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Assessing Post-retirement Strategies and Products

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Please note that investment returns can fall as well as rise and that past performance is not a guide to future investment returns.



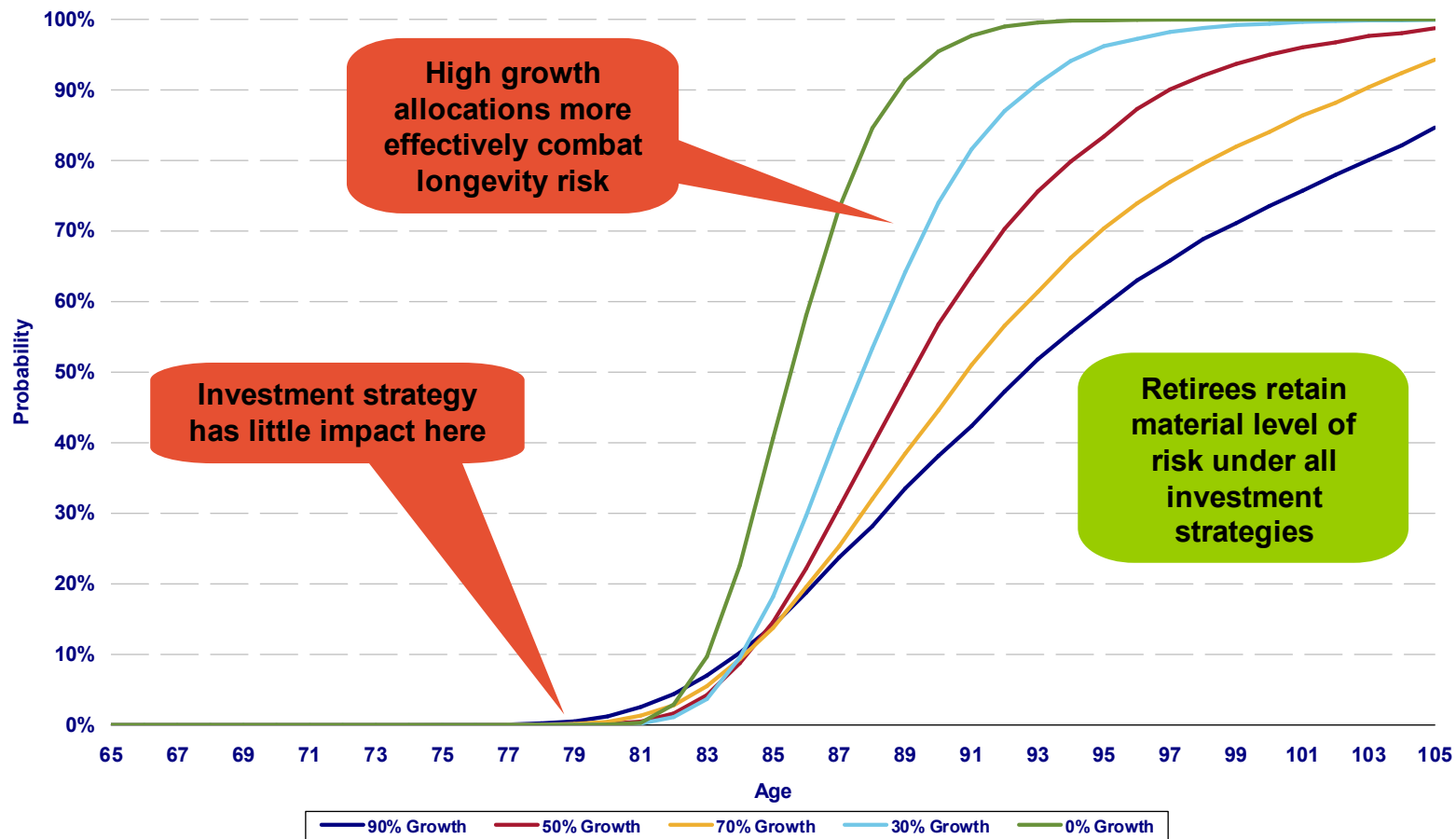
Overview

- Previous related research
- Analysis of products (including various strategies based on these products) from a *retiree outcomes* perspective
- Notes on product design and trustee issues

Ongoing program of research and consulting on post-retirement issues

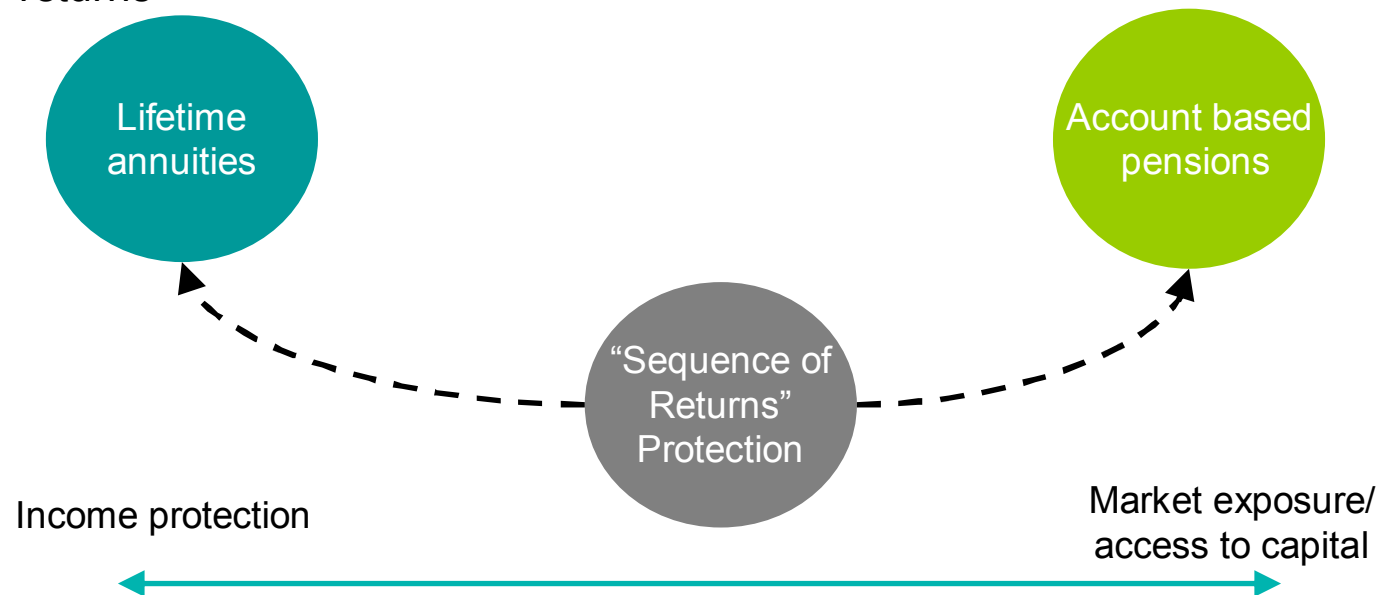
- Towers Perrin, 2008 – “Retirees’ Longevity Risk” paper and subsequent work
 - the survivor risk premium (SRP) concept for weighing up retirement income strategies
 - importance of the age pension underpin when designing longevity solutions
 - decision not to purchase longevity protection quite rational for many new retirees (see SRP work)
 - retirees should think seriously about locking in longevity protection during retirement
- Watson Wyatt, 2009 – “Investment and Spending in Retirement” paper and subsequent work:
 - quantified retiree’s exposure to risk of running out of money (“ruin”)
 - questioned a material shift away from risky assets towards and in retirement
 - illustrated impact of introducing a lifetime annuity into a retirement portfolio
- Towers Watson, 2010:
 - analysis of government-provided lifetime annuity idea raised by Henry review
 - extension of previous work to cover wider range of post-retirement products

Account-based pension: risk of running out of money (“Ruin”) under varying investment strategies

