

Rules of Thumb: Helping retirees to decumulate

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October 2017





Agenda

- Retirement income in NZ
- The RIIG
- Rules of Thumb in concept
- Modelling and testing
- Making a success of the Rules



Retirement income in NZ

- Near-universal public pension
- Corporate annuity market 'extinct'
- DB in rapid decline
- Property and term deposits
- KiwiSaver (2007) to the rescue?

KiwiSaverTM
Poua he Oranga

The RIIG



Key messages from 2015 paper*



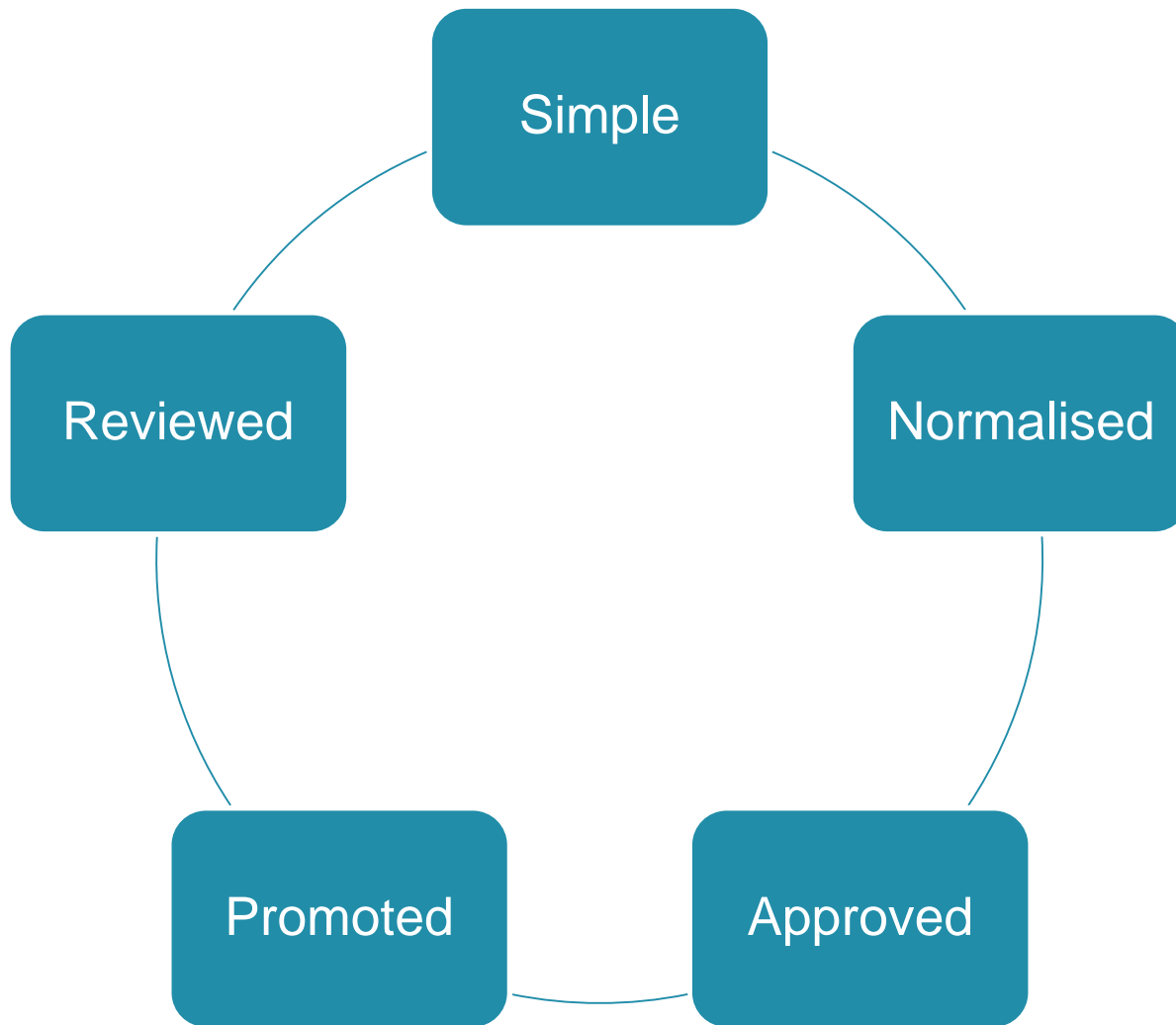
$$e_x, \sigma, \partial P / \partial t$$



“Complexity is your enemy. Any fool can make something complicated. It is hard to make something **simple.**”



Criteria for Rules of Thumb



What we did



- Tested 6 rules, discarded 2
- General steer for a typical KiwiSaver
- Assumptions for longevity and investment
- Model run for sample people → pros and cons
- 1,000 simulation runs for each case

