# Lifecycle Design – To and Through Retirement

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# AGENRA

**BACKGROUND** 

**INVESTMENT HORIZON** 

INVESTMENT DEFAULT DESIGN

**I**MPLICATIONS







# Why do we care?

#### Members

- 80% of people are in their funds' default investment option.
- Earnings are the largest driver of superannuation savings.

#### Regulation

- SIS Act requires that trustees formulate and review regularly the investment strategies for their options.
- Focus of the regulator (APRA MySuper Product Heatmap).



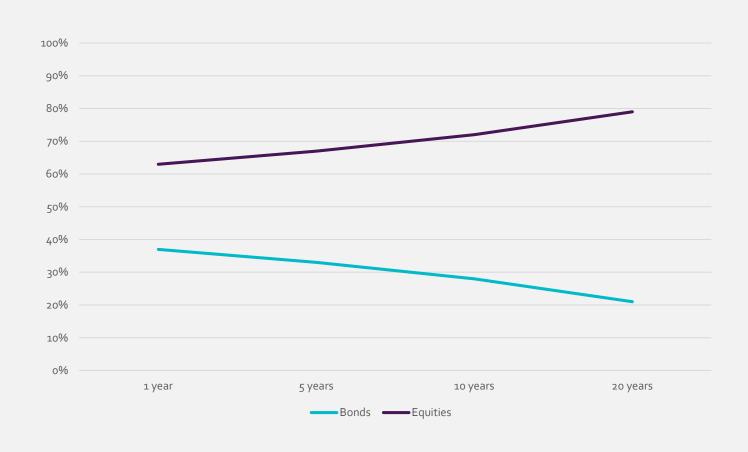
Fortunately current designs are usually good – though they could be **optimised** 







#### Investment horizon and asset allocation





#### Superannuation investment horizon

Pre-retirement

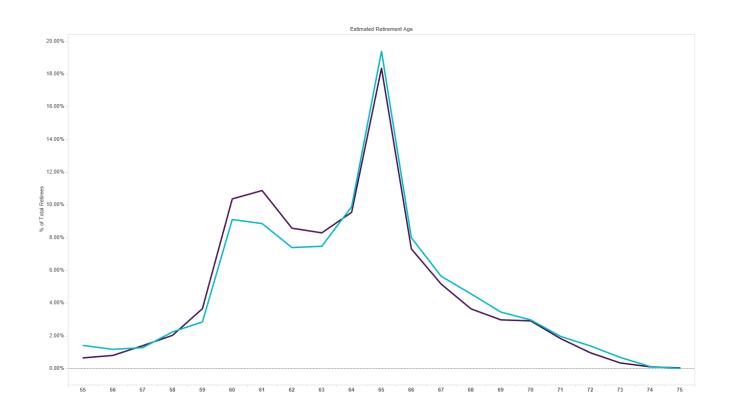
 From the current point until the point the member makes an election to retire



 From the point of retirement until the last of the members balance is expended



#### **Pre-retirement**



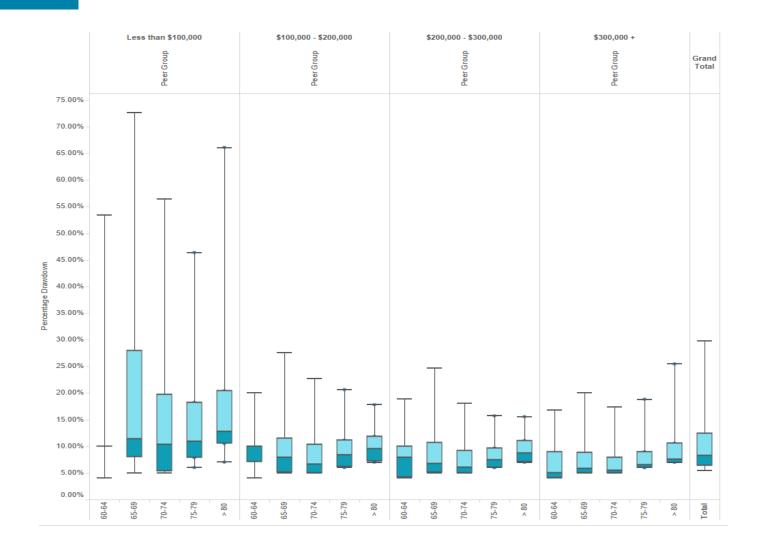


Individuals typically retire between age 55 and age 70.