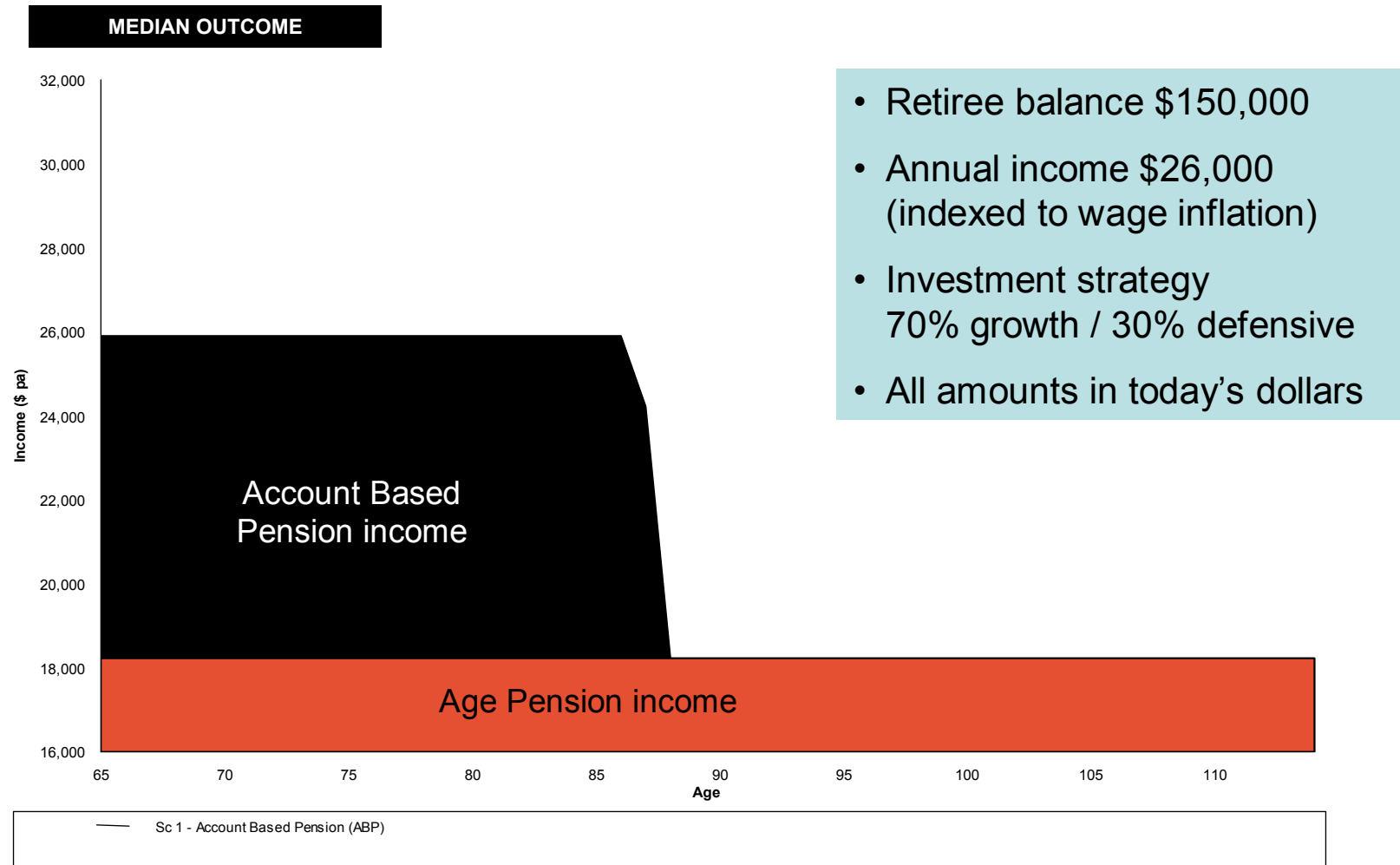


Now consider a broader suite of post-retirement products

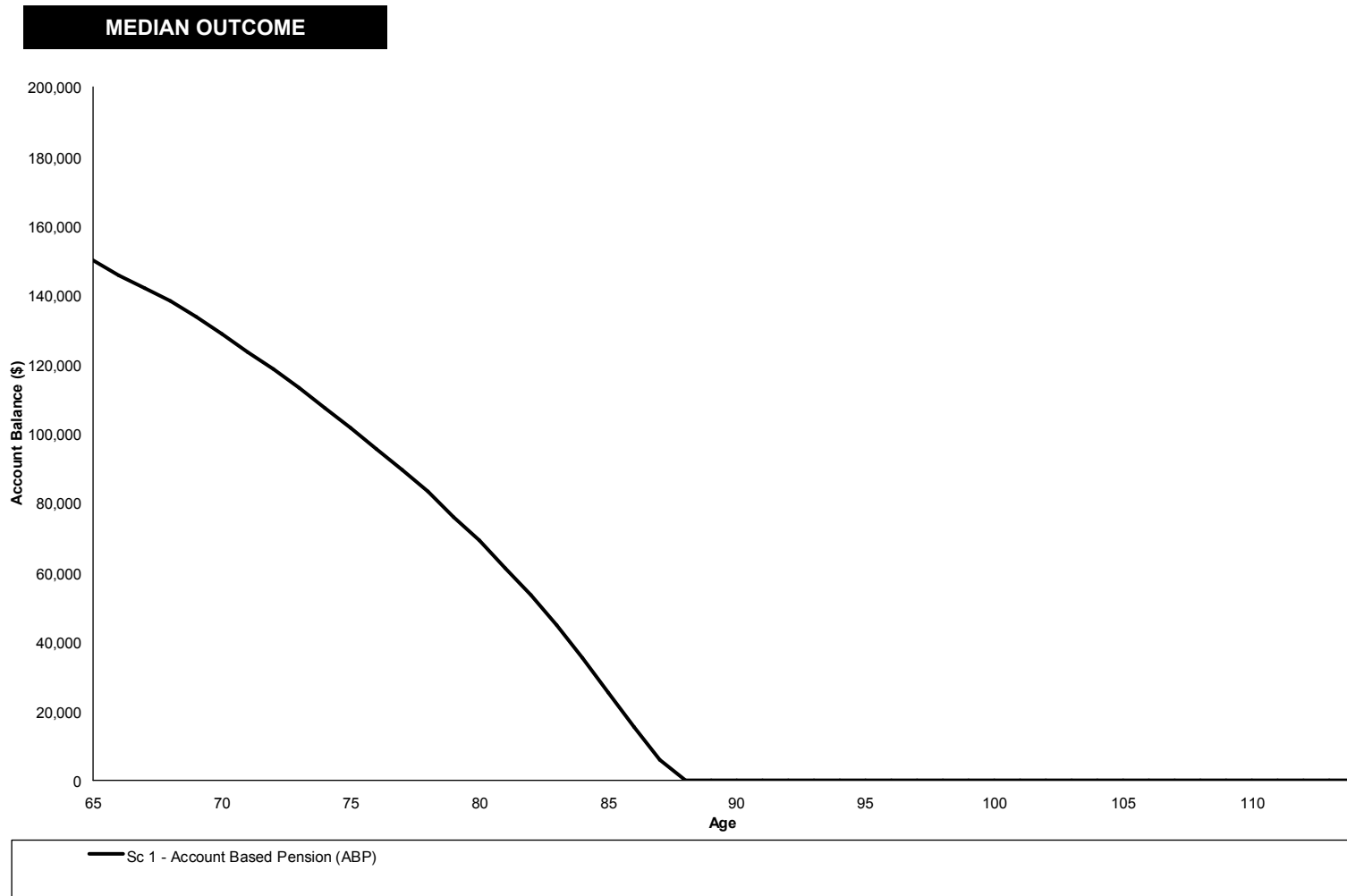
- (Pure) account-based
 - full pass through of market returns;
no guarantees
- Annuities – (lifetime or deferred)
 - guaranteed income streams
 - completely independent of market returns
- “Next generation” sequence-of-return protected products
 - engineered products with some guarantees but also market exposure



