



# Natural Selection

## Financial Services Forum

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# Demystifying Drawdowns for Retirees

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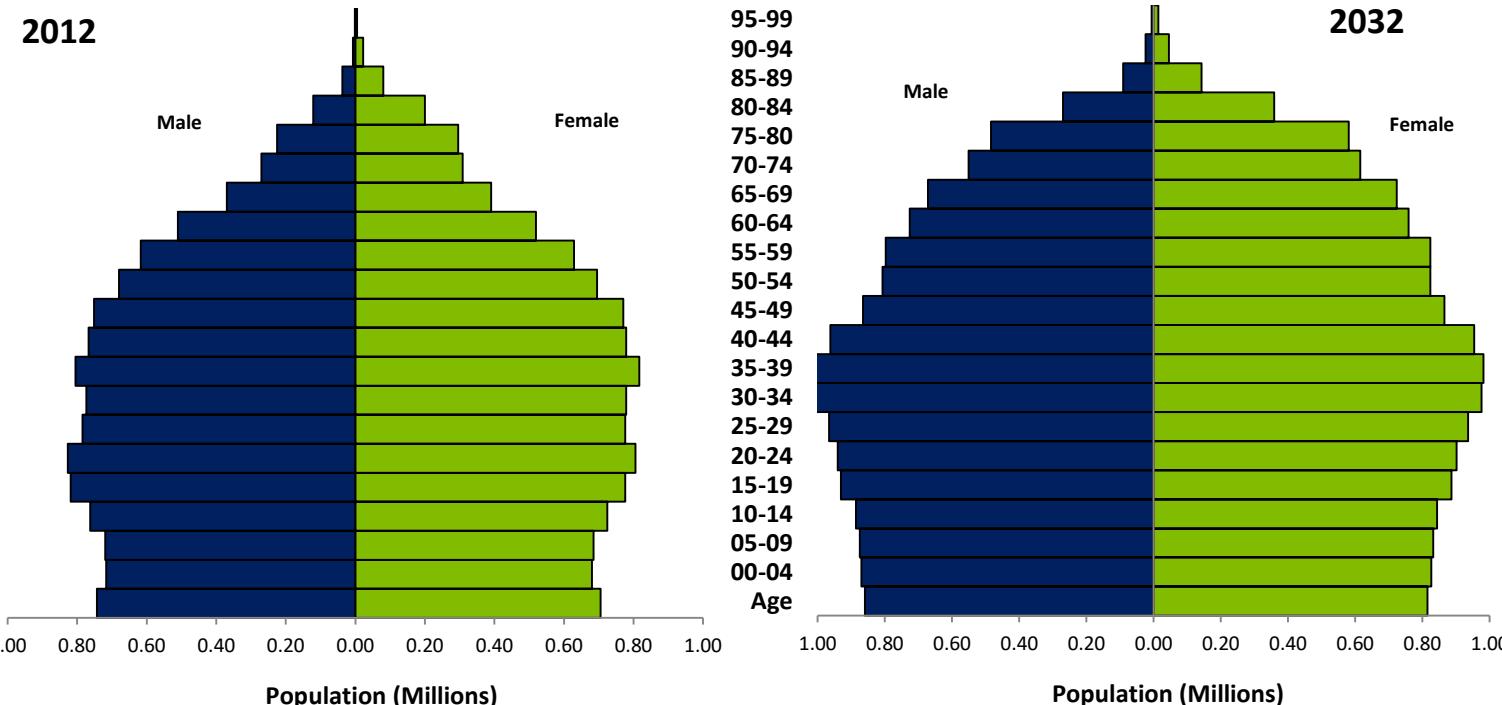
# Agenda

- Background
- Core motivations and needs in retirement
- Guidance around spending
- NZ Retirement Income Interest Group paper
- General considerations
- Criteria for drawdowns
- An idea

# Background

- Objective of super is to provide **income** in retirement
- But Australia is a **lump sum, defined contribution** environment
- ABPs dominate retirement products
  - In due course CIPRs/MyRetirement will become more important (budget covenant) & address part of the issue
- Retirees may not be financially literate yet only a minority seek advice
  - How should a retiree invest his or her ABP?
  - **How much can the retiree(s) afford to spend?**
  - SIS minimum provides some guidance – but a blunt tool
- How can trustees support decisions about drawdown?

