Pensions Policy Institute. The information contained above is for illustrative purposes only.

Macro Headwinds -Diminishing Returns



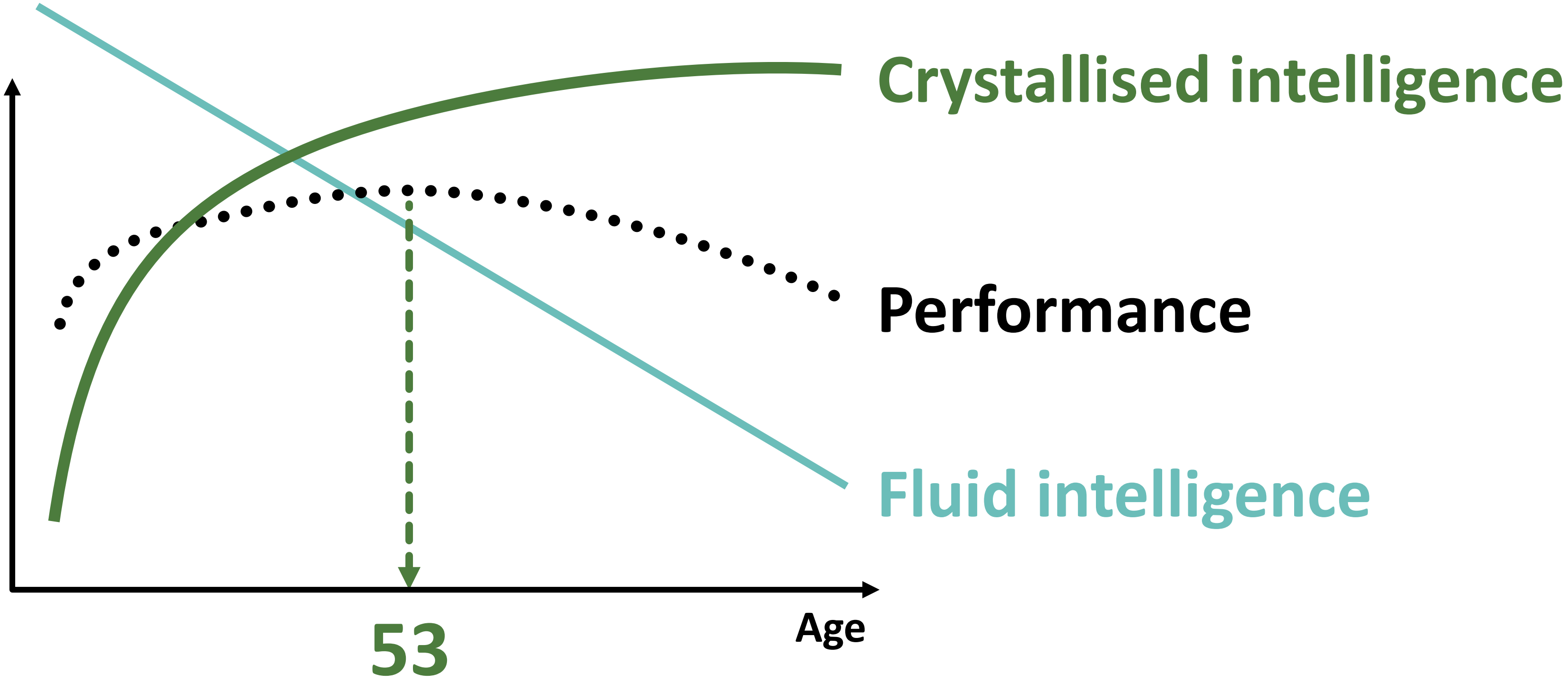
Source: McKinsey Global Institute (May 2016) — Diminishing Returns: Why Investors may need to lower their expectations. Historical returns for Western European fixed-income are based on treasury bonds using data from the Dimson-Marsh-Staunton Global Returns database, which targets a bond duration of 20 years. Future returns show ranges across a set of countries, and are based on ten-year bonds; numbers reflect the range between the low-end of the slow-growth scenario and the high end of the growth-recovery scenario. Past performance is not a guarantee of future results. Estimated returns reflect subjective judgments and assumptions. There can be no assurance that developments will transpire as forecasted and that the estimates are accurate.