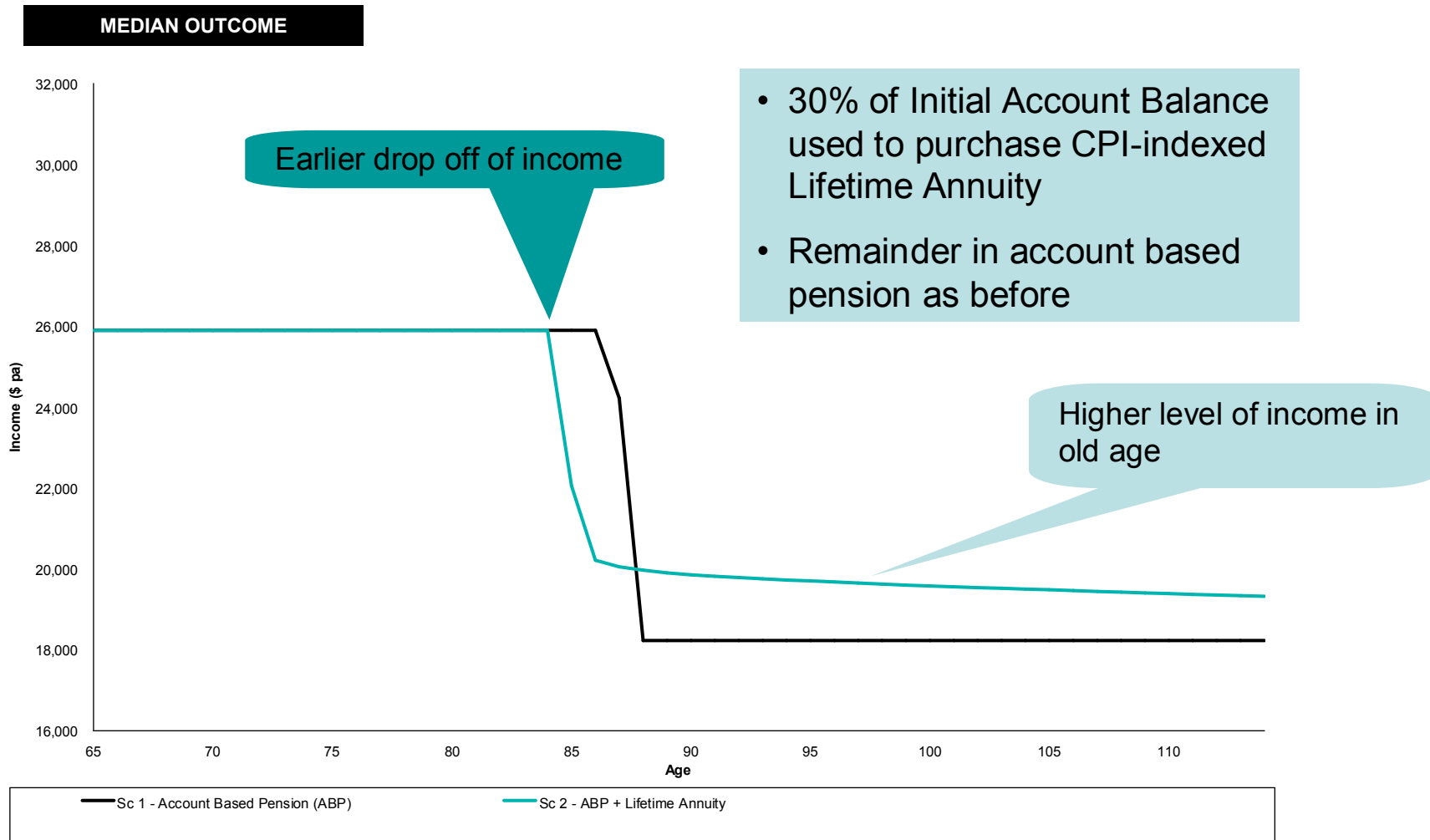
Account Based Pension Scenario – Retiree Income



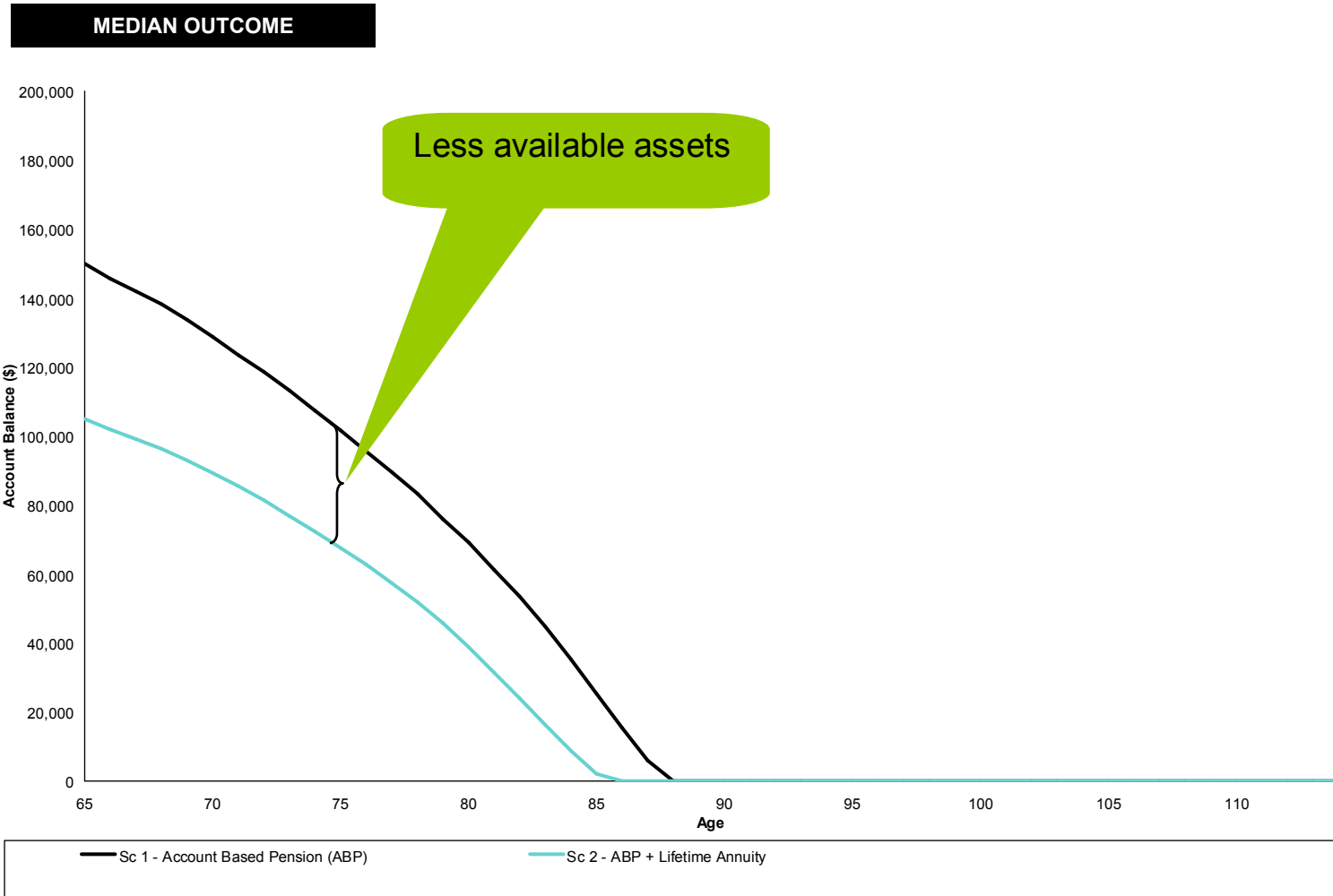
Account Based Pension Scenario – Available Assets



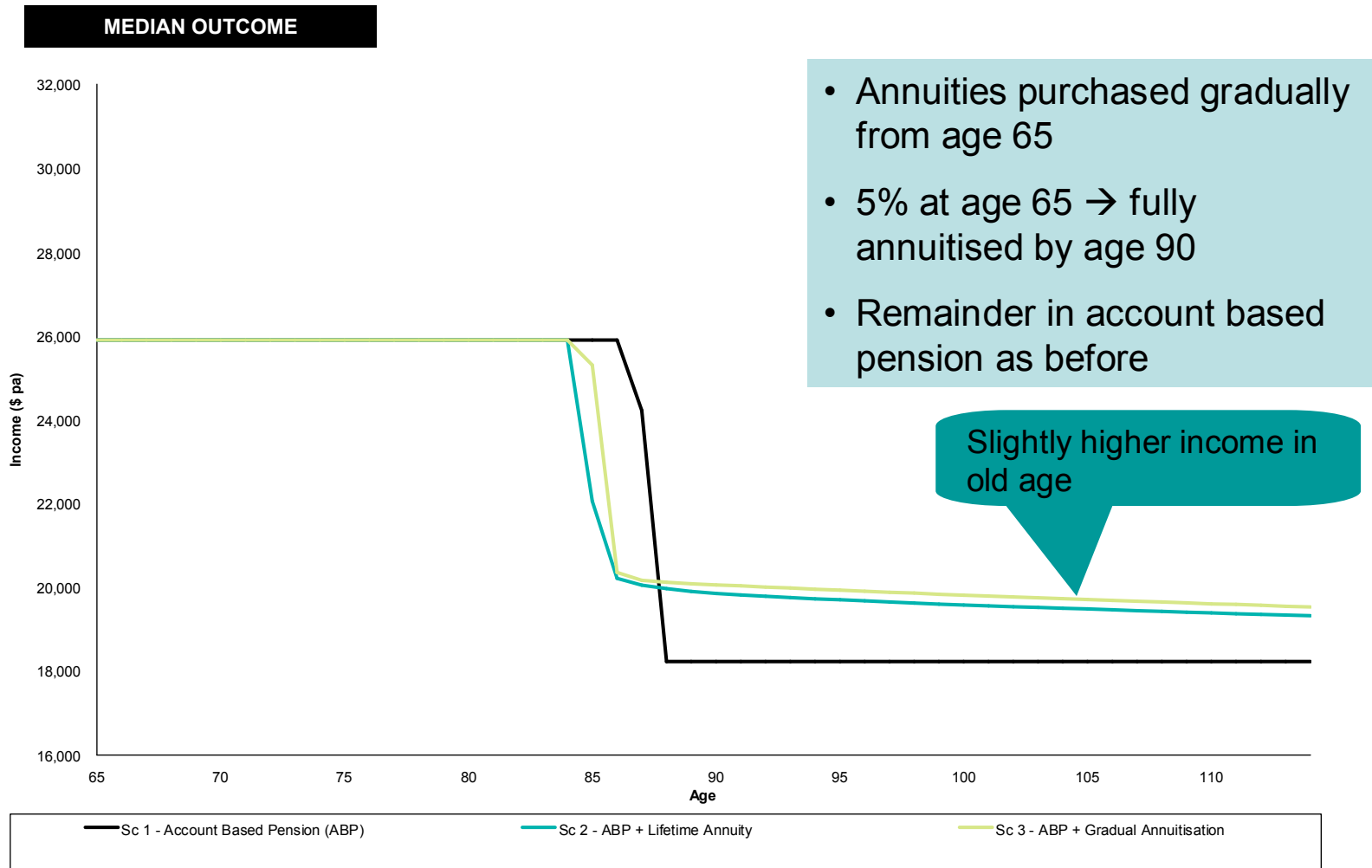
Immediate Lifetime Annuity Scenario – Retiree Income