# A growing need for retirement solutions

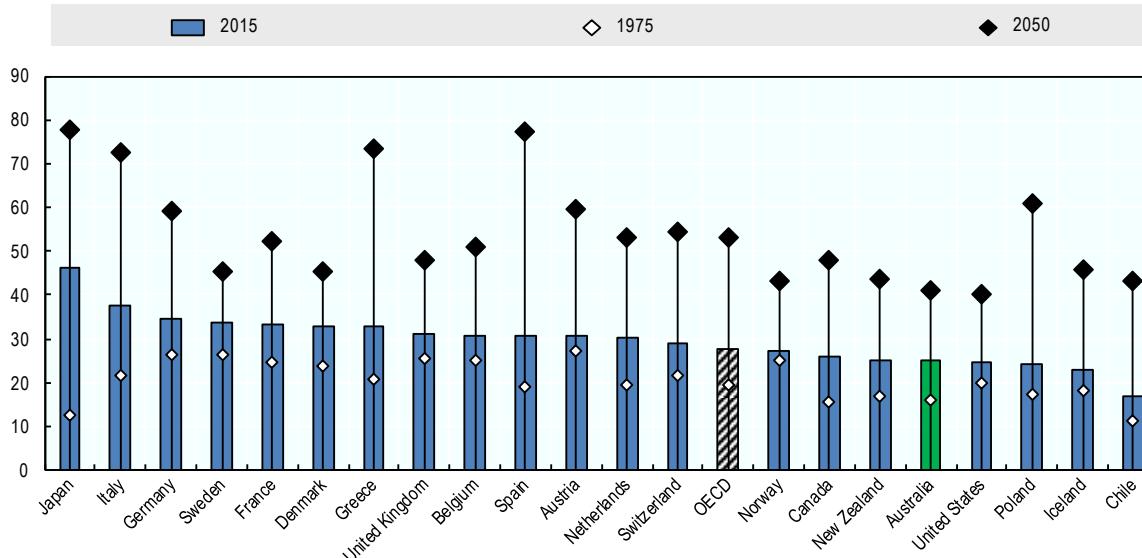


Source: ABS Population Projections – Series B

# Old-age dependency ratio will almost double in the next 35 years

Figure 1.1. The old-age dependency ratio will almost double in the next 35 years on average

Number of people older than 65 years per 100 people of working age (20-64), 1975-2050



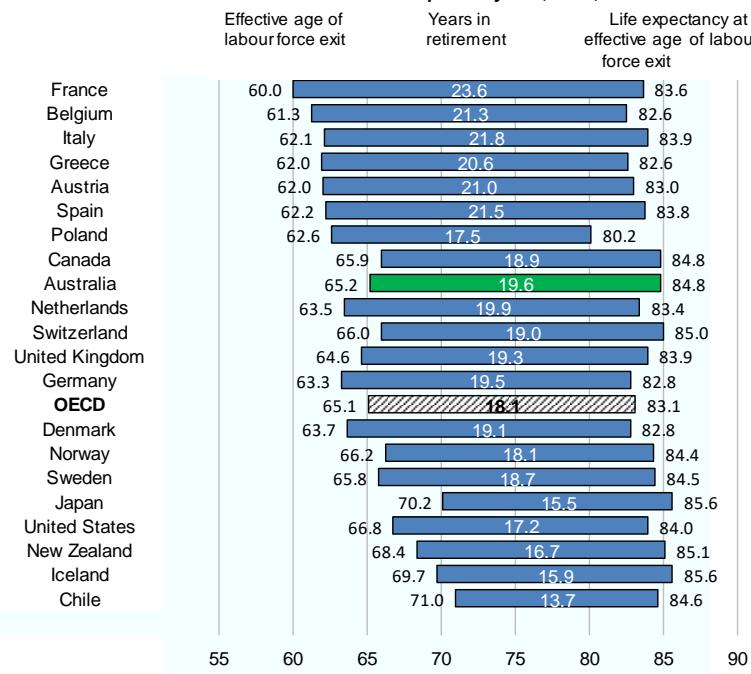
Source: OECD 'Pensions at a Glance 2017'