Rules modelled



1. 6% nominal
2. Inflated 4%
3. Fixed date (straight line)
4. Life expectancy

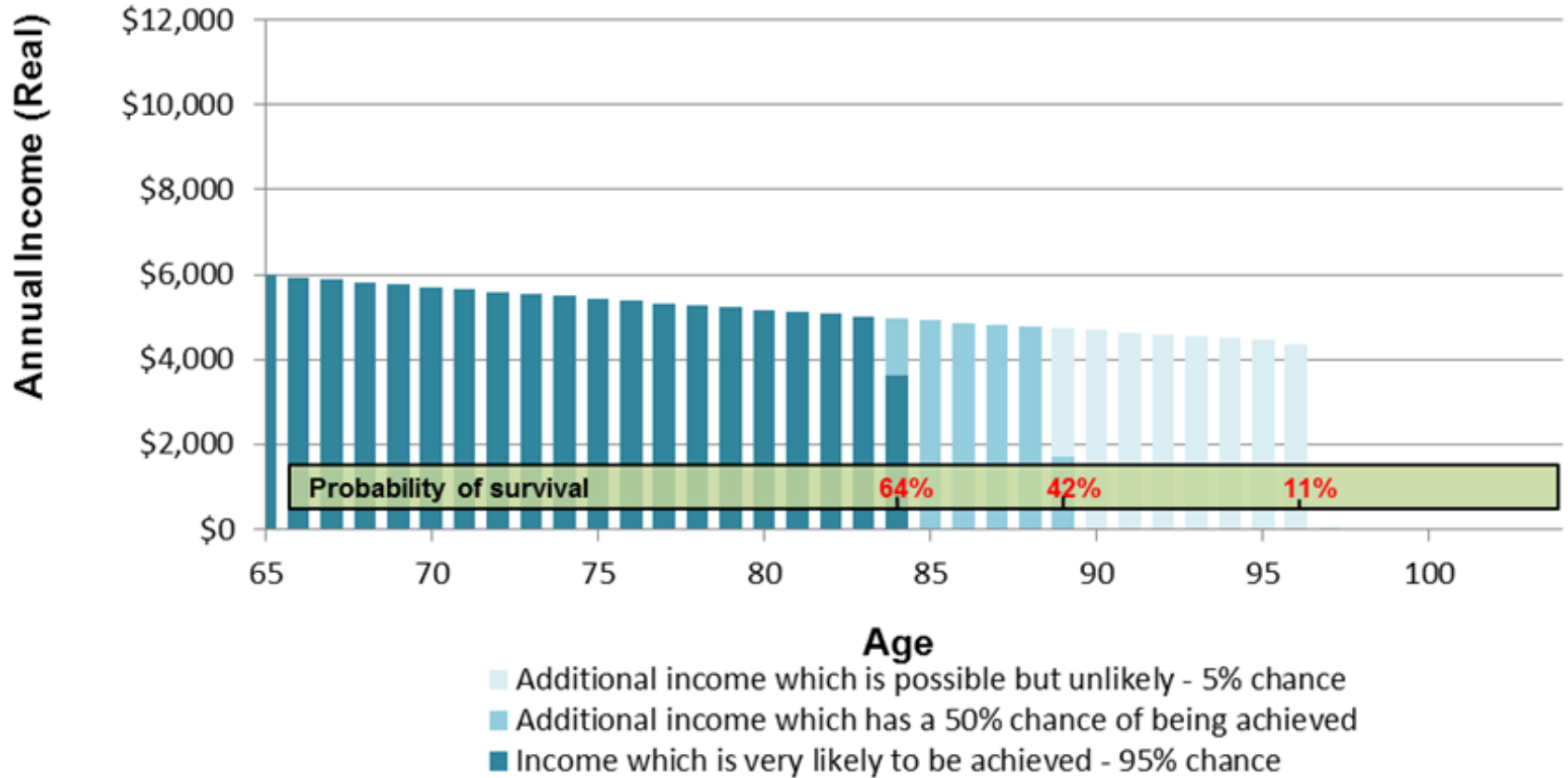


Modelling base assumptions

- Lump sum of \$100,000 drawn down from age 65
- Investment returns normally distributed
- Returns net of tax and management fees
- Future inflation of 1% (deterministic)
- Mortality rates from Statistics NZ cohort life tables (updated September 2014) and 2014 (base)

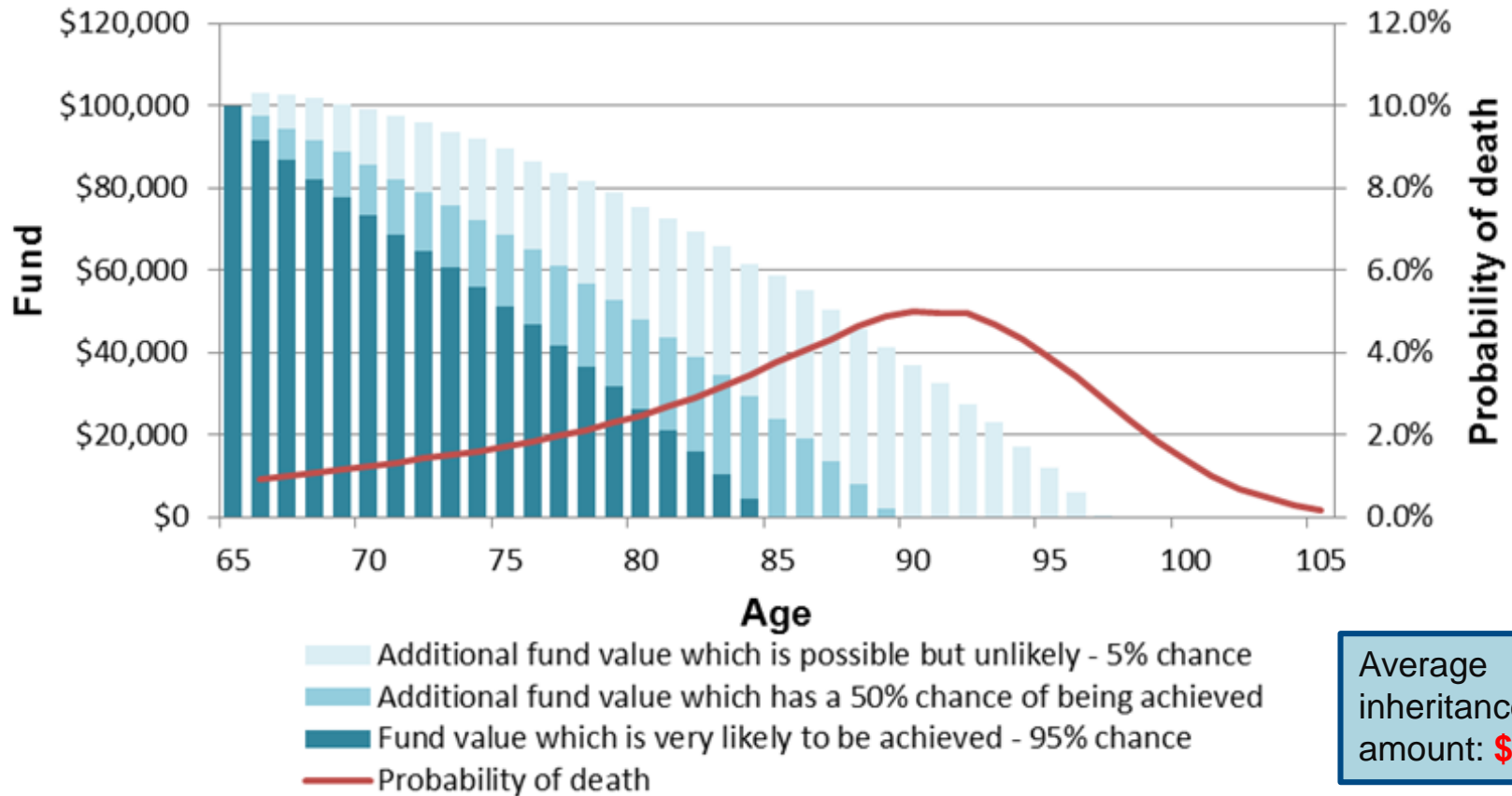
6% rule

Income and probability of survival. 6% rule, conservative profile, male, age 65 start



6% rule

Fund value and probability of death.
6% rule, conservative profile, male, age 65 start