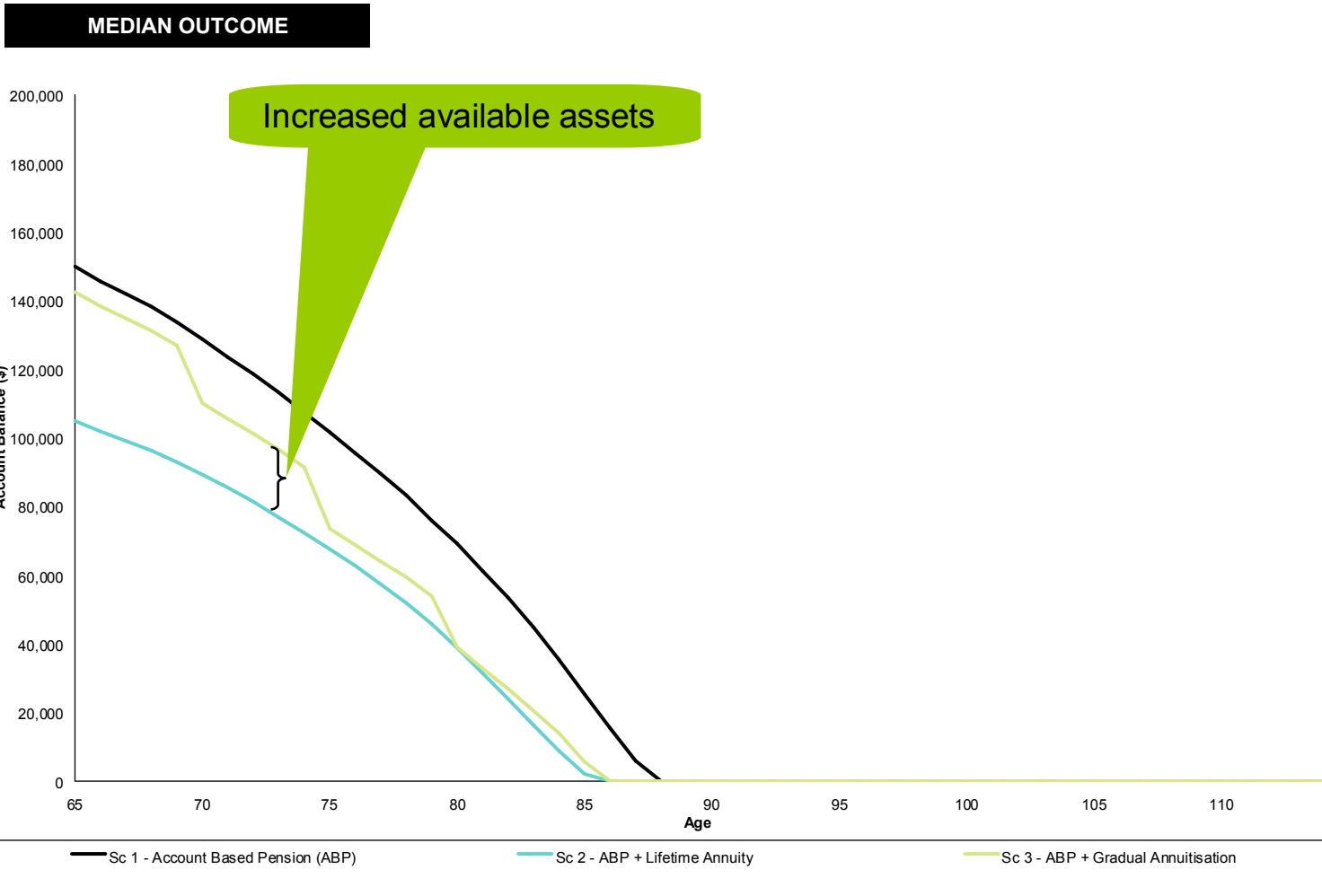
Immediate Lifetime Annuity Scenario – Available Assets



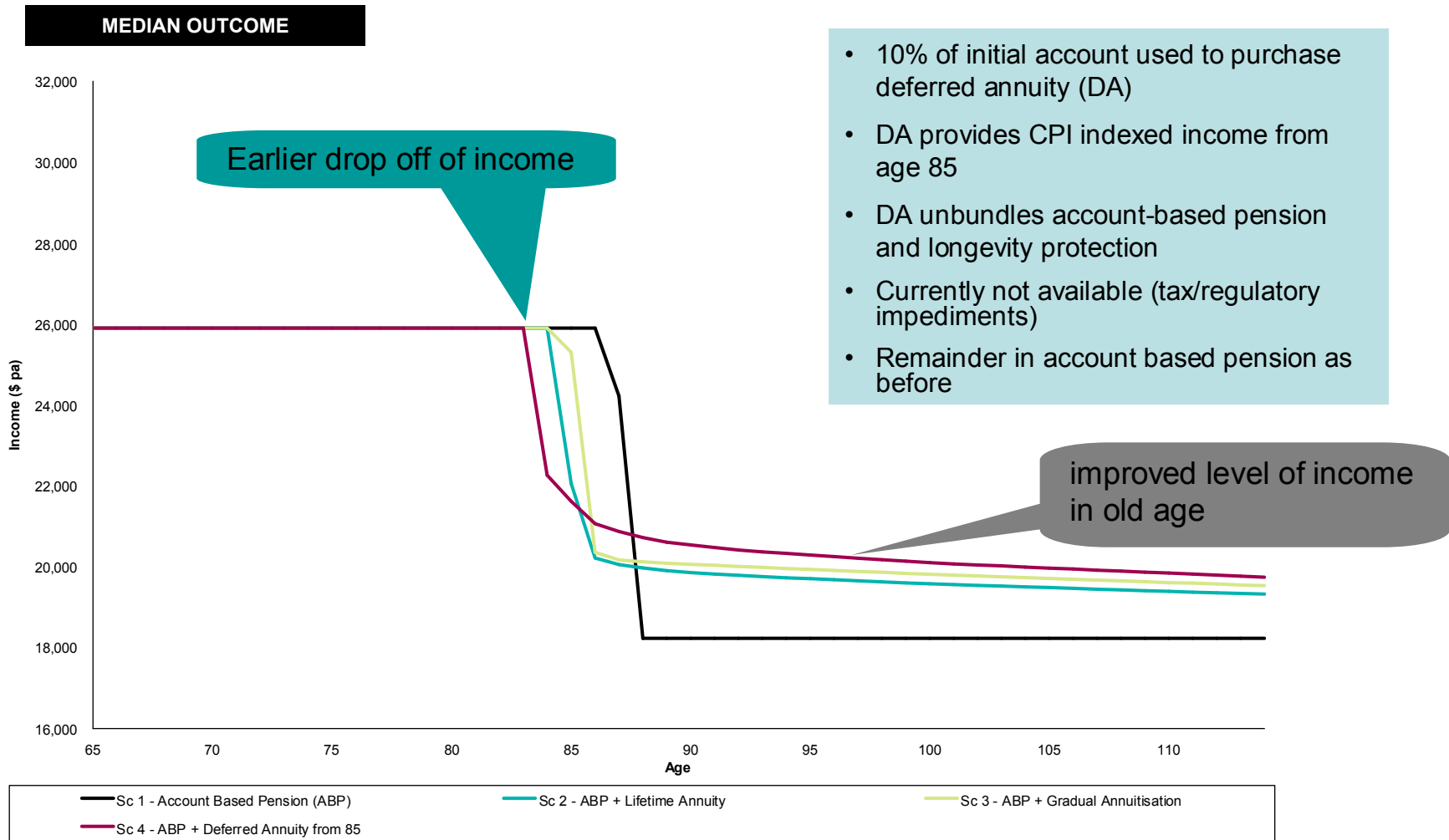
Gradual Annuitisation Scenario – Retiree Income