# Expected years in retirement (2016)

Panel A. Expected years, women, 2016



Panel B. Expected years, men, 2016



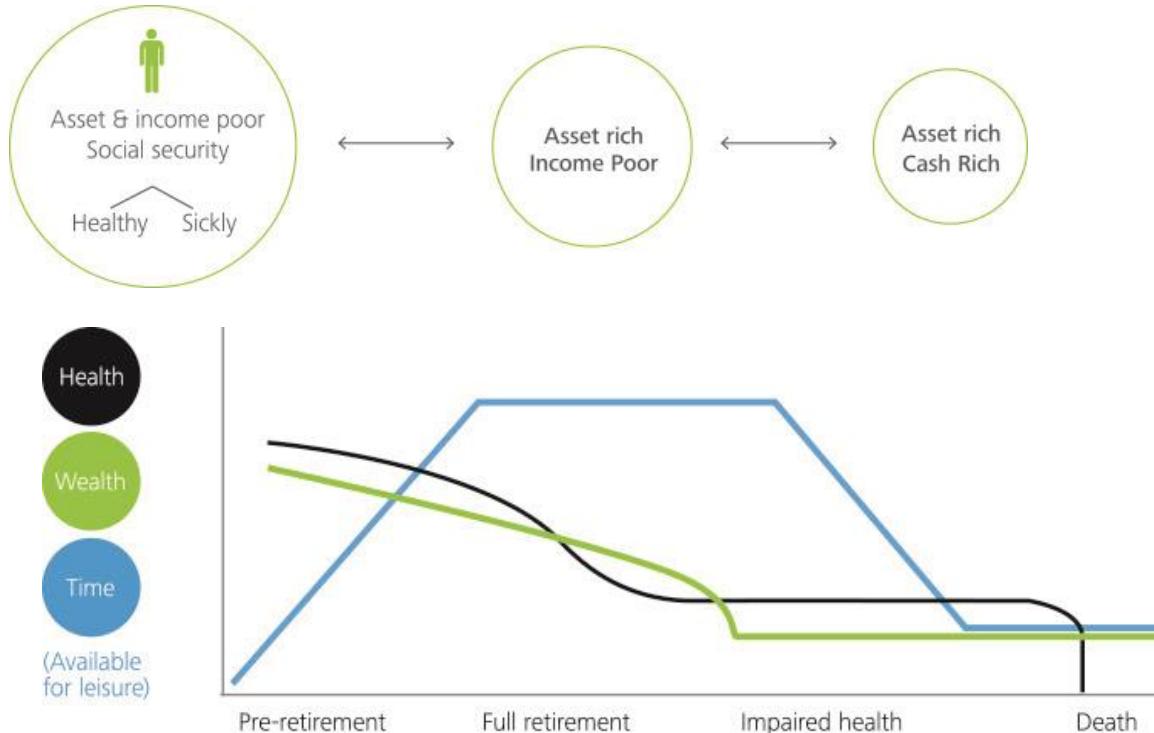
Note: Effective retirement age shown is for five year period 2011-16. Pensionable age is shown for 2016.

Source: OECD estimates based on the results of national labour force surveys and the European Union Labour Force Survey. Life expectancy estimates are calculated from United Nations Population Prospects: 2017 Revision.

# A variety of drivers leading to changes in consumer behaviour



# A mixture of very different needs for different consumers at different stages of retirement



*"While we found that High Asset consumers were more likely to be comfortable about retirement than Low Asset consumers (68 percent versus 41 percent), many consumers in both asset classes were worried about retirement. More often than not, the level of retirement preparedness was found to be a stronger indicator of consumer attitudes and behavior than relative asset level."*

*"Mining the Retirement Market"*  
Deloitte US

# There are some common needs to consider

- Products and services that are designed to speak to core motivations create stickier experiences, are more stable in demand and require less customisation in delivery



## Health

- Do I have specific illnesses or care requirements?
- What are my forecasted annual health costs?
- Am I active in preventative health management?
- Is aged care in my current plans?