Macro Headwinds – Increasing Savings Gap



Source: WEF, 'We Will Live to 100'

Cognitive Decline in Later Life



Source: Laibson, Harvard University, “Behavioural Finance: Psychological Barriers to Optimal Investing”, 2014 Presentation. The information contained above is for illustrative purposes only.

The Old

Education

Employment

Retirement

Source: SSGA. The information contained above is for illustrative purposes only. Image from http://www.istockphoto.com

The New Old?

THE 'BETWEENAGER'

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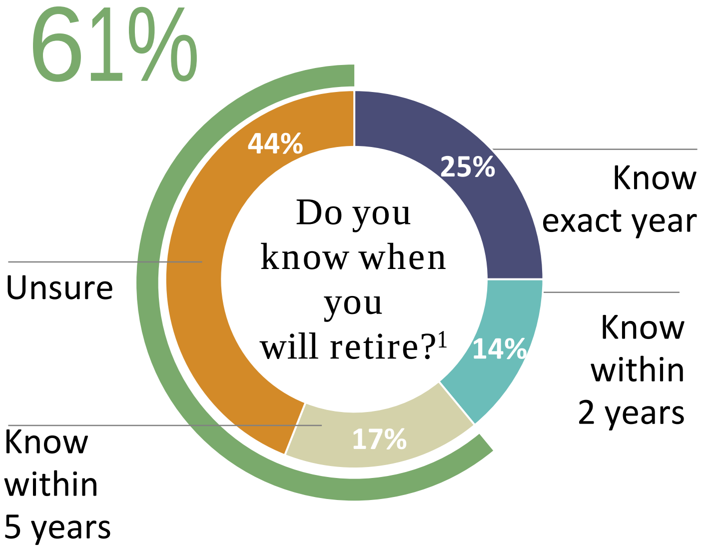
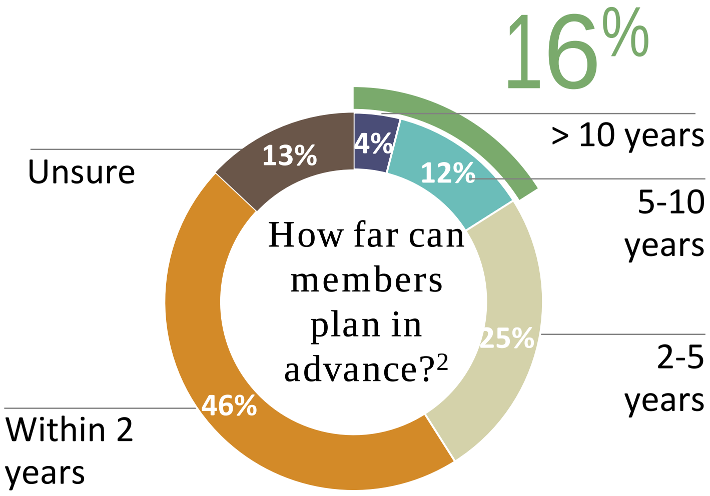
Retirement is Uncertain