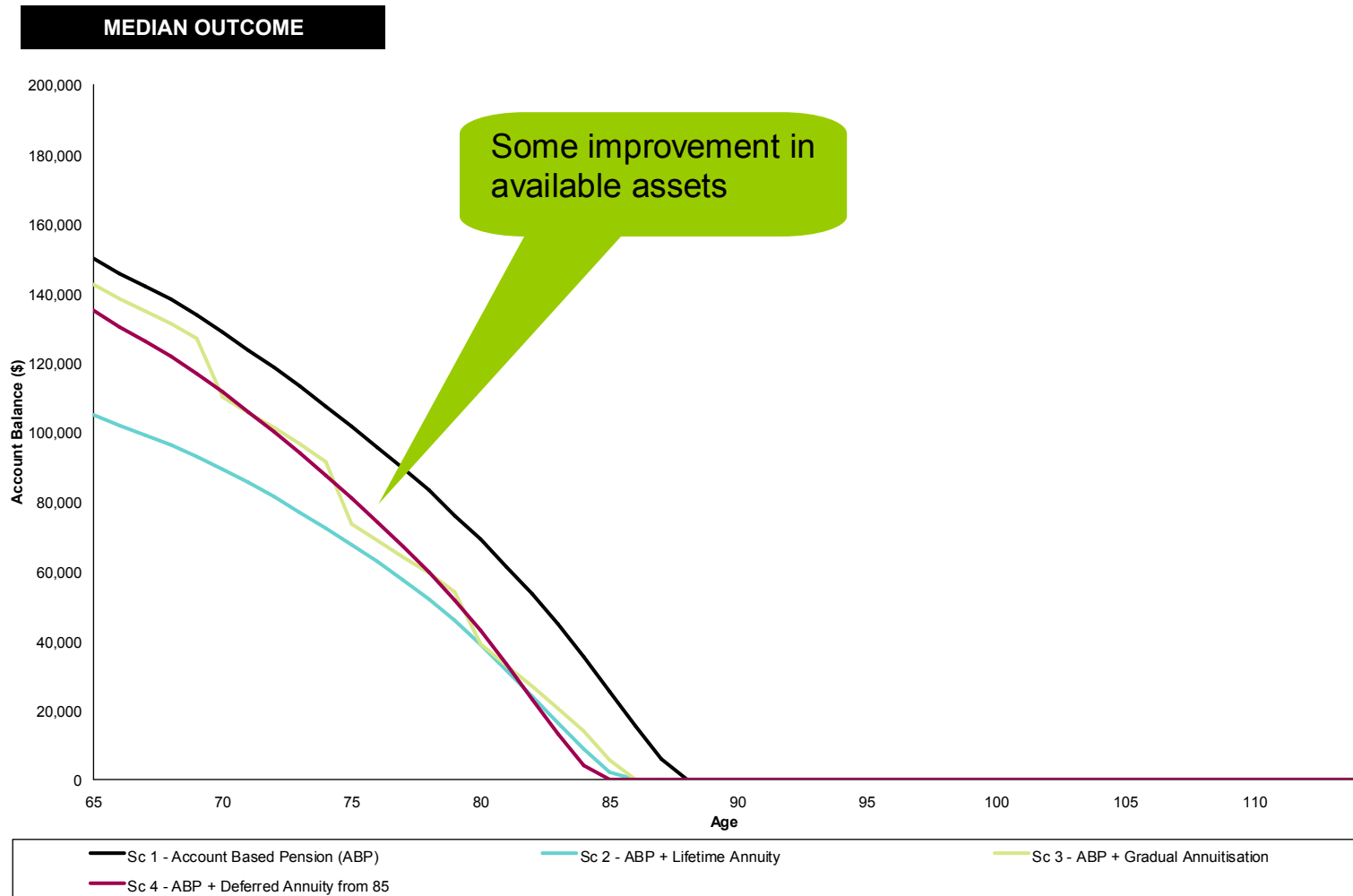
Gradual Annuitisation Scenario – Available Assets



Deferred Annuity Scenario – Retiree Income



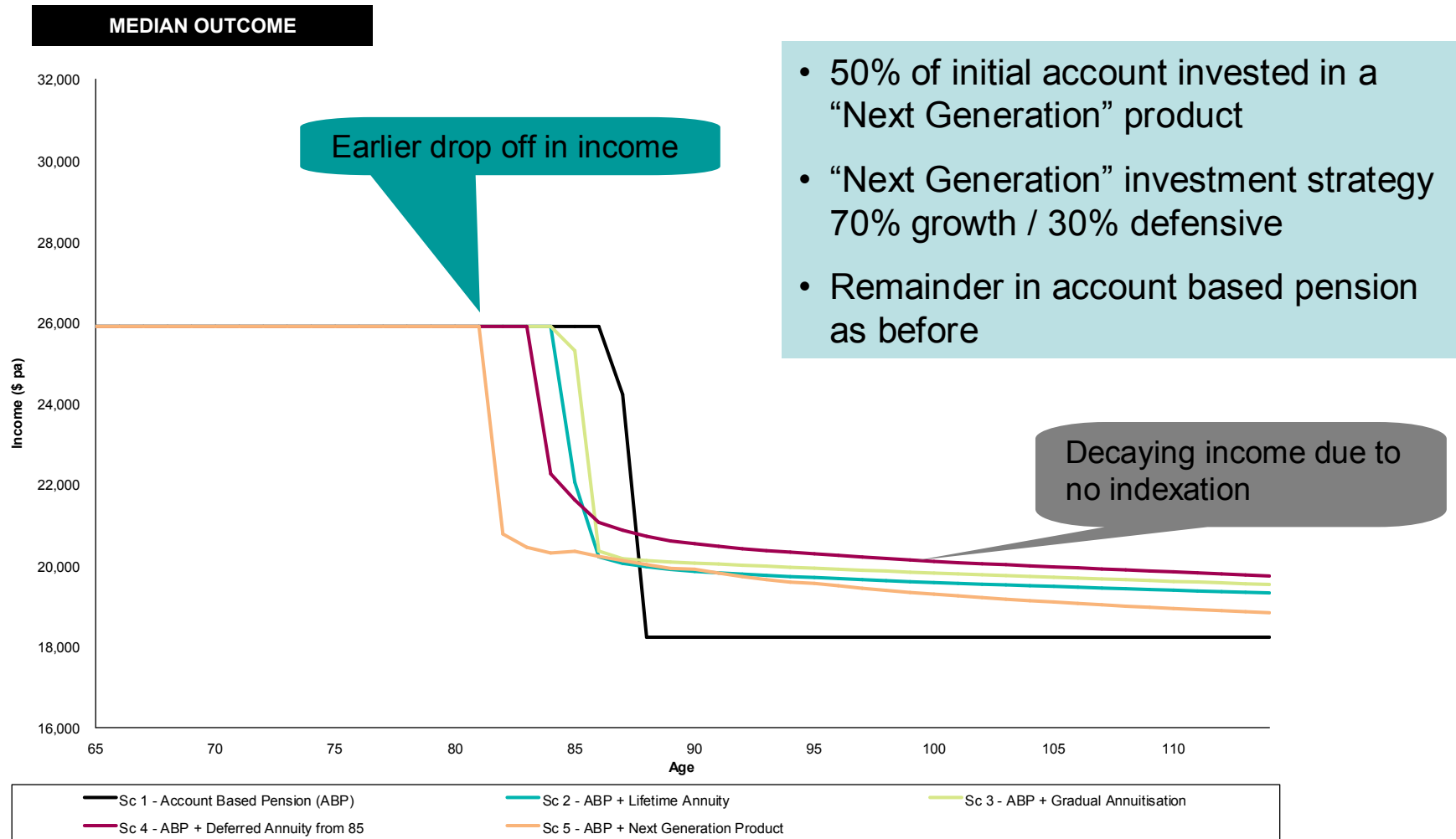
Deferred Annuity Scenario – Available Assets



