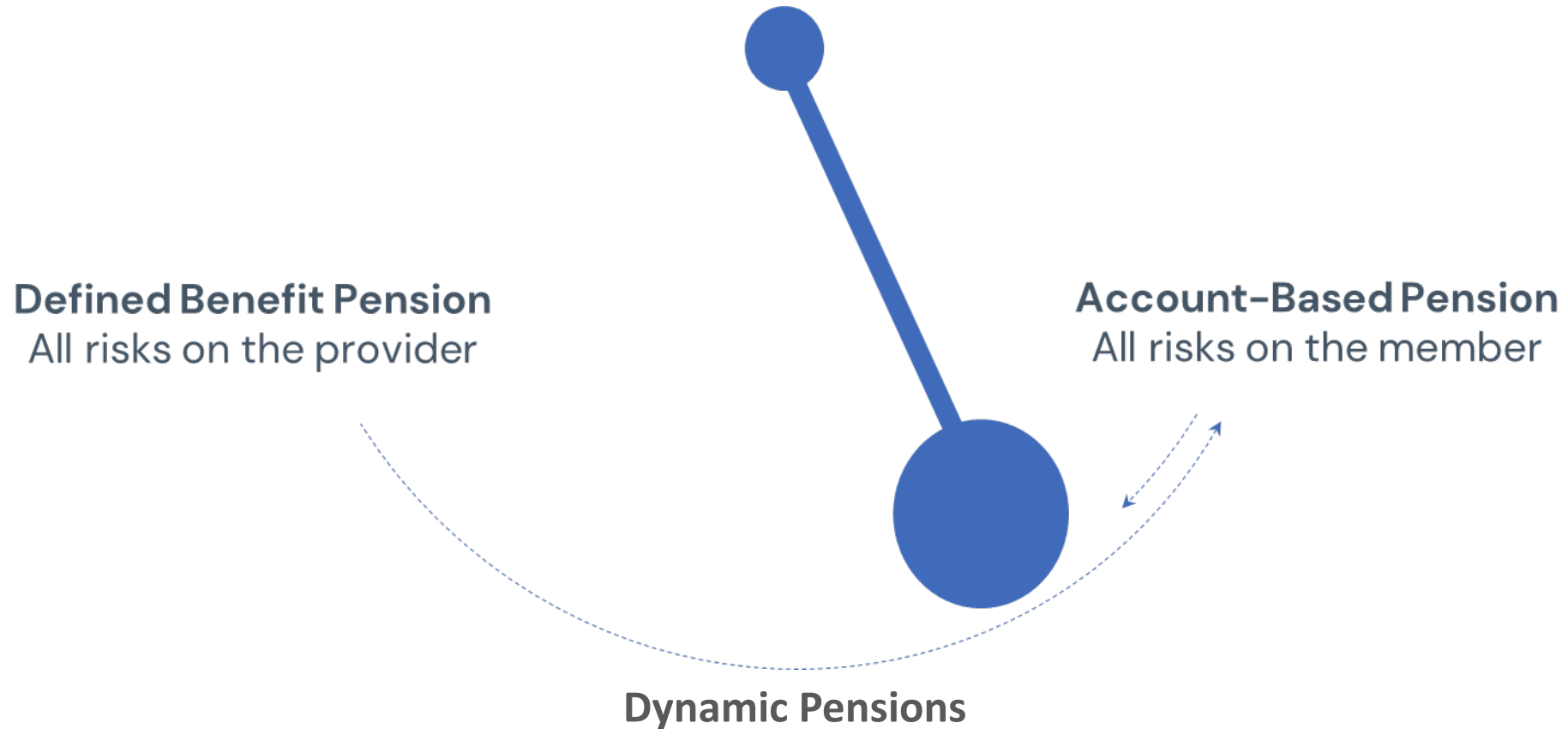


# Dynamic Pensions in Real Life

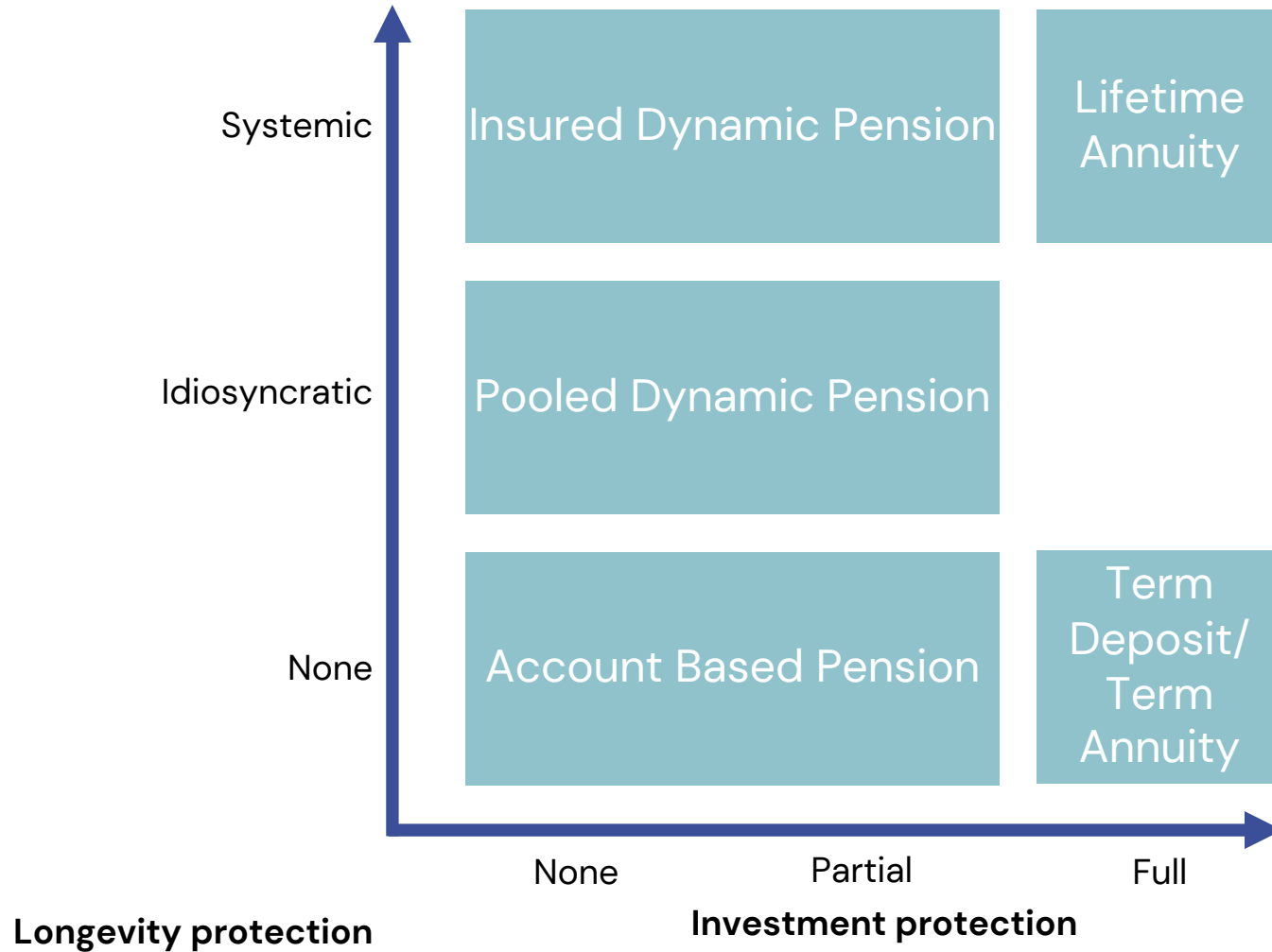
Ben Hillier

July 2023

# The Pendulum is Moving Back to the Sensible Centre



# A New Landscape of Retirement Solutions is Emerging



# Characteristics of a Dynamic Pension



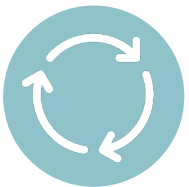
**Variable income for life** – duration is guaranteed but level is not guaranteed, varies with market returns and potentially mortality experience if pooled and not insured



**Higher rates of income** – typical rates of income for a 65 year old are 6.5% to 7.5%, because there is no need for capital reserving or conservative investments



**Capital restrictions** – access to capital will be restricted, though typically a death benefit or minimum payment period will be offered to overcome loss aversion



**No capital risk** – providers do not need to provide or reserve capital, and dynamic pensions can operate perpetually with no intergenerational inequity

# Dynamic Pensions Can Be Pooled or Insured

## Pooled Dynamic Pension

### Advantages:

- No requirement to reserve capital
- No revenue leakage = theoretically higher incomes
- No third-party risks
- Simplicity

### Disadvantages:

- Incomes will vary by actual mortality experience
- Income volatility can be an issue with low scale or closed pools
- Competing methods for sharing mortality-credits each have advantages and disadvantages

## Insured Dynamic Pension

### Advantages:

- Incomes only vary by investment experience
- Can more easily offer investment choice
- Pool size and composition is irrelevant (to participants)
- No complexities or inequities with sharing mortality credits
- Simpler pool management

### Disadvantages:

- Insurance comes at a cost = theoretically lower incomes
- Insurer will require capital
- Third-party risks
- Additional complexity