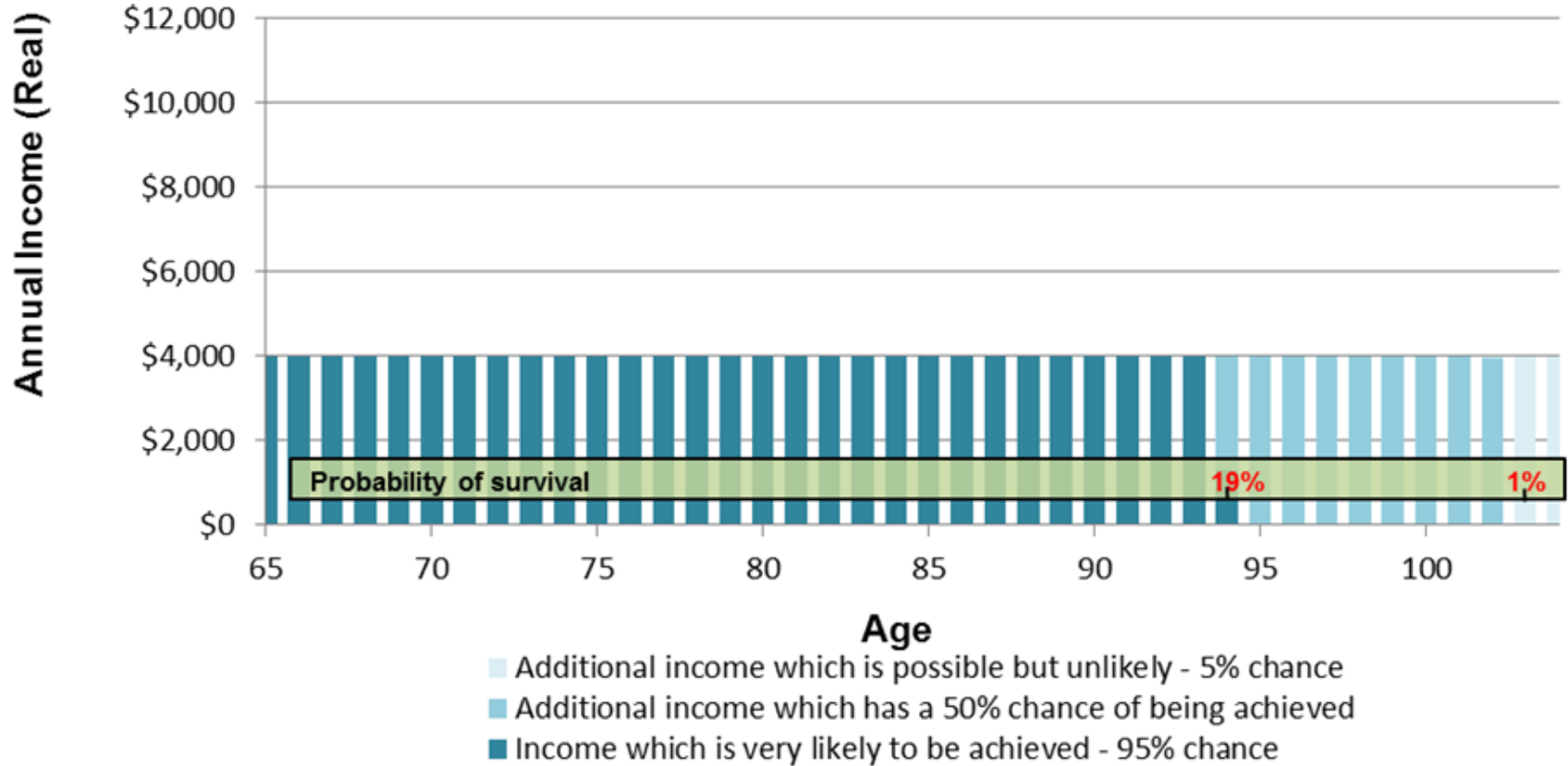
Average inheritance amount: **\$5,514**

Probability of income being exhausted by:

Age 85	Age 90	Age 95	Age 100
6.3%	57.6%	90.9%	97.9%

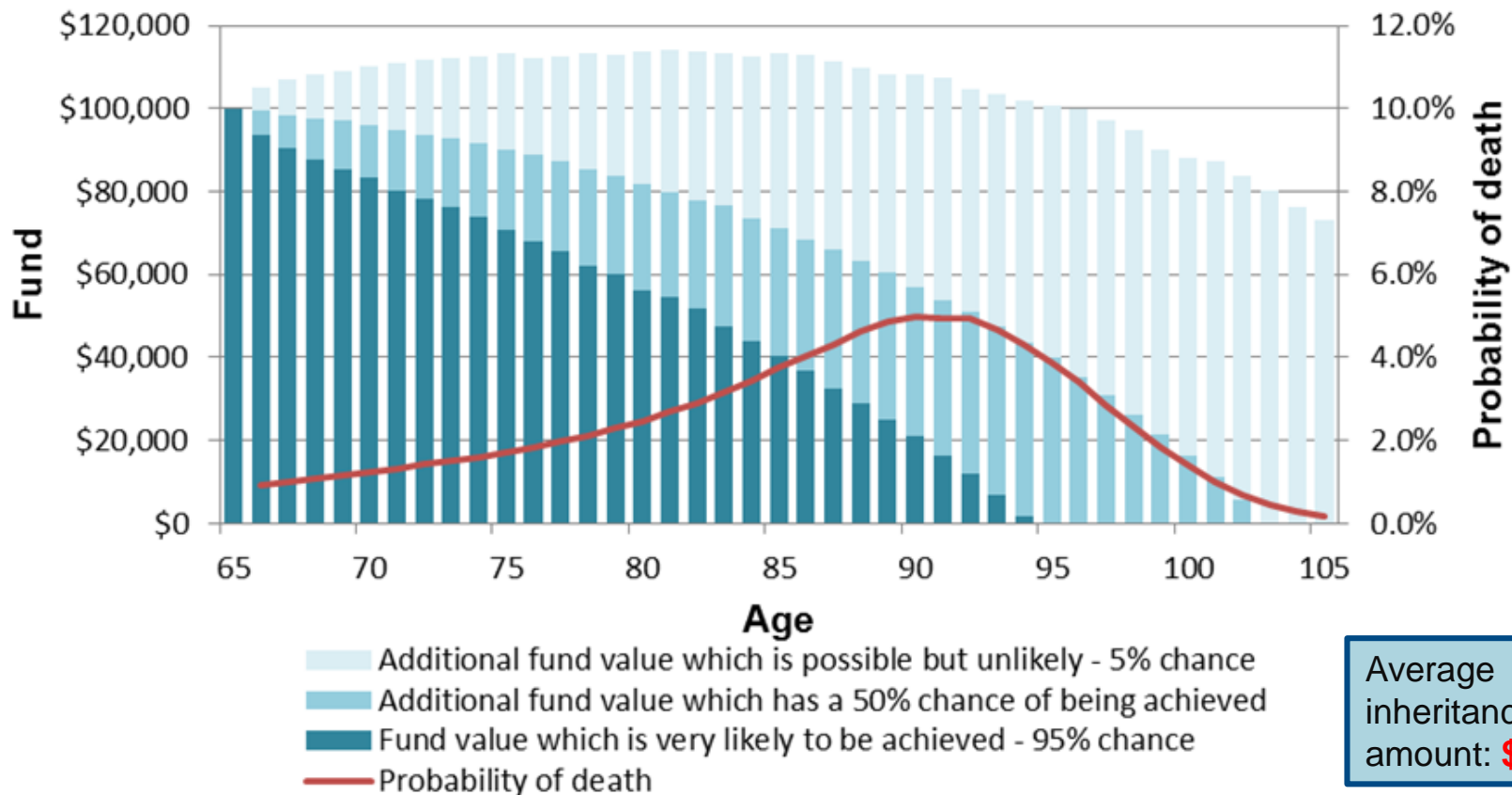
Inflated 4% rule

Income and probability of survival. 4% + inflation rule, conservative profile, male, age 65 start



Inflated 4% rule

Fund value and probability of death.
4% + inflation rule, conservative profile, male, age 65 start