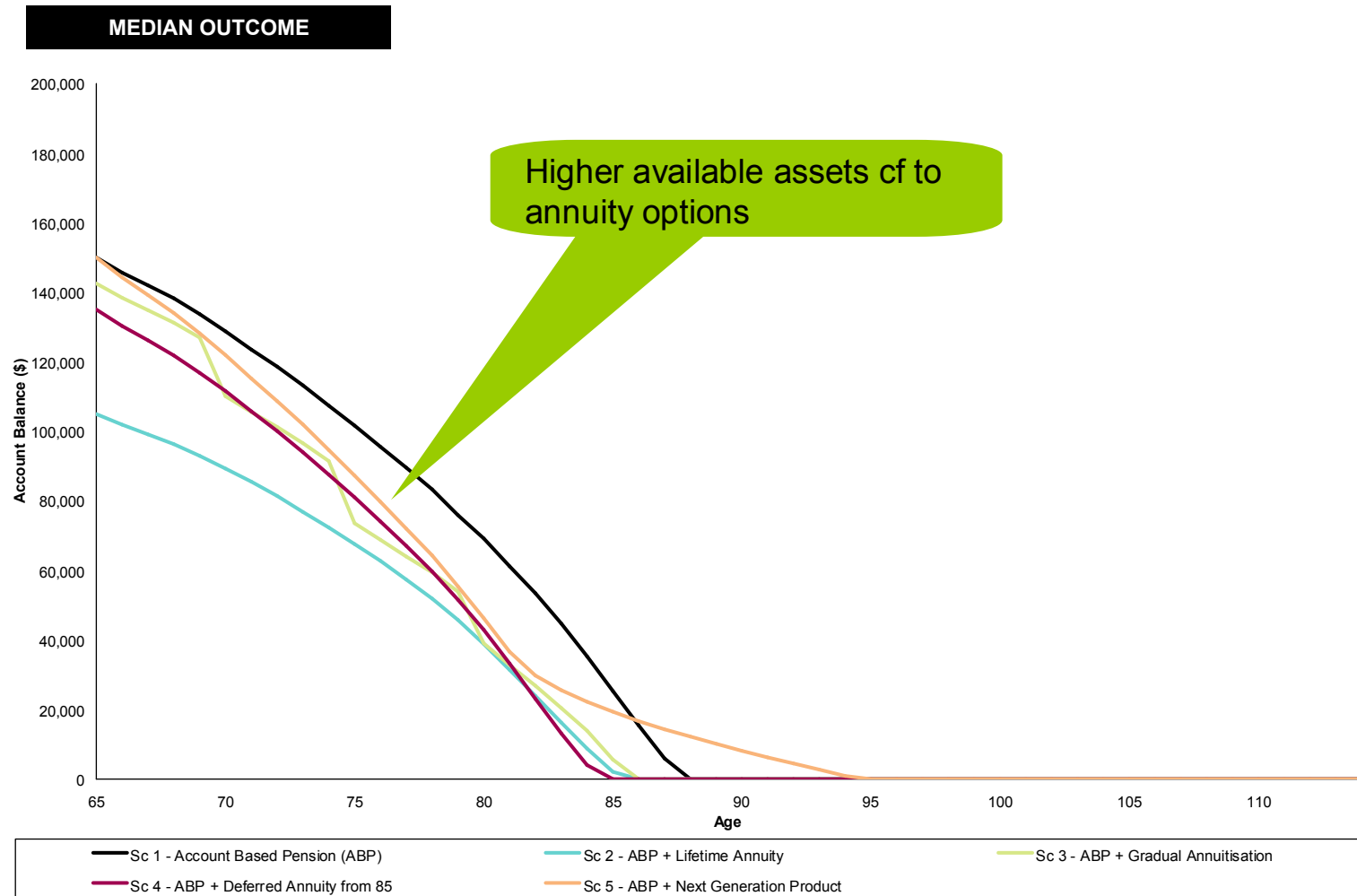
“Next Generation” Products

- Now available in Australia (INGA, Macquarie, AXA coming, others?)
- Combine key aspects of account-based pensions and annuities
 - Market exposure
 - Lifetime income protection
 - Ongoing access to remaining account
- We have considered a generic, lifetime income variant
 - Lifetime income equal to 5% per annum of protected floor
 - Protected floor can increase periodically but cannot fall (unless permitted income limits exceeded)
 - Guarantee fee of 1.6% per annum (for a 70/30 asset mix)
 - Higher than INGA product because of higher growth mix assumed
 - Higher than Macquarie product because of:
 - Lower lifetime income guarantee in Macq product
 - Indirect costs embedded in the Macq product (volatility control, life-cycle strategy, franking credits?)

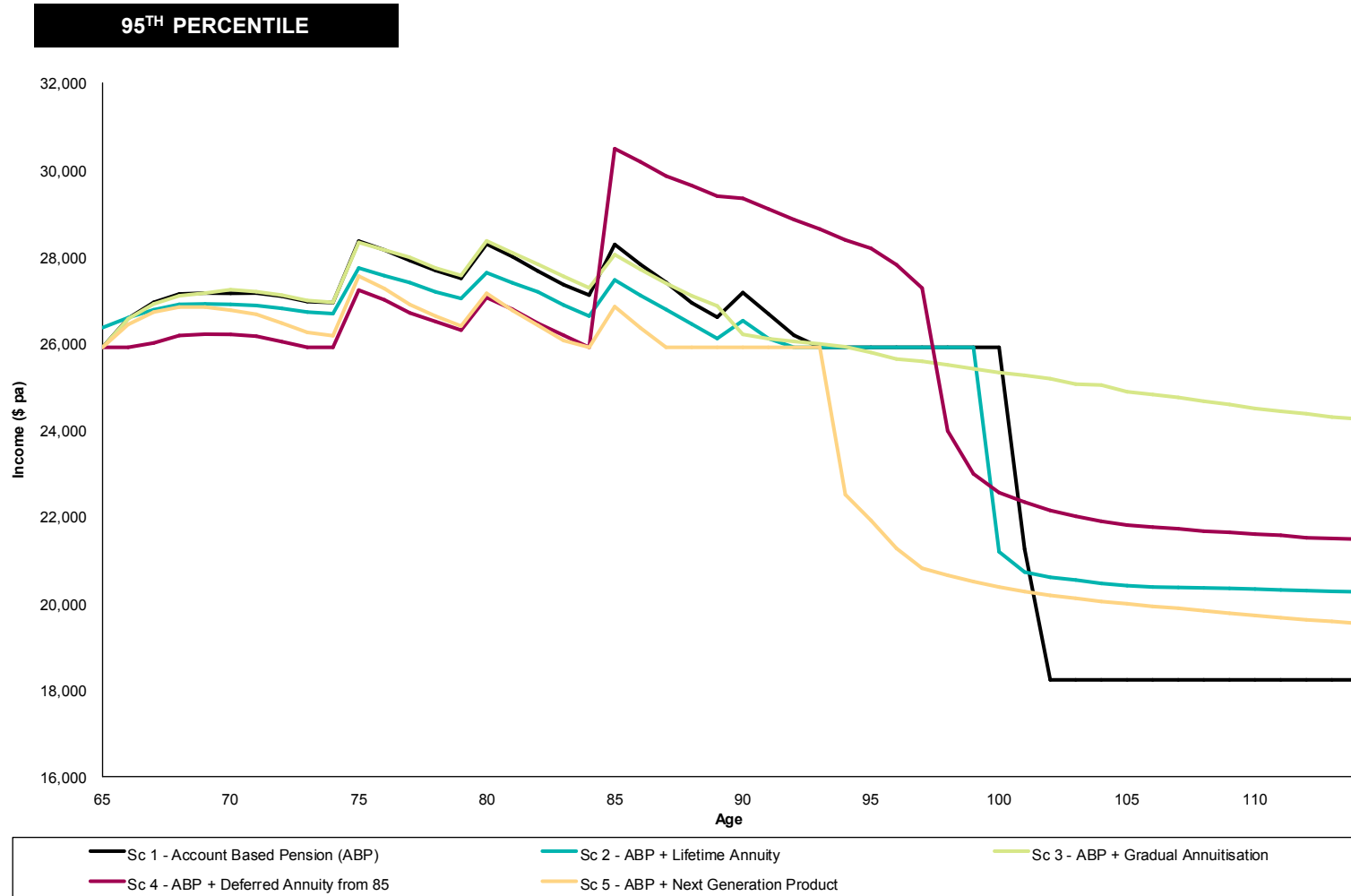
Next Generation Product Scenario – Retiree Income