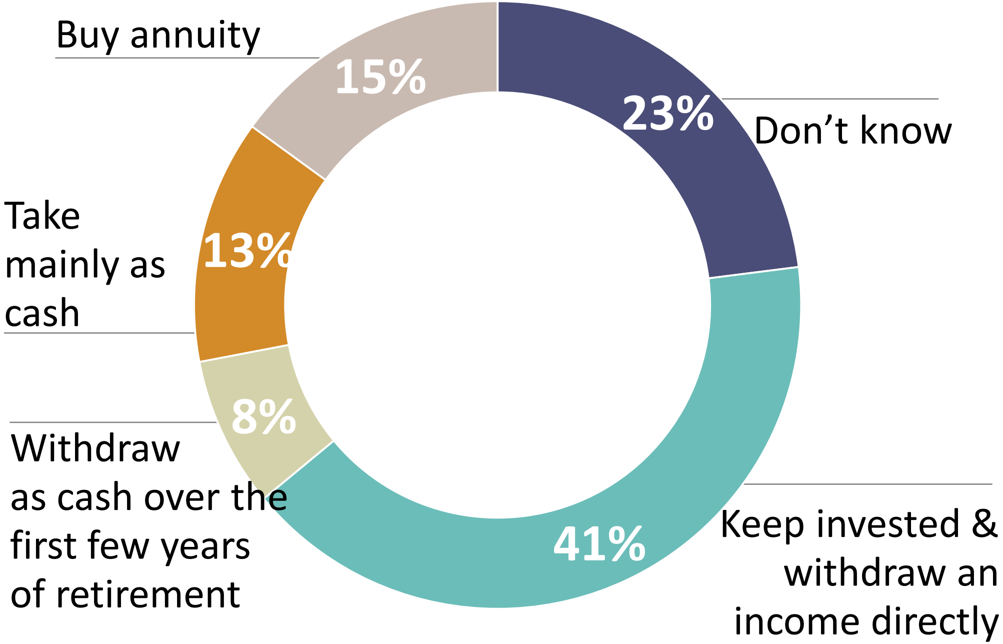
67%

Somewhat or very likely to work part-time in retirement[1]

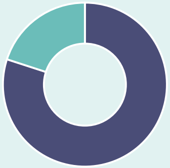
1.SSGA UK DC Survey, by TRC, August 2014. Partnered with TRC Market Research, an independent marketing research firm located in suburban Philadelphia, 8-minute online survey in August 2014
2. SSGA Global Retirement Monitor survey, by TRC (USA) and Toluna (UK). 8-minute online survey in July 2014

Members will use Savings in Different Ways

Expected use of DC assets[1]



Survey Results[2]



80%

Express **a guaranteed monthly payout benefit** as a 'must have'

67%

Expect their **employer to help** them plan for retirement

Sources: SSGA. The information contained above is for illustrative purposes only. 1.Ignition House research for the Pensions Policy Institute, January 2015. SSGA Global Retirement Monitor by TRC June 2015. Q13 — New pension legislation means that members of direct contribution plans have greater flexibility about how they access their pension fund at retirement. Which of the following are you most likely to do? 2. SSGA Biannual DC Investor Survey July 2013. Partnered with TRC Market Research, an independent marketing research firm located in suburban Philadelphia 20-minute online survey. Panel of 1,498 verified 401(k), 403(b), 457 and profit-sharing plan participants and retirees, age 40 to 70, who were actively engaged with their plans.

Retirement Income Design

Plan Sponsors agreed on 4 key points:

1 Longevity risk is a problem **we must solve**

2 The solution needs to be a **part of the default**

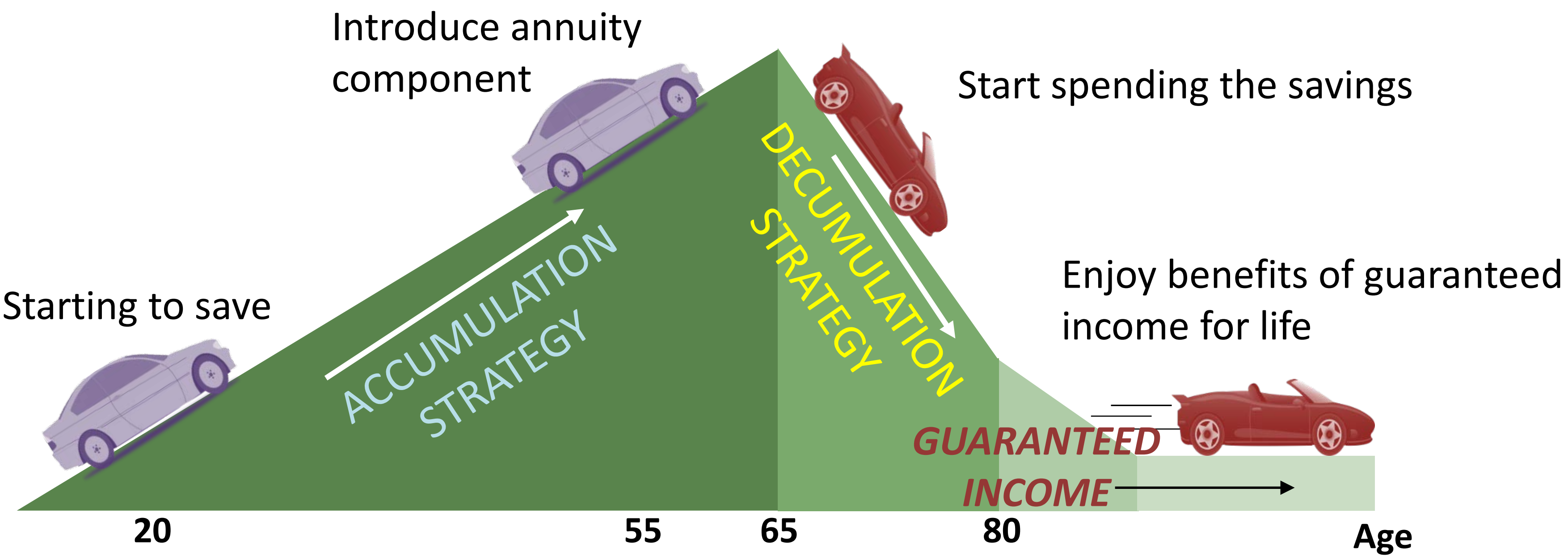
3 A **gradual accumulation** is necessary to minimise sequence risk