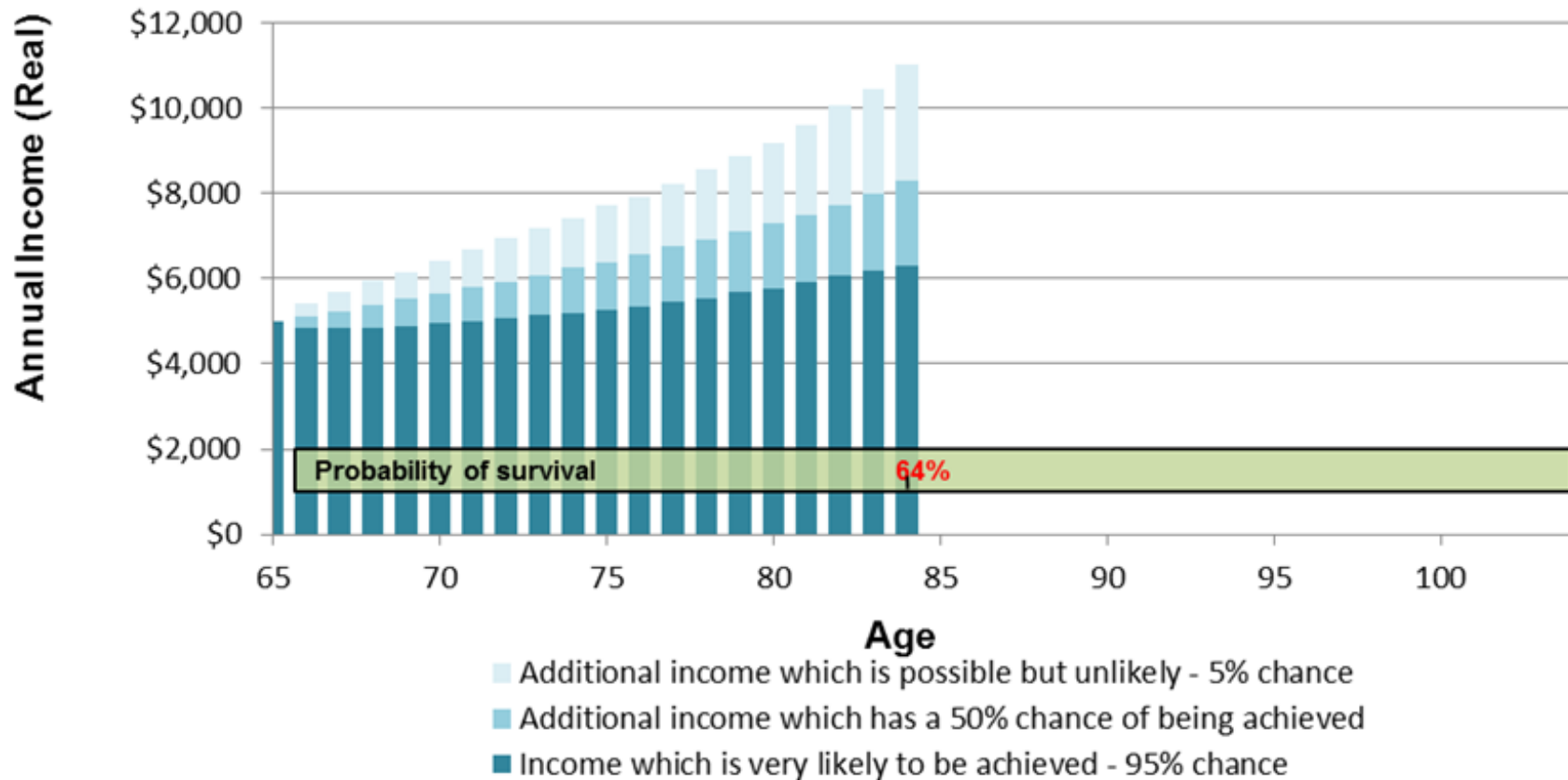


Probability of income being exhausted by:

Age 85	Age 90	Age 95	Age 100
0.0%	0.2%	6.8%	32.5%

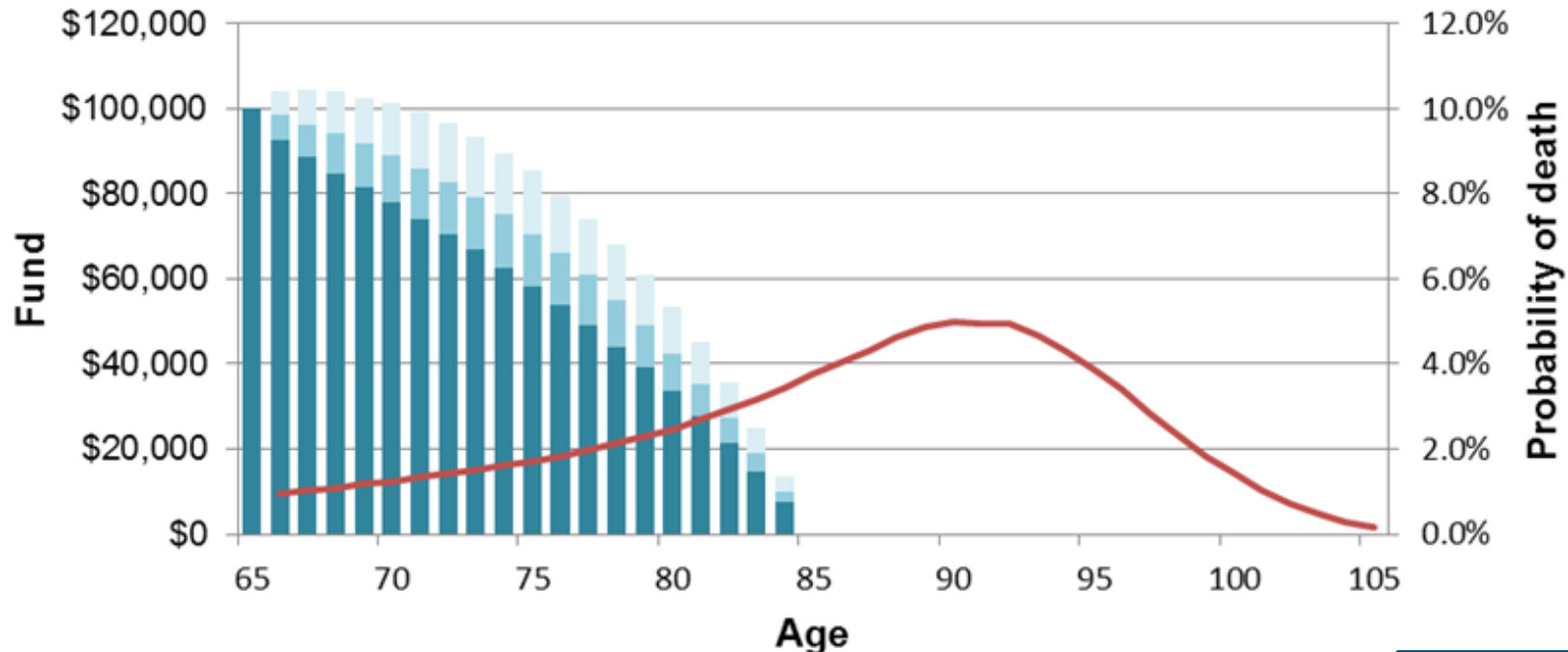
Fixed Date Rule – 20 years

**Income and probability of survival.
Straight line to age 85 rule, conservative profile, male, age 65 start**



Fixed Date Rule – 20 years

Fund value and probability of death.
Straight line to age 85 rule, conservative profile, male, age 65 start