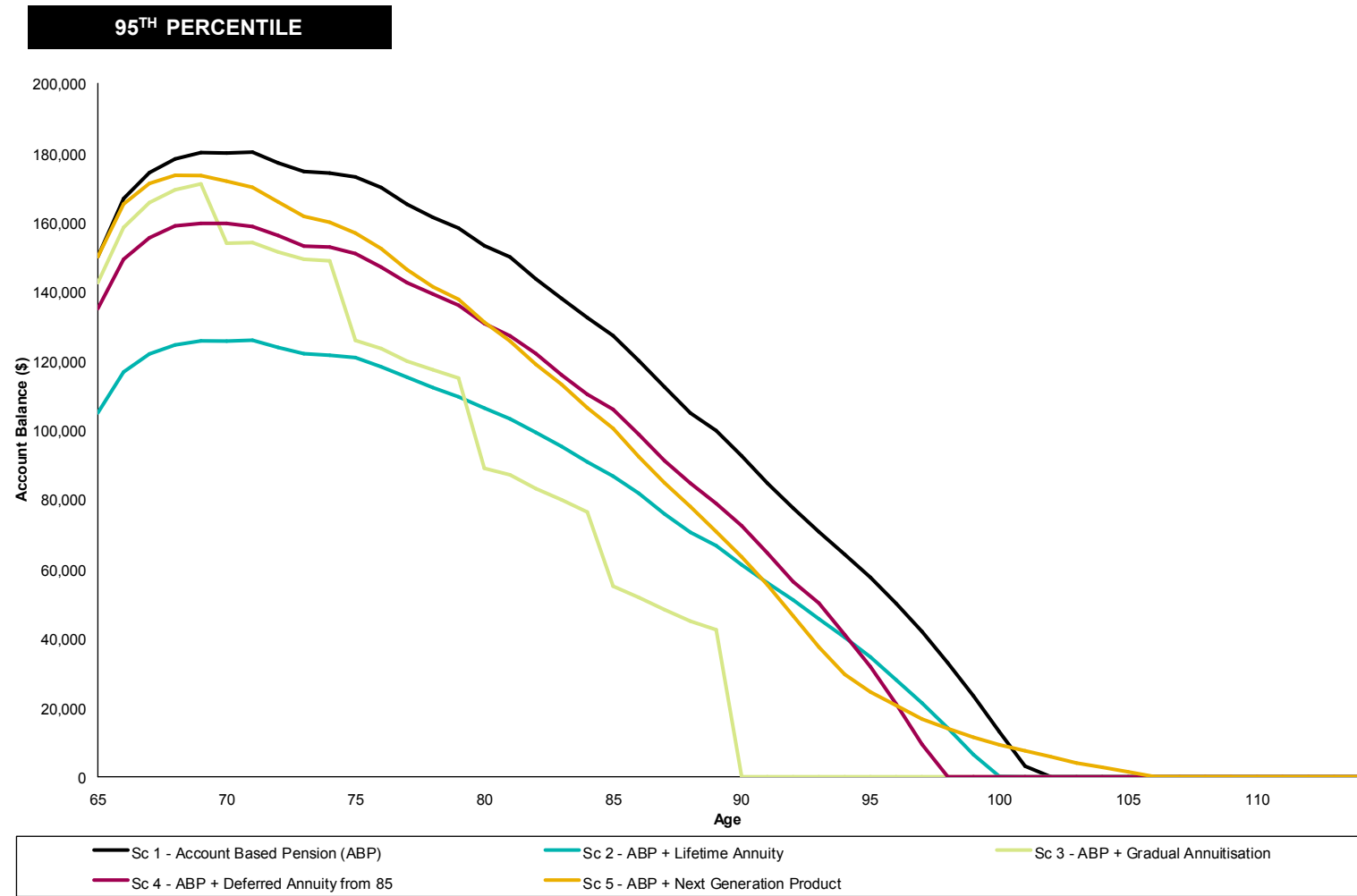
Next Generation Product Scenario – Available Assets