4 A comprehensive **communication package is essential**

Source: SSGA. The information contained above is for illustrative purposes only.

Automate the Journey

Default Investment Funds to Focus on Savings and Pay-out



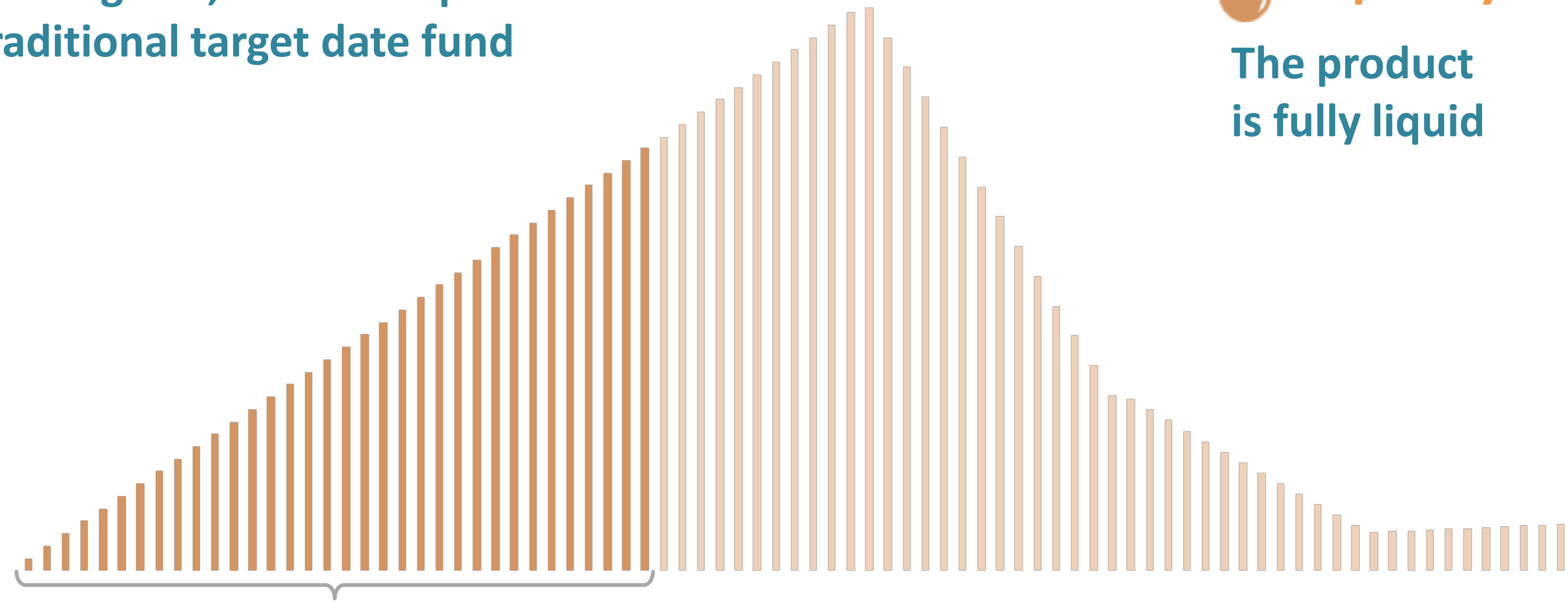
Source: SSGA. The information contained above is for illustrative purposes only. * Please reference Page 21 for full disclosure.