## Wealth

- Are my retirement savings adequate?
- How dependent will I be on a pension?
- Have I optimised my investment portfolio?
- What role will my property/s play?
- Will I need money before my super is available?



## Happiness

- How do I want to spend my retirement?
- How do I explore new hobbies and experiences as I change life stages?

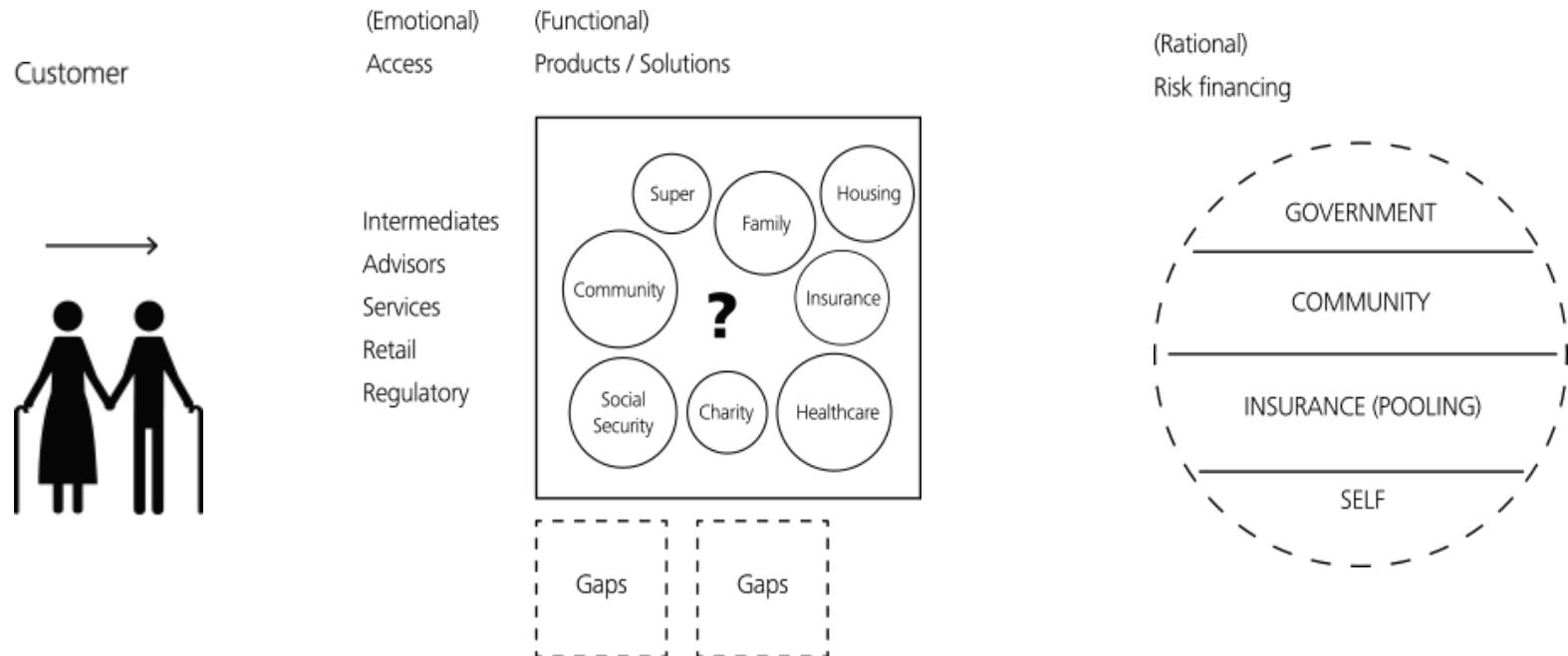


## Legacy

- Do I have dependents, parents or siblings I want to care for?
- What do I want to be remembered for?
- How do I connect with my community now that I am not working?