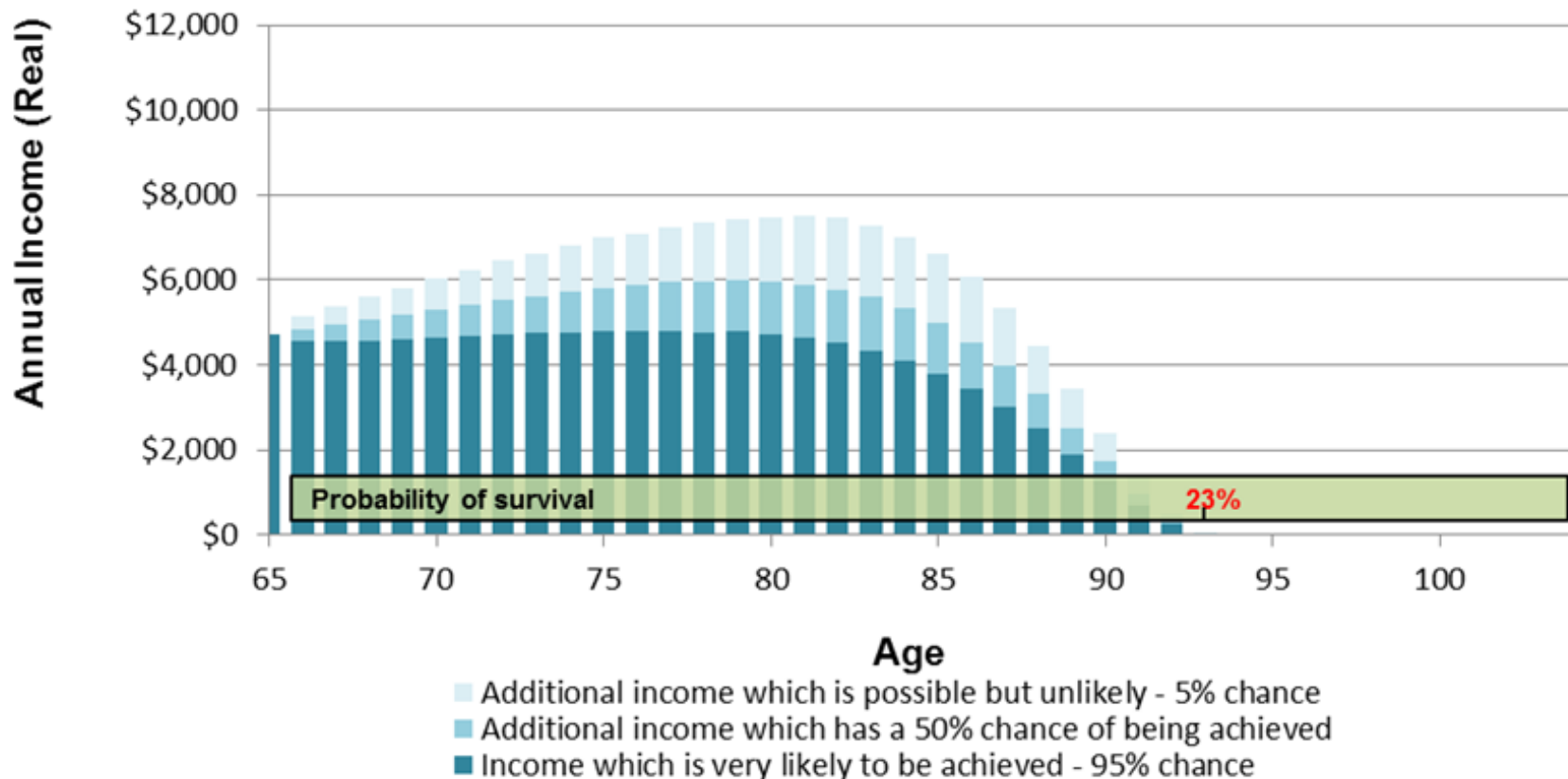


- Additional fund value which is possible but unlikely - 5% chance
- Additional fund value which has a 50% chance of being achieved
- Fund value which is very likely to be achieved - 95% chance
- Probability of death

Average inheritance amount: **\$4,224**

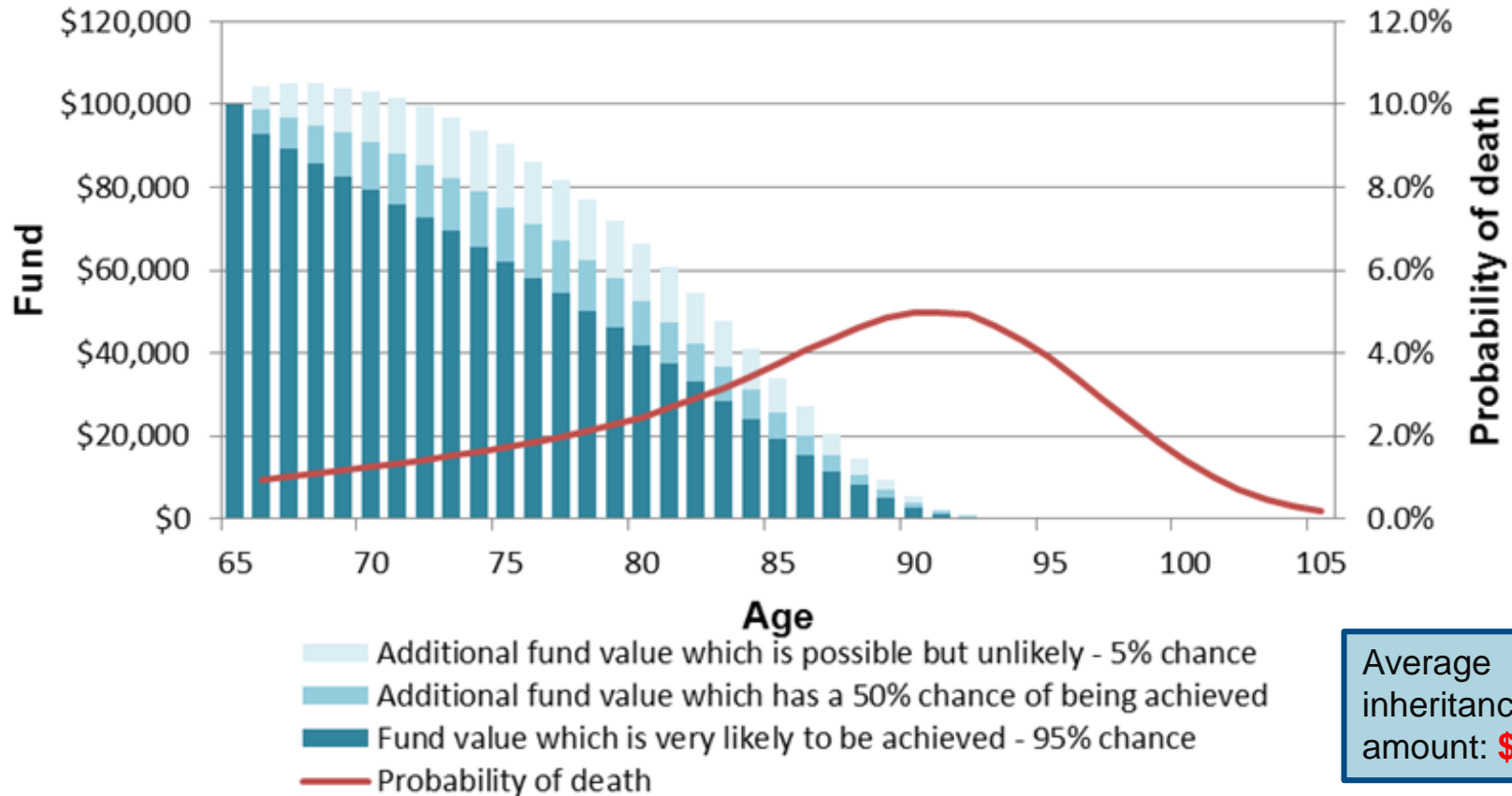
Life Expectancy Rule

Income and probability of survival.
Life expectancy rule, conservative profile, male, age 65 start



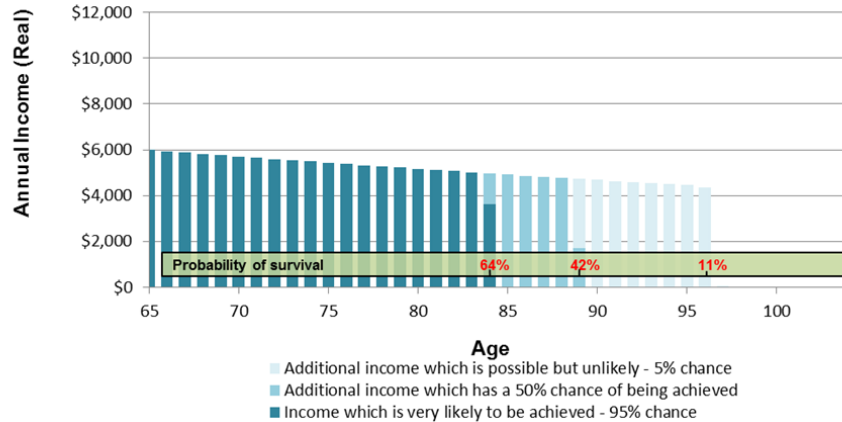
Life Expectancy Rule

Fund value and probability of death.
Life expectancy rule, conservative profile, male, age 65 start