Phase 1 — Core Accumulation

Until age 55, the fund operates like a traditional target date fund

Liquidity

The product is fully liquid



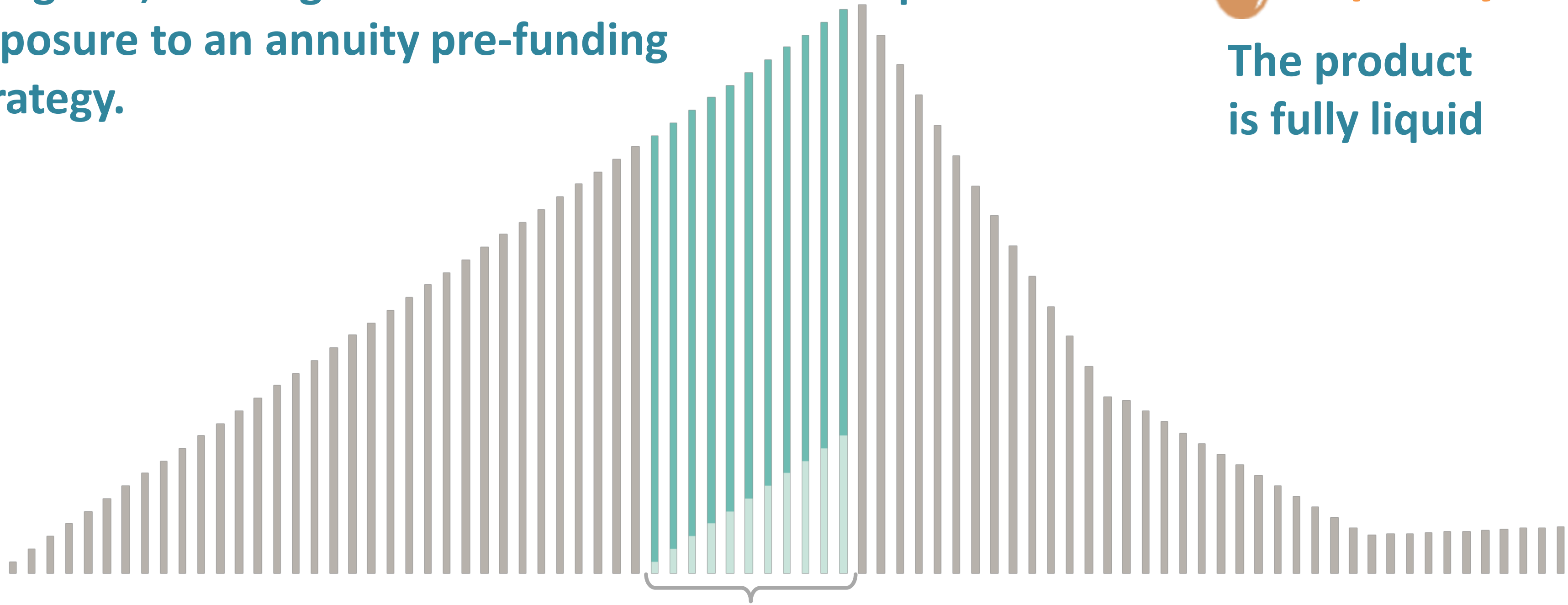
Phase 1:
Core Accumulation

Phase 2 — Pre-Retirement

At age 55, the target date fund starts to build up exposure to an annuity pre-funding strategy.

Liquidity

The product is fully liquid



Source: SSGA. The information contained above is for illustrative purposes only.