Wealthy individuals retire earlier than those who are poor.



#### Retirement



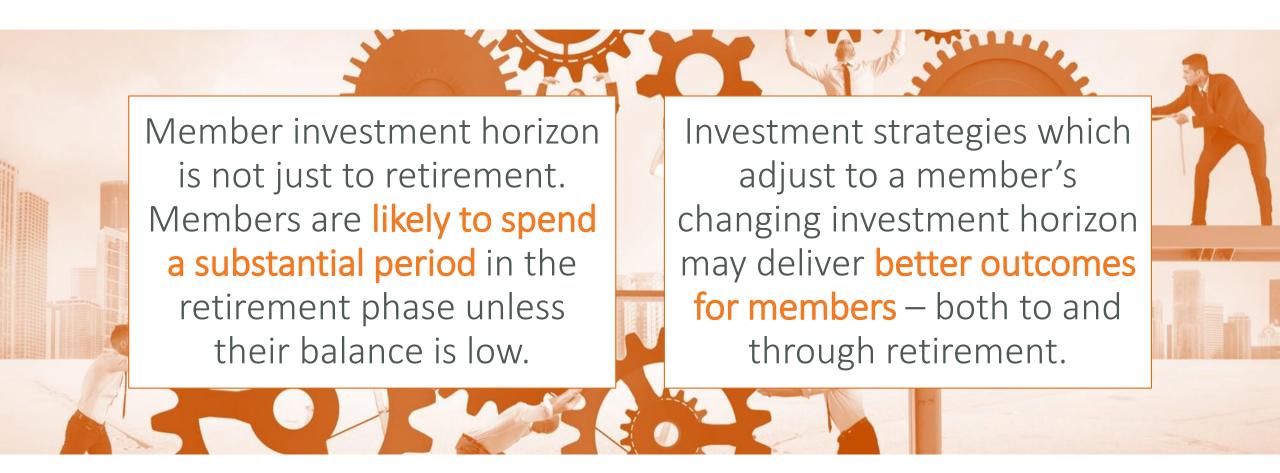


Balances under \$100,000 more likely to draw down high amounts.

Drawdowns typically increase with age.



# **Implications**









# **Approach**

Stochastic Investments

Investment Strategies

Cameo	Age	Starting Balance	Annual Contributions
Cameo 1	30	\$7,900	\$1,500
Cameo 2	30	\$26,900	\$3,800
Cameo 3	30	\$89,900	\$10,550
Cameo 4	60	14,500	\$1,500
Cameo 5	60	\$52,700	\$3,500
Cameo 6	60	\$338,000	\$38,000

Projected Member Experience



# Investment Strategies considered

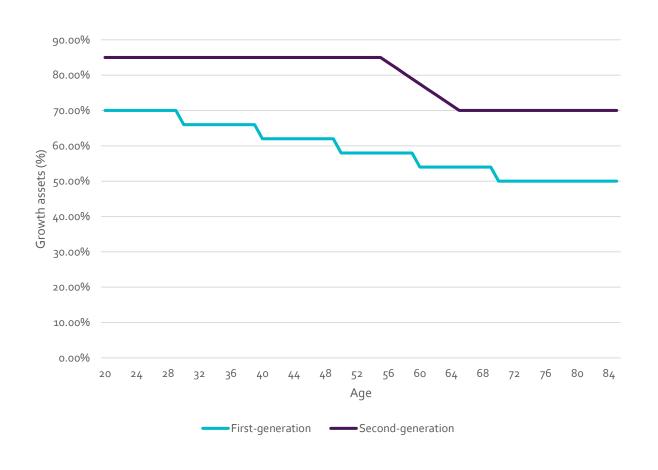
Balanced Strategy (70% Growth)