# Pooled Dynamic Pensions - Methods to Share Mortality Credits

Three members in a dynamic pooled pension, where actual mortality credits total \$5,000 compared to expected credits of \$13,529



Name	Larry	Curly	Moe
Age	60	75	90
Income	\$10,000	\$10,000	\$10,000
Balance	\$166,667	\$117,647	\$83,333
Expected credits	\$1,667	\$3,529	\$8,333
<b>Method 1 – credits distributed as proportion of balance</b>			
Share of actual credits	\$2,267	\$1,600	\$1,133
Income variation	0.4%	-1.6%	-8.6%
<b>Method 2 - credits distributed as proportion of expected credits</b>			
Share of actual credits	\$616	\$1,304	\$3,080
Income variation	-0.6%	-1.9%	-6.3%
<b>Method 3 - credits distributed to provide equal income variation</b>			
Share of actual credits	-\$2,100	\$818	\$6,282
Income variation	-2.2%	-2.2%	-2.2%

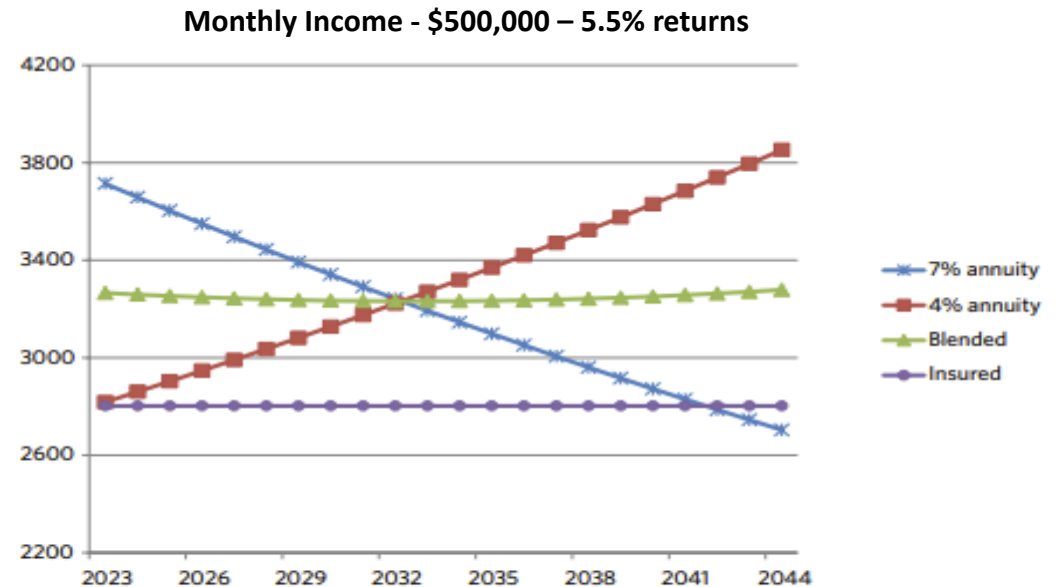
Simplified example – does not reflect actual data

# Example of a Pooled Dynamic Pension

University of British Columbia - Canada

## Variable Payment Lifetime Annuity

- No insured benefit
- Single balanced investment option
- Options for dual lives and minimum payment periods
- Income adjusted annually relative to a performance benchmark
- Choice of two benchmarks – 4% and 7%
- Income also adjusted annually based on mortality experience and forecast
- *Operating successfully since 1967*



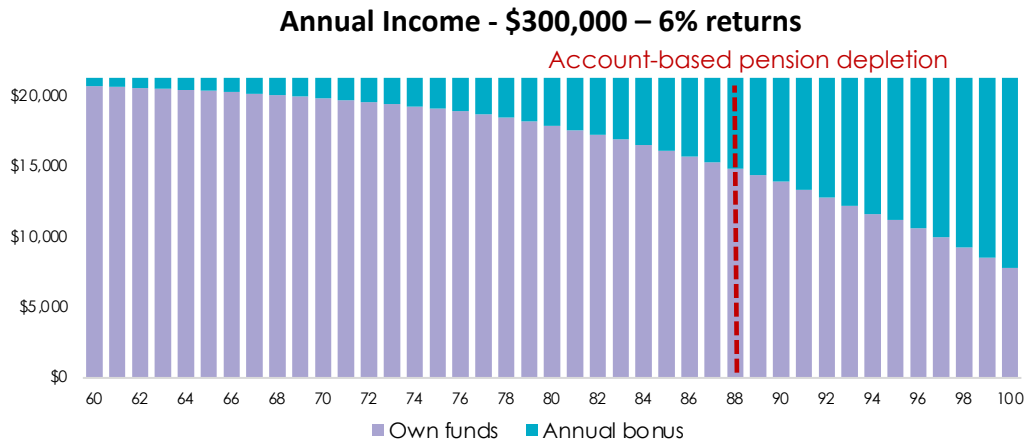
Any benchmark will still provide income for life, but will impact the starting rate and level of indexation