Phase 3 — Drawdown

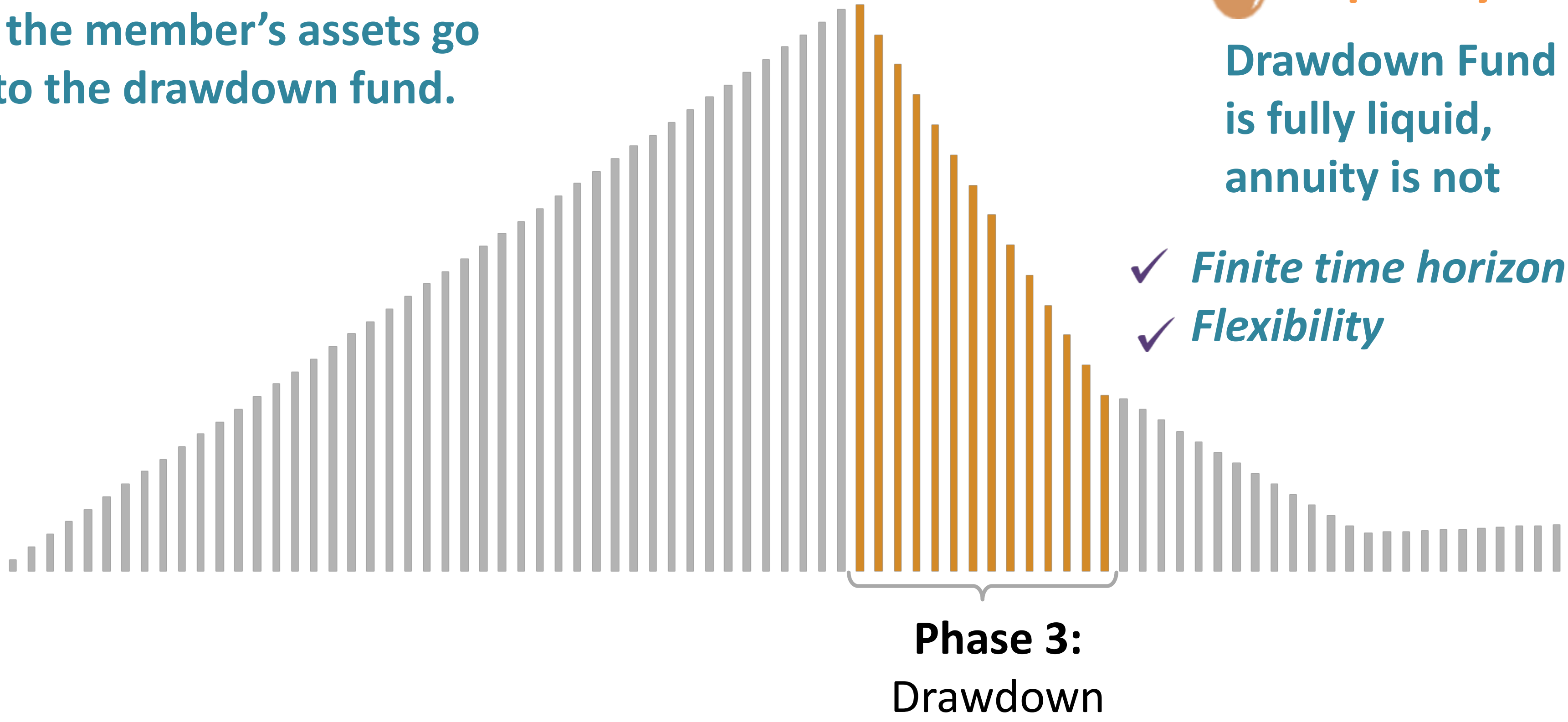
After the annuity purchase, the remainder of the member's assets go into the drawdown fund.