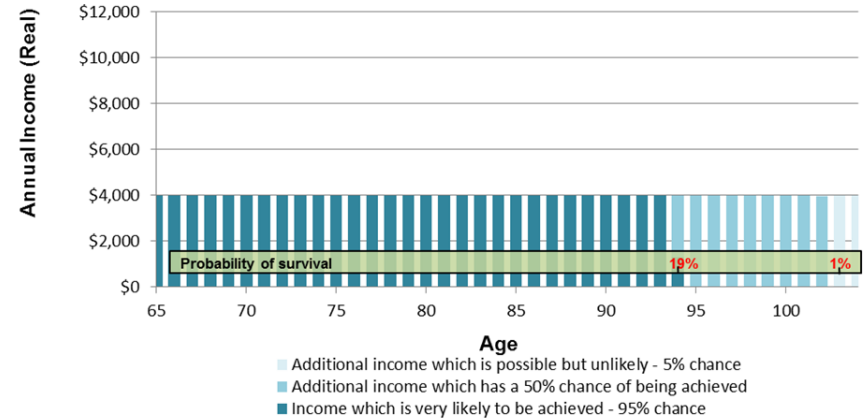


Comparison of rules - income

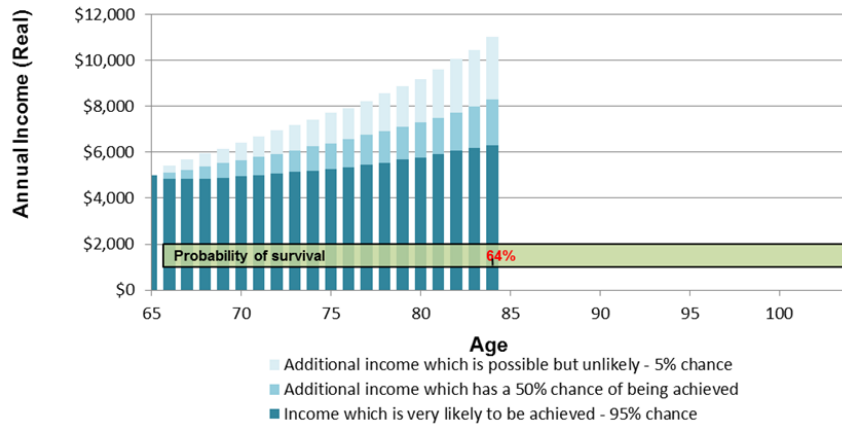
Income and probability of survival.
6% rule, conservative profile, male, age 65 start



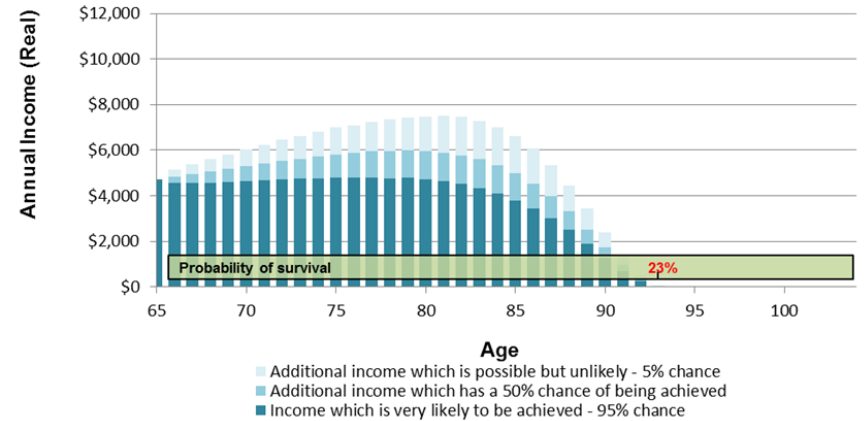
Income and probability of survival.
4% + inflation rule, conservative profile, male, age 65 start



Income and probability of survival.
Straight line to age 85 rule, conservative profile, male, age 65 start

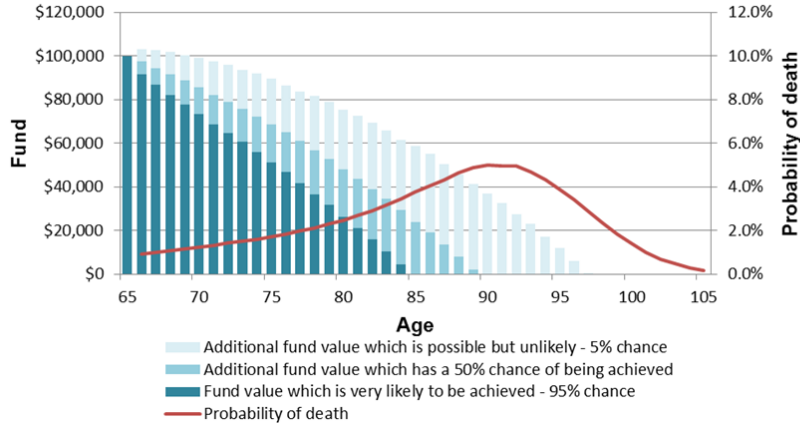


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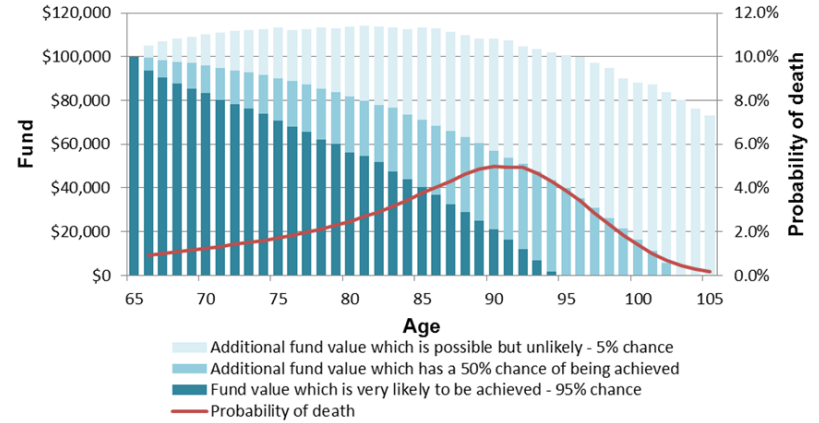


Comparison of rules – fund value

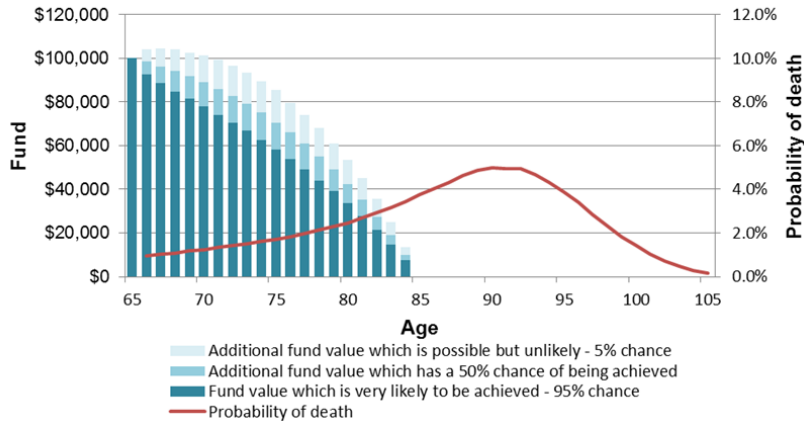
Fund value and probability of death.
6% rule, conservative profile, male, age 65 start