# Example of an Insured Dynamic Pension

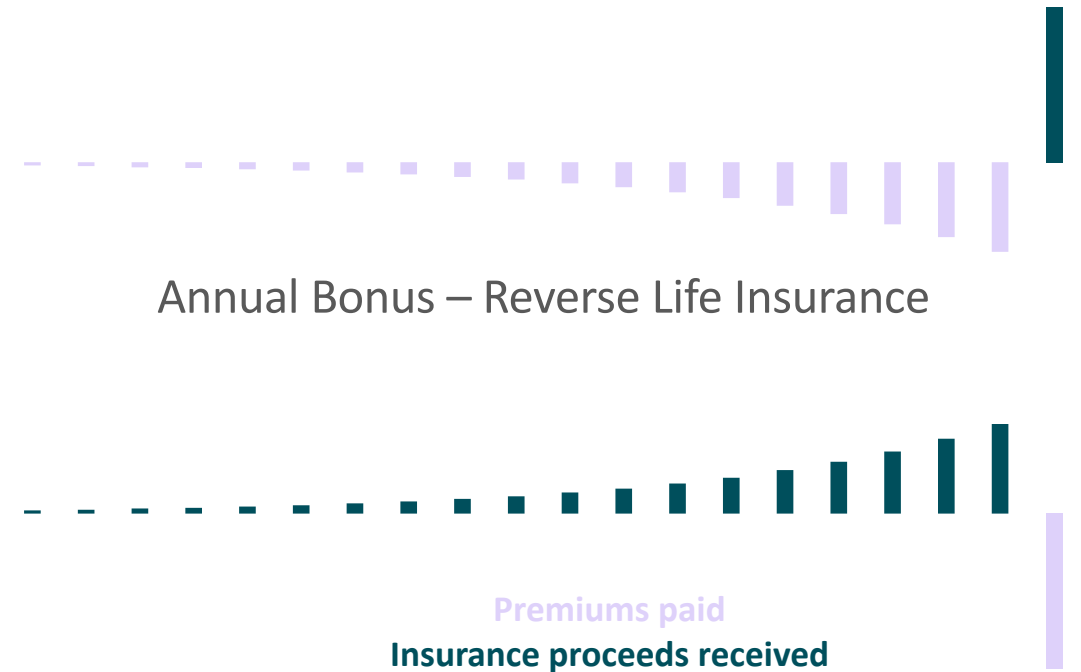
AMP – Australia

## MyNorth Lifetime Income Account

- Individual accounts – no pooling of mortality or investments
- Extensive investment choice – managed funds, SMAs, guarantees, direct equities, ETFs, cash
- Options for dual lives, death/exit benefits, and deferral – can be opened pre-retirement
- Income flexibility with a maximum benchmark of 6%
- Annual bonus insures longevity – distribution of expected mortality credits in exchange for actual mortality credits



## Standard Life Insurance



**A dynamic pension can provide confidence to spend more income without fear of running out**



# MyNorth Lifetime Income and Bonus Rates

Age	Single Life		Joint Life		Account-based Pension
	Income	Annual Bonus	Income	Annual Bonus	Minimum
<b>60</b>	7.1%	0.2%	6.6%	0.003%	4%
<b>65</b>	7.6%	0.3%	7.0%	0.01%	5%
<b>70</b>	8.2%	0.6%	7.5%	0.04%	5%
<b>75</b>	9.2%	1.0%	8.3%	0.1%	6%
<b>80</b>	10.6%	1.7%	9.5%	0.5%	7%
<b>85</b>	12.6%	3.2%	11.5%	1.5%	9%
<b>90</b>	15.7%	5.8%	14.7%	4.1%	11%
<b>95</b>	20.3%	10.8%	19.4%	9.3%	14%
<b>100</b>	26.5%	20.2%	25.7%	18.7%	14%

Rates are applied to the account balance each year to calculate actual income and bonus amounts

# Summary of initial results

56% Proportion drawing the minimum from an account-based pension before opening a Lifetime account

43% Proportion drawing the minimum from an account-based pension after opening a Lifetime account

52% Average allocation to a Lifetime account, with the remainder in an account-based pension

50% Approximate average increase in total retirement income, comprised of:

- higher rates on Lifetime accounts;
- increased propensity to draw above minimum on account-based pensions; and
- additional social security

75% Members selecting one of the deferred options