High Growth Strategy (85% Growth)

First-generation
Lifecycle Strategy
(Defensive and
early de-risking)

Second-generation
Lifecycle Strategy
(Aggressive and
late de-risking)

Two-dimensional Lifecycle strategies





# Income in retirement – age 30 and balance \$26,900

	Single Strategy (70/30)	Single Strategy (85/15)	Lifecyle 1 (Age)	Lifecyle 2 (Age)	Lifecycle (Age and Balance)
			(\$)		
Low (10 <sup>th</sup> Percentile)	\$610,500	\$611,600	\$610,700	\$612,900	\$612,700
Median	\$664,200	\$681,300	\$652,200	\$679,200	\$682,500
High (90 <sup>th</sup> Percentile)	\$772,700	\$851,400	\$717,400	\$829,300	\$870,100



# Percentage change – age 30

	Single Strategy	Lifecyle 1	Lifecyle 2	Lifecycle							
Age 30, Low Balance	(85/15)	(Age)	(Age)	(Age and Balance)							
		(9	/ <sub>6</sub> )								
Low (10 <sup>th</sup> Percentile)	0.1	0.0	0.1	0.2							
Median	1.2	-0.8	0.9	1.1							
High (90 <sup>th</sup> Percentile)	3.3	-2.2	2.9	3.5							
	Single Strategy	Lifecyle 1	Lifecyle 2	Lifecycle							
Age 30, Moderate Balance	(85/15)	(Age)	(Age)	(Age and Balance)							
	(%)										
Low (10 <sup>th</sup> Percentile)	0.2	0.0	0.4	0.4							
Median	2.6	-1.8	2.3	2.8							
High (90 <sup>th</sup> Percentile)	10.2	-7.2	7.3	12.6							
	6' 1 6' '										
	Single Strategy	Lifecyle 1	Lifecyle 2	Lifecycle							
Age 30, High Balance	(85/15)	(Age)	(Age)	(Age and Balance)							
	(%)										
Low (10 <sup>th</sup> Percentile)	1.1	-1.3	0.9	1.0							
Median	9.1	-6.8	4.5	13.1							
High (90 <sup>th</sup> Percentile)	24.1	-22.3	11.9	35.1							



#### Comparative performance – age 30 and balance of \$26,900

High Growth )including
Two-dimensional
Lifecycle) strategies
typically outperform
Balanced strategies

First-generation Lifecycle strategies typically underperform.

High Growth singlesector strategies will typically beat Secondgeneration Lifecycle.

Age 30 / Balance 26.9k	Balanced Strategy (70/30)	Single Strategy (85/15)	Lifecyle 1 (Age)	Lifecyle 2 (Age)	Lifecycle (Age and Balance)	
Balanced Strategy (70/30)	-	8.4%	86.2%	7.4%	8.2%	
Single Strategy (85/15)	91.6%	-	89.6%	72.6%	26.8%	
Lifecyle 1 (Age)	13.8%	10.4%	-	8.8%	8.8%	
Lifecyle 2 (Age)	92.6%	27.4%	91.2%	-	15.4%	
Lifecycle (Age and Balance)	91.8%	73.2%	91.2%	84.6%	-	



# Percentage change – age 60

	Single Strategy	Lifecyle 1	Lifecyle 2	Lifecycle							
Ana Ca Laur Balanca											
Age 6o, Low Balance	(85/15)	(Age)	(Age)	(Age and Balance)							
		(1	%)								
Low (10 <sup>th</sup> Percentile)	-0.1	0.1	0.0	0.0							
Median	0.0	-0.1	0.0	0.0							
High (90 <sup>th</sup> Percentile)	0.2	-0.2	0.1	0.1							
	Single Strategy	Lifecyle 1	Lifecyle 2	Lifecycle							
Age 60, Moderate Balance	(85/15)	(Age)	(Age)	(Age and Balance)							
	(%)										
Low (10 <sup>th</sup> Percentile)	-0.3	0.3	-0.1	-0.1							
Median	0.2	-0.2	0.1	0.1							
High (90 <sup>th</sup> Percentile)	0.8	-0.9	0.2	0.2							
	Circula Christiania	Life and a s	Life and a s	Life mule							
	Single Strategy	Lifecyle 1	Lifecyle 2	Lifecycle							
Age 60, High Balance	(85/15)	(Age)	(Age)	(Age and Balance)							
Low (10 <sup>th</sup> Percentile)	-1.0	1.0	0.1	-1.8							
Median	2.2	-3.6	0.1	2.3							
High (90 <sup>th</sup> Percentile)	3.4	-5.8	0.3	4-4							