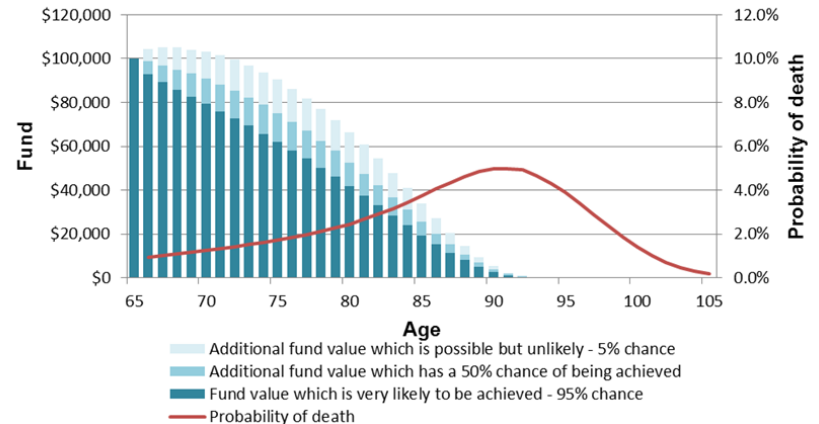
Fund value and probability of death.
4% + inflation rule, conservative profile, male, age 65 start



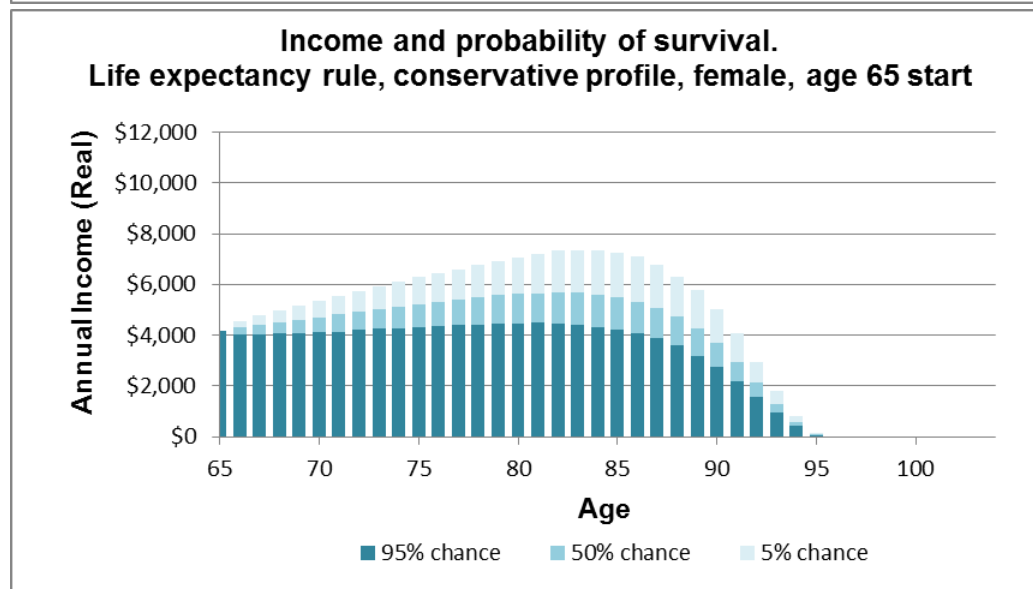
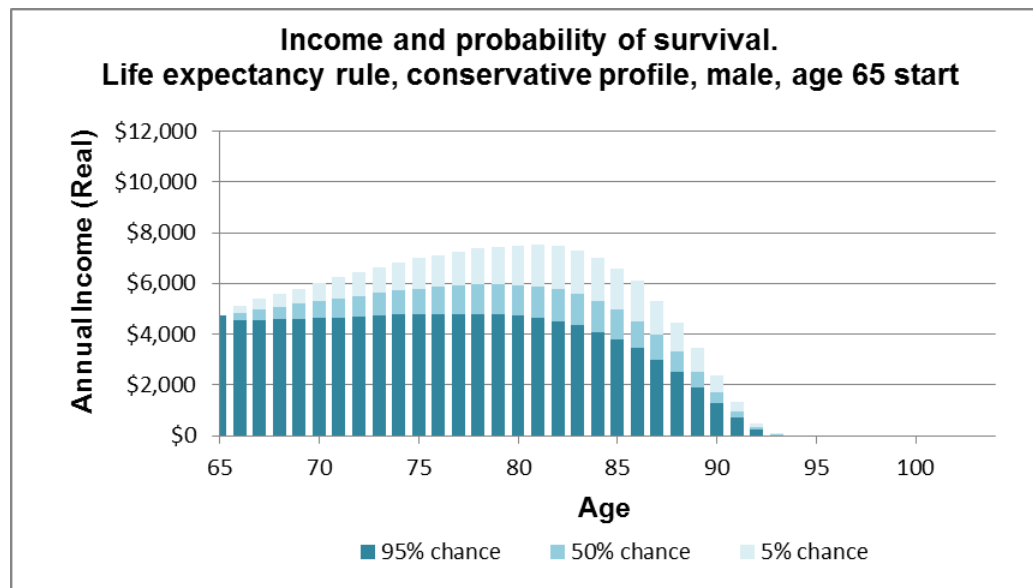
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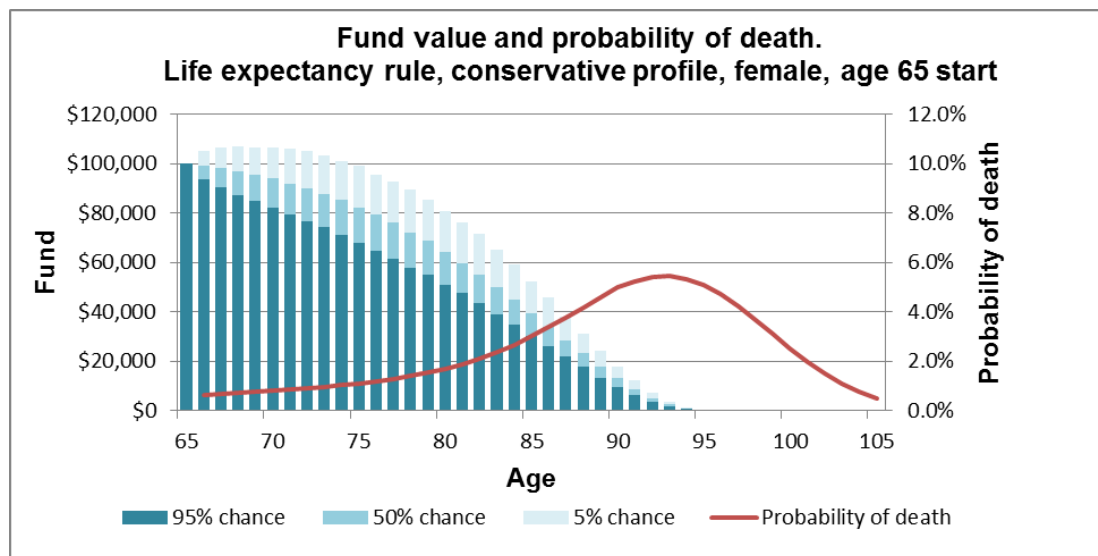
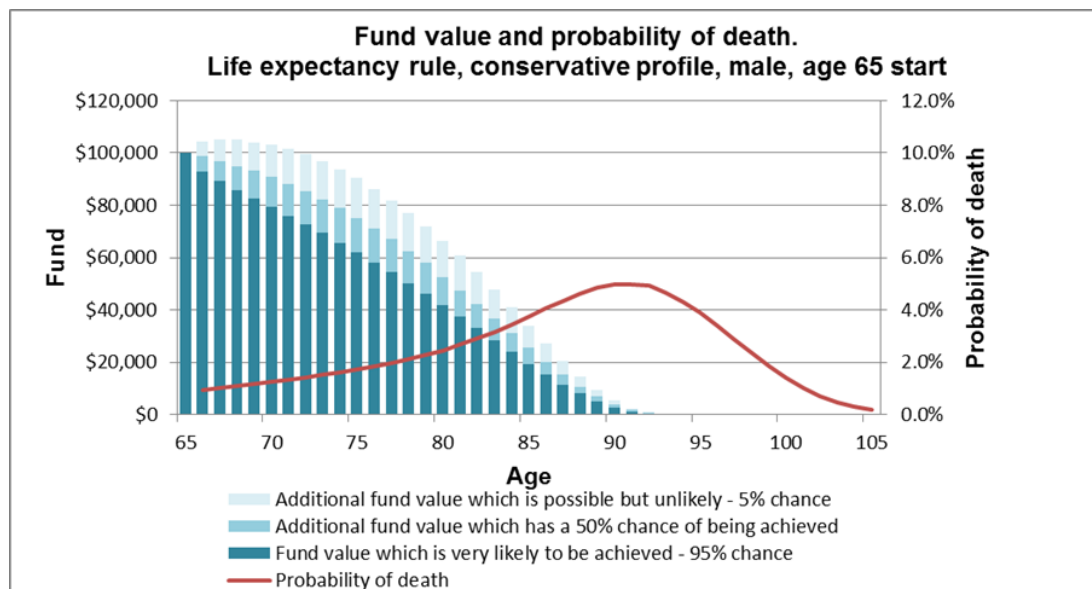
Fund value and probability of death.
Life expectancy rule, conservative profile, male, age 65 start