Liquidity

Drawdown Fund is fully liquid, annuity is not

✓ ***Finite time horizon***

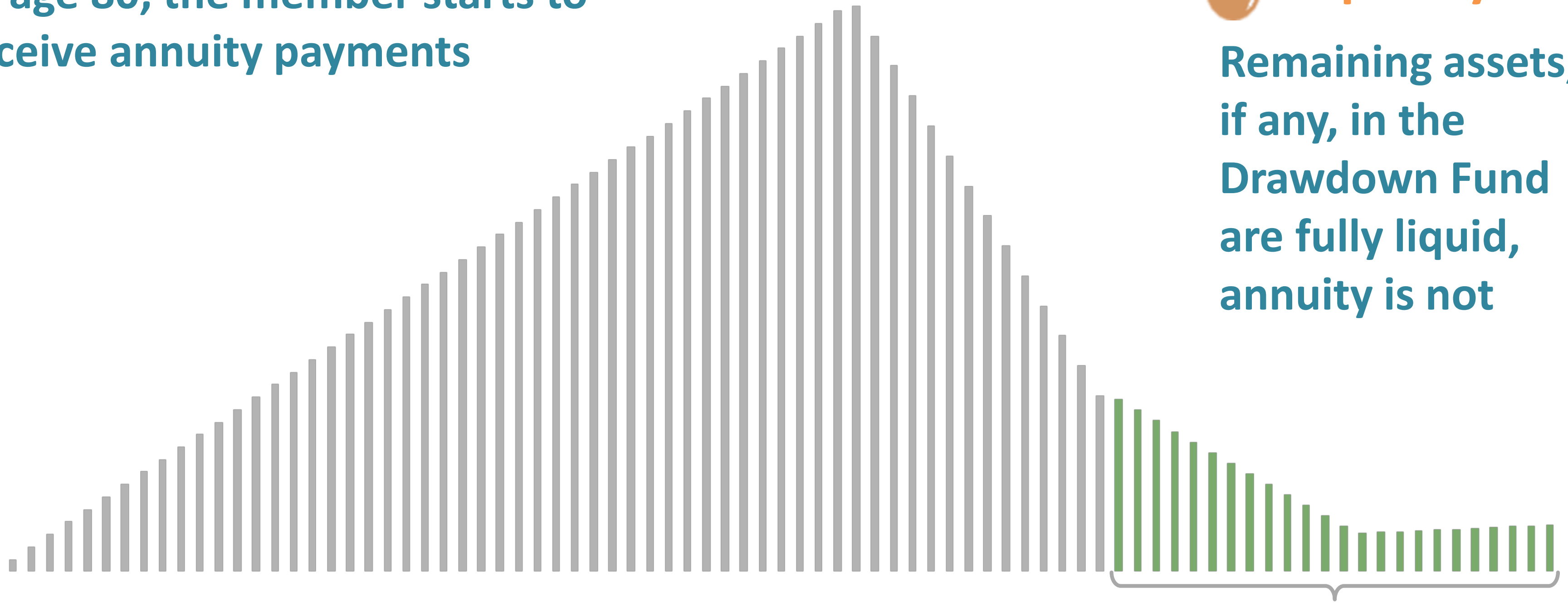
✓ ***Flexibility***



Source: SSGA. The information contained above is for illustrative purposes only.