#### Comparative performance – age 60 and balance of \$52,700

High Growth strategies will typically outperform lower growth strategies

Second-generation Lifecycle will usually outperform Firstgeneration and Balanced

Two-dimensional Lifecycle will typically beat Secondgeneration.

	Balanced Strategy (70/30)	Single Strategy (85/15)	Lifecyle 1 (Age)	Lifecyle 2 (Age)	Lifecycle (Age and Balance)
Balanced Strategy (70/30)	-	29.2%	71.0%	27.6%	27.6%
Single Strategy (85/15)	70.8%	-	71.2%	69.6%	69.6%
Lifecyle 1 (Age)	29.0%	28.8%	-	28.2%	28.0%
Lifecyle 2 (Age)	72.4%	30.4%	71.8%	-	28.9%
Lifecycle (Age and Balance)	72.4%	30.4%	72.0%	71.1%	-



#### Inference

High allocations to growth assets is **not inherently a poor strategy**, even at advanced ages.

Defensive Lifecycle
investments will typically
underperform unless
investment returns are poor
and the members are
approaching or actively retired.

Two-dimensional Lifecycle strategies can **provide excess return** while still being able to control risk.

IMPORTANTLY — IT IS UNLIKELY THAT THERE IS A SINGLE SOLUTION THAT MEETS THE NEEDS OF ALL FUNDS FOR ALL MEMBER COHORTS.







#### Next **steps**

We consider that it is in **members' best interest** that funds review the:





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# Appendix A – Two-dimensional Lifecycle

												A	ccount Balar	ice (\$)										
Age	50,000 and under	52,500	55,000	57,500	60,000	62,500	65,000	67,500	70,000	80,000	90,000	100,000	110,000	120,000	130,000	140,000	150,000	160,000	170,000	180,000	190,000	200,000	210,000	220,000 and over
													Growth (9	6)										
40 and under	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
41	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
42	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
43	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
44	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
45	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
46	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
47	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
48	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
49	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
50	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
51	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
52	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	90.0
53	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	89.0	90.0
54	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	87.0	88.0	89.0	90.0
55	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	86.0	87.0	88.0	89.0	90.0
56	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	84.0	85.0	86.0	87.0	88.0	89.0	90.0
57	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	90.0
58	80.5	80.5	80.5	80.5	80.5	80.5	80.5	80.5	80.5	80.5	80.5	80.5	80.5	80.5	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	90.0
59	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	90.0
60	77.5	77.5	77.5	77.5	77.5	77.5	77.5	77.5	77.5	77.5	77.5	78.0	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	90.0
61	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	77.0	78.0	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	90.0
62	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5	75.0	76.0	77.0	78.0	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	90.0
63	73.0	73.0	73.0	73.0	73.0	73.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	90.0
64	71.5	71.5	71.5	71.5	71.5	71.5	71.5	74.0	75.0	76.0	77.0	78.0	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	90.0
65	70.0	70.0	70.0	70.0	70.0	70.0	70.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	90.0
66	70.0	70.0	70.0	70.0	70.0	70.0	70.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	90.0
67	70.0	70.0	70.0	70.0	70.0	70.0	70.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	90.0
68	70.0	70.0	70.0	70.0	70.0	70.0	70.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	90.0
69	70.0	70.0	70.0	70.0	70.0	70.0	70.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	90.0
and over	70.0	70.0	70.0	70.0	70.0	70.0	70.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	90.0