Comparison of rules – females



Comparison of rules – females



Pros & cons of each rule

Rule	Suitable for	Pros	Cons
6%	'Front-loaders'	<ul style="list-style-type: none"> • Very simple • Known, regular income 	<ul style="list-style-type: none"> • No inflation protection • Risk of fund running out within lifetime
Inflated 4%	'Bequeathers'	<ul style="list-style-type: none"> • Likely to last lifetime • Inflation protection • Inheritance likely 	<ul style="list-style-type: none"> • Lower income
Fixed Date	'Spare tail'	<ul style="list-style-type: none"> • Income for known selected period 	<ul style="list-style-type: none"> • Variable Income • Inheritance 0 / low • Annual re-calculation
e_x	'Eaters'	<ul style="list-style-type: none"> • Unlikely to run out of money • Income for whole of life. 	<ul style="list-style-type: none"> • Inheritance low • Income variable, low in later years • Re-calculation complicated



Criteria for success

“A simple principle, generally reliable in the absence of full advice that provides a broad steer on how to achieve a financial goal.”

- Addresses a specific question
- Better course than not following

But:

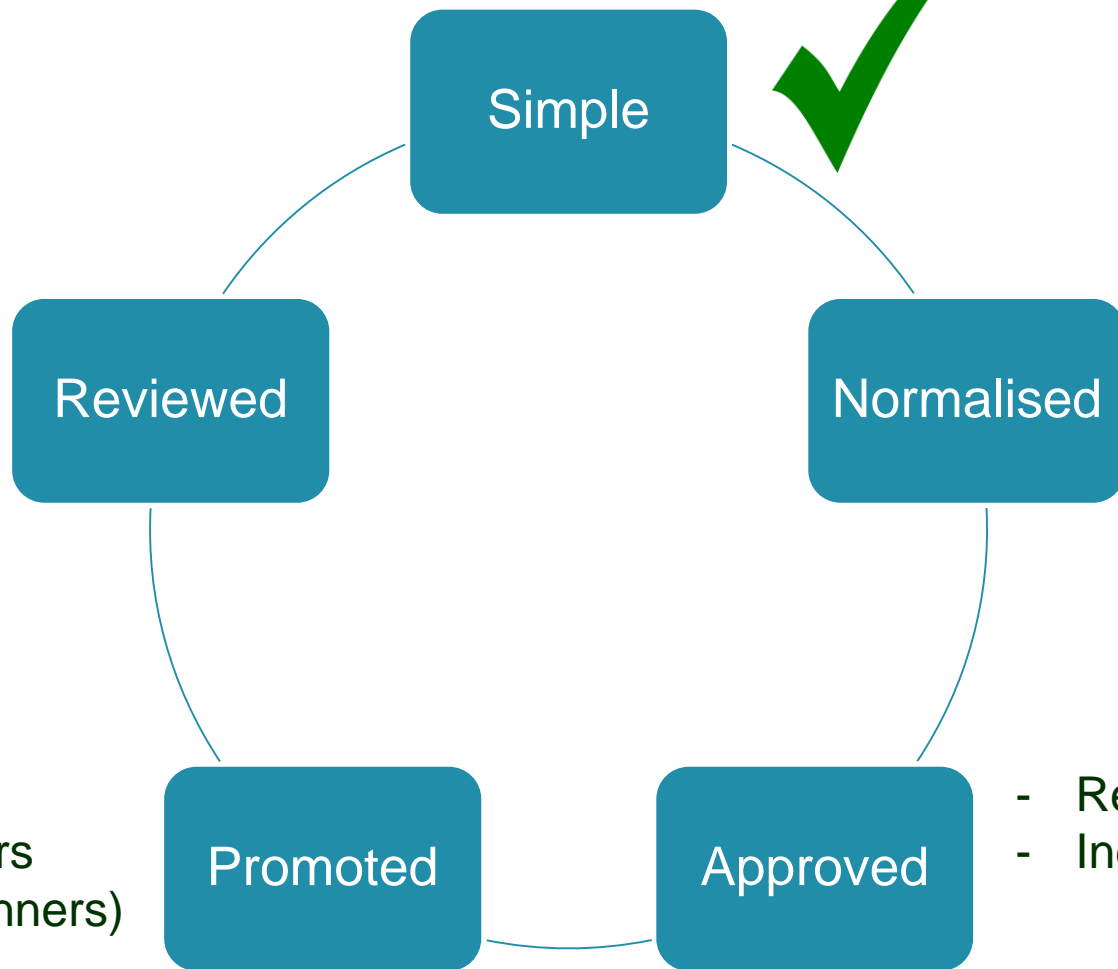
- Not perfect!
- Not a replacement for advice
- Not ‘set and forget’; review needed



Criteria for success

- Most RoT are for saving / budgeting
- Useful for decumulation too because:
 - Most retirees have modest savings
 - Many will not seek advice
 - Neglected area
 - In-line with trend to simplicity / accessibility

What success looks like?



- FMA
- CFFC
- Actuaries!

- Single set
- Widely & consistently referenced

- CFFC
- Industry actors (financial planners)
- Robo-advice

- Regulator (FMA)
- Industry associations

RIIG Engagement



**Commission for
Financial Capability**



FMA

FINANCIAL MARKETS AUTHORITY

TE MANA TATAI HOKOHOKO - NEW ZEALAND



**MASSEY
UNIVERSITY**



RoT in Summary

- Public interest
- ‘Guidance’, not advice, nor product
- Targeted
- User-friendly
- Engagement matters!





Want more detail?

<https://actuaries.org.nz/resources-and-publications/reports/>

We welcome feedback!

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