Phase 4 — Later Life

At age 80, the member starts to receive annuity payments



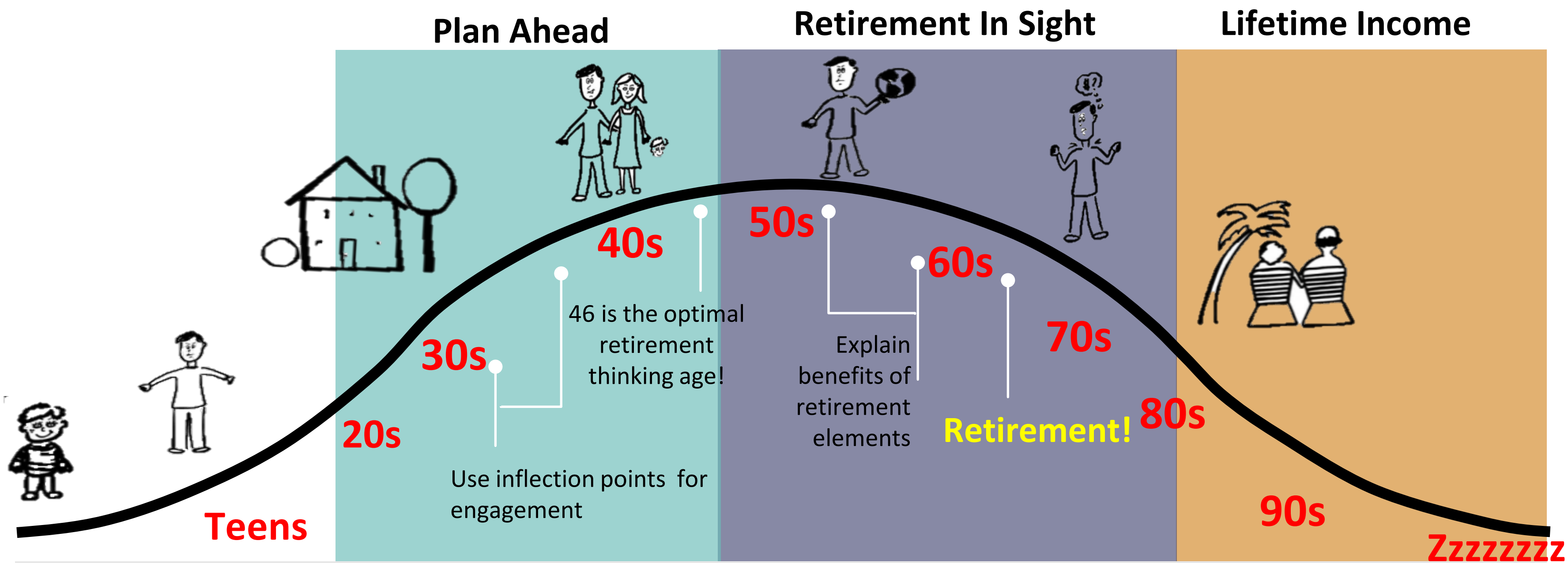
Liquidity

Remaining assets, if any, in the Drawdown Fund are fully liquid, annuity is not

Phase 4:
Later Life

Source: SSGA. The information contained above is for illustrative purposes only. Income security past 80 is subject to the claims-paying ability of the issuing insurance company. It is possible that the issuing company may not be able to honour the annuity payouts.

Member Experience



Sample language:

- *We're helping you save for retirement*
- *We'll take care of the investing part—just be sure to check in periodically to make sure you're still aligned with your future goals.*

- *We've got you covered*
- *You've been saving throughout your career and we offer a benefit that will help provide lifetime income.*
- *Keep up the good work.*
- *Start to think how you'll spend your pension*

- *You've done everything right*
- *You'll now receive a guaranteed income for life*

In conclusion

AN INVESTMENT STRATEGY FOR FUTURE PENSIONS?

Keep options open
to and through retirement

THE NEXT STEP?

Best of both worlds in
retirement income

Source: SSGA. The information contained above is for illustrative purposes only.

Important Disclosures

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* Slide 14 & 19: SSGA Defined Contribution team, December 2015. All calculations made using mortality rates from the Society of Actuaries RP-2014 mortality tables for healthy annuitants using a 50/50 blend of male and female mortality and ISG capital market forecasts for Q4/2015. The median life-expectancy at age 65 in these tables is 85. Drawdown assumptions include a 2% cost of living adjustment and a retirement age of 65. Self-managed drawdown: we assume the participant has all their retirement assets in a 35/65 portfolio with an expected return of 4.5% and a risk level of 7.3%. The drawdown rate is the annual rate at which a participant could draw down their assets with a 95% probability of not exhausting their assets during their lifetime. Hybrid: we assume the participant uses 25% of their retirement assets to purchase a 50% joint and survivor annuity with a return of premium benefit and a 2% COLA which starts payments at age 80 and invests the remainder of the assets in a 35/65 portfolio with an expected return of 4.5% and a risk level of 7.3%. The hybrid drawdown rate is the continuous annual rate at which the participant could draw down their assets between the ages 65 and 80 and use the remainder of their assets to supplement their annuity income after the age of 80. Annuity: the annual payment that the participant would receive if they used all their retirement assets to purchase an immediate 50% joint and survivor annuity with a 2% COLA and a return of premium benefit starting payments at age 65. Calculations for the self-managed drawdown and the drawdown portion of the hybrid solution are based on simulations (simulation count = 100,000) and do not reflect the effects of unforeseen economic and market factors on decision-making. Annuity prices are based on MetLife quotes for December 2015. Expected returns are based upon estimates and reflect subjective judgments and assumptions.

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