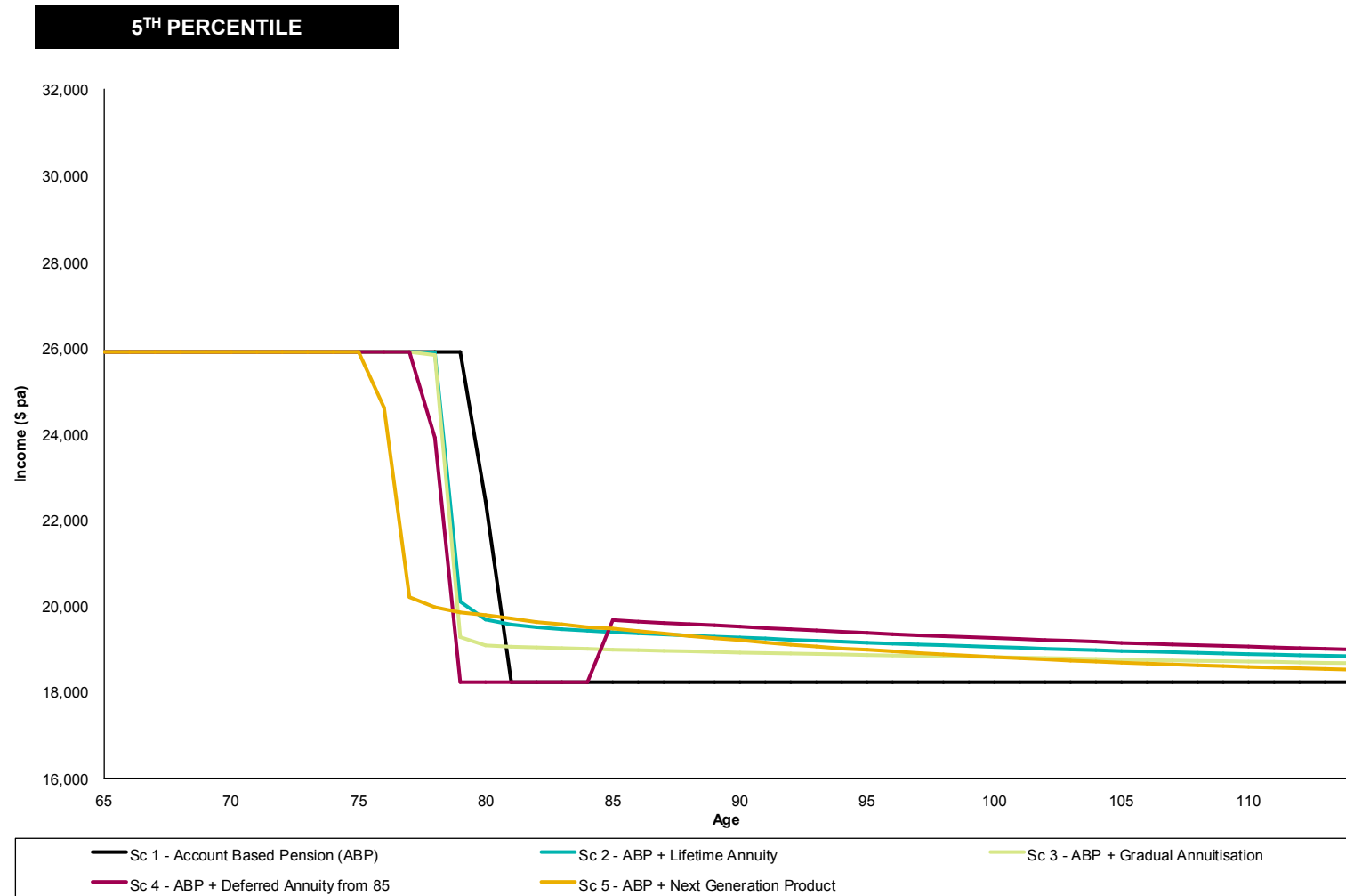
Retiree Income – “Good” Outcomes



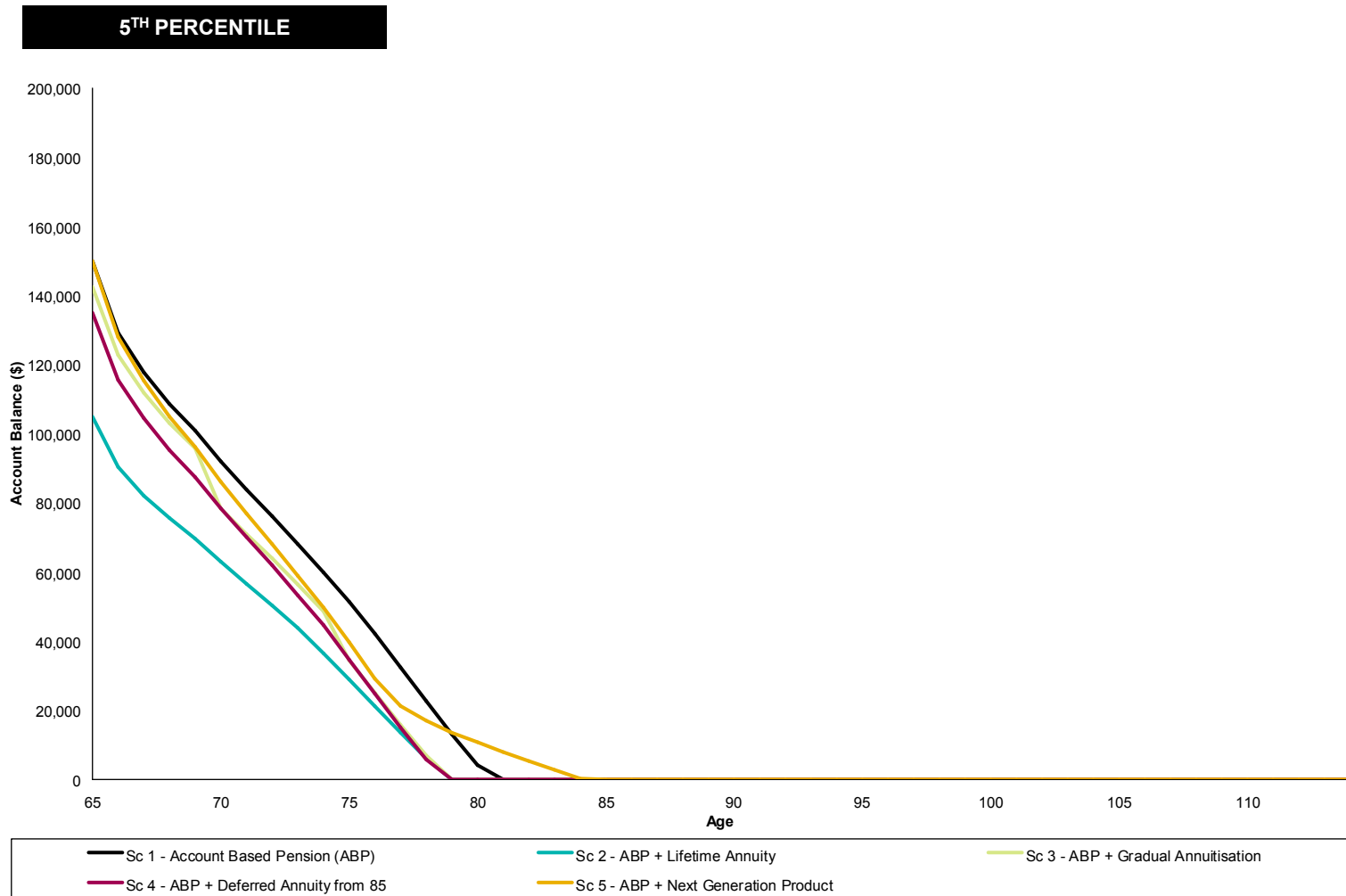
Available Assets – “Good” Outcomes



Retiree Income – “Bad” Outcomes



Available Assets – “Bad” Outcomes



Observations and conclusions

- No free lunch - inevitable trade-offs between:
 - A member's retirement income objective vs available assets objective
 - Form of longevity guarantee vs the cost of that guarantee
 - Note – the annuity prices adopted in this analysis have not allowed for the potential pricing benefits that would be expected under a compulsory annuitisation system
- For the case considered, the next generation product is potentially surprising:
 - Greater available assets but with lower longevity benefits than unbundled solutions
 - A different blend of next generation product and ABP may deliver different outcomes
 - Implications for product pricing and advice process for next generation products
- For the case considered, gradual annuitisation delivers some interesting results:
 - Income benefits appear to compare favourably against other strategies
 - But at cost of lower available assets, particularly under good market returns
- Worth pursuing change in tax/regulatory treatment of deferred annuities:
 - Interesting set of projections for the deferred annuity
 - However, the lack of investment guarantee hurts under poor market returns
 - Also a potentially risky product for providers to offer on a standalone basis ?



Observations and conclusions (cont'd)

- Only one case considered in this presentation – dangers in extrapolating!
- Optimum solution will vary by:
 - Retirement balance
 - Retirement age
 - Target income and associated age pension interactions
 - Assumed investment mix in the account-based pension
- Use of analysis for formulating product strategy and designing product solutions:
 - Assessing income/liquidity and guarantee cost/benefit trade-offs
 - Selection of product strategy(ies) better suited to a particular customer base
 - Retirement income advice better tailored to individual retirees
- Use of analysis for weighing up the costs/benefits of different product solutions:
 - Comparing bundled solutions vs unbundled solutions
 - Comparing benefits and costs of different next generation solutions
 - Note – only two next generation products on market and yet they differ significantly

Next generation solutions – understanding indirect guarantee costs

- Some guarantee costs are explicit e.g. the guarantee fee based on account balance or protected floor
- Some “hard” guarantee or “softer” protection costs may be indirect and not readily apparent:
 - Emergence of volatility-controlled funds – drag on expected investment return
 - New idea to put a delta hedging mandate “inside” the fund – drag on expected returns
 - Use of lifecycle funds alongside the guarantee – reduces the value of the guarantee
 - Use of true index funds – will the provider retain the underlying imputation credits?
 - The analysis shown has not allowed for the adverse impact of these indirect costs
- Key challenge for product design and advice process:
 - How to compare the value propositions of bundled/structured products, softer protection strategies and unbundled longevity solutions?
 - How to ensure a clear understanding of the nature/value of the guarantee offered
 - How to ensure a complete understanding of the total costs associated with the guarantee (direct and indirect)
 - Ensuring that the price charged for the guarantee/protection recognises the lower guarantee cost stemming from any cost-mitigating embedded features

Areas of further potential research

- Other blends of growth/defensive assets
- Dynamic gradual annuitisation decision rule
- Gradual deferred annuitisation
- Other blends of products considered
- Soft protection strategies within a fund e.g.:
 - Put/call collars
 - Delta hedging mandate
 - Volatility controlled mandate
- Capital guarantee periods within annuity options
- Other products (structured and unbundled) with capital guarantees but not explicit longevity protection

Underlying Assumptions

- Retiree
 - A single male homeowner for Age Pension means tests
 - Retirement age: 65 years
 - Initial balance: \$150,000
 - Target income: \$26,000 pa (indexed with AWE)
- All amounts in today's dollars – discounted at AWE
- Social Security current from 20 March 2010 (full age pension: \$18,229 pa)
- Administration and Platform fees
 - Only applied to the Account Based Pension assets based on a sliding scale according to size of account
 - Sample fees set out in table below:

Account balance	Fee
\$50,000	0.9% pa
\$500,000	0.5% pa
\$1m	0.4% pa

- Investment management fees
 - Growth assets: 0.4% pa
 - Defensive assets: 0.3% pa
- Modelled annuity pricing (current and deferred) is based on annuity prices currently available in the market, but vary with stochastic government yields.

Summary of Investment Assumptions

- Towers Watson Global Asset Model
 - Projection tool which generates stochastic rates of investment return for individual assets classes and other market indicators such as the level of Consumer Price Indexation (CPI) and Average Weekly Ordinary Time Earnings (AWOTE).
 - Table below sets out summary statistics of the investment returns.

Asset Class	Long Term Compound Returns p.a. (before tax and fees)	
	Median	Standard Deviation
0% Growth	5.4%	0.7%
70% Growth	7.4%	1.1%
100% Growth	8.1%	1.4%
Price Inflation (CPI)	2.5%	0.5%
Wage Inflation (AWOTE)	4.0%	0.9%

- Note – under the model the assumed distribution of asset class returns varies over time; hence the statistics shown above are for long term (50 year) annualised returns rather than for any particular year.
- This means in particular that the standard deviations shown are smaller than for the underlying annual standard deviation in any year.



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