# No ‘one size fits all’

- A range of sources for financial and other solutions



## Drawdown “rules of thumb” from NZ<sup>1</sup>

Rule of Thumb	Critique
6% rule: 6% of $F(t)$	No recognition of asset allocation; no recognition of age; volatile
4% rule: 4% of $F(0) * CPI(t) / CPI(0)$	Stable but runs risk of running out of funds OR significant under-spending
Fixed date rule: $1/(N-t) * F(t)$	Assets expire after N years; volatile
Life expectancy rule: $F(t)/e(x+t)$	No recognition of interest earnings; volatile

<sup>1</sup>“Decumulation options in the NZ market: how rules of thumb can help”, Christine Ormrod & Retirement Income Interest Group, November 2016.

# Considerations (situation of client)

- Client attitude to consider some reduction in spending as age increases
- How much spending flexibility (wants vs needs)
- Drawdown rate not an issue for clients who live off real investment return
- Time preferences of individuals: more spending now, or later
- Allow for demographic and financial circumstances of client including intended bequests, gifts, inheritances, one-off expenses
- Consider aged care needs (RAD/DAP)

# Considerations (assumptions for calculations)

- How will client invest?
  - More aggressive asset allocation → higher return (& risk)
- Need to assess likely real investment return
- Allow for assumed mortality improvements
- To what survival percentile should the client be assumed to survive?
- How should the client address longevity risk?
- Should an immediate or deferred annuity be part of the plan?

# Considerations (complexity of means testing)

- Targeting stable real spending is difficult for those with assets within the asset testing range (or just above)
  - Ignoring the age pension produces significant increases in total income as assets diminish
  - However it is difficult to predict the extent to which this will happen & hence allow for future age pension entitlements
- How to respond to age pension means testing incentives
  - EMTRs are very high in certain asset ranges
  - Strong incentives to adopt strategies to maximise age pension entitlement

# Possible Approaches

- **Academic approach:** optimise the PV of expected future utility from consumption expenditure
  - Requires a utility curve – would be necessary to ensure that these curves could be robustly and stably estimated
- **Stochastic approach:** for example, “what expenditure can I sustain in real terms, with 90% probability?”
  - Take probabilistic approach to investment returns, survival, possibly health status or aged care needs
- **Deterministic approach:** use an explicit formula based on “central estimate” assumptions for each relevant variable
- Update calculated drawdown regularly (control cycle)

# Smoothing the more volatile approaches

- Spending will be volatile if proportional to beginning of year assets unless constrained
- One possible constraint: smooth asset values
- OR adopt a rule limiting real spending increases or decreases
  - $\text{Spend}(t) = F(t)/a(x+t,r)$
  - Subject to  $0.95 \leq \text{Spend}(t) \leq 1.05$
  - Where  $F(t)$ =balance of funds at beginning of year  $t$
  - $a(x+t,r)$ = annuity factor for retiree originally aged  $x$ , after  $t$  years, at real interest rate  $r$
  - $\text{Spend}(t)$ =permissible real expenditure in year  $t$

# An app for guidance

- Guidance on an appropriate level of drawdown
- Aid to retirees and those approaching retirement
- Allow for assumed mortality improvements

# A simple account-based pension example

- Member inputs: retirement age, gender, retirement balance, risk appetite, relative health
- Solve for payout
  - Capital runs out at end of life expectancy (not before or after)
  - Constant real value of payouts
  - Subject to legislative minimums

# A simple account-based pension example (ctd)

## Member Inputs:

Gender (M, F)  
 Current Age  
 Retirement Age  
 Retirement Balance  
 Life Expectancy Decile (1 to 10, i.e. shortest to longest; Average)  
 Investment Risk Appetite (Low, Medium, High)  
 Desired Annual Withdrawal Amount

M
60
65
\$1,500,000
A
M
\$50,000

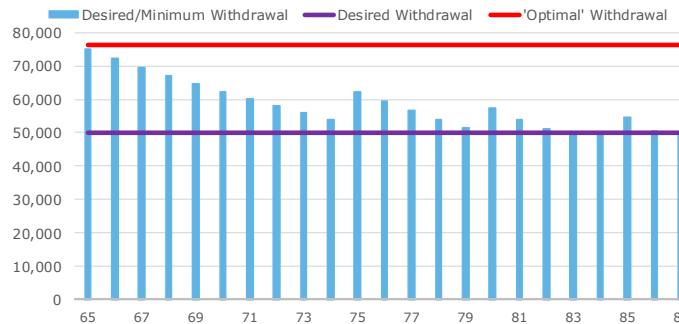
Re-Calculate

## Output:

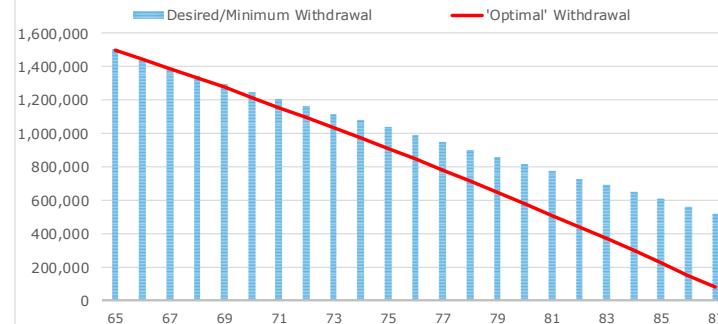
Life Expectancy Age  
*Age at which funds run out under desired withdrawal (subject to minimum)*  
 Supportable Annual Withdrawal @ Current Dollars; Investment Scenario = Best-estimate

87
>100
\$76,160

## ANNUAL WITHDRAWALS



## ACCOUNT BALANCE



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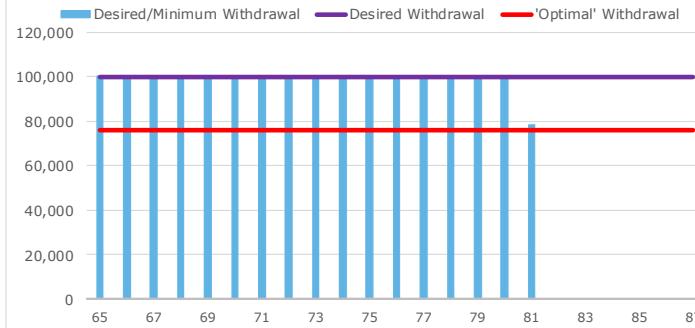
Re-Calculate

## Output:

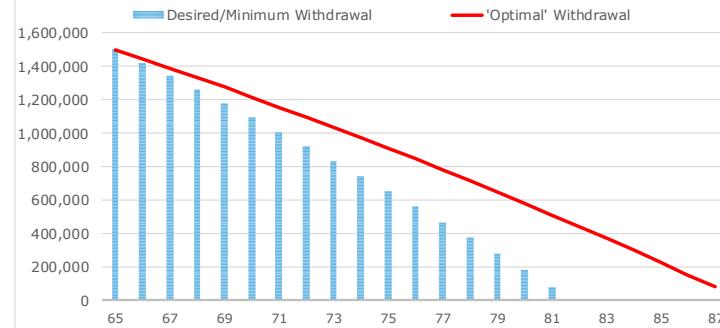
Life Expectancy Age  
*Age at which funds run out under desired withdrawal (subject to minimum)*  
 Supportable Annual Withdrawal @ Current Dollars; Investment Scenario = Best-estimate

87
81
\$76,160

## ANNUAL WITHDRAWALS



## ACCOUNT BALANCE



# Future enhancements

- Consumer-oriented digital solution
- Include age pension
- Factor in non-super savings and investments including family home
- Allow for both members of a couple
- Other retirement income products – deferred annuities, lifetime annuities, group self-annuitisation products
- Allow for potential aged care costs
- Stochastic modelling

→ Holistic view of retirement income

# Questions & Discussion

