



Longevity Risk – the Policy, Planning and Practical issues

FINSIA Retirement Income Symposium – Macquarie Longevity Solutions
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Australian retirees have it good...



Our tax efficient, generous, and flexible retirement system should let retirees do well

For a couple retirement could last for
35 years

Equity markets have delivered on average
7% p.a. premium

The Australian social security safety net is over
\$18,000 each year

Source: Bloomberg, Australian Life Tables, Macquarie Longevity Solutions analysis

... but "Longevity Risk" darkens the outlook



A challenge to policymakers and industry – can we answer the strategy basic questions?

Strategy

Understand

“What is Longevity Risk?”

Identify

“Who has Longevity Risk?”

Measure

“How much Longevity Risk do they have?”

Manage

“What should they do to manage it?”

Today's agenda



1. Understanding Longevity Risk
2. Managing Longevity Risk – lessons from overseas
3. Making it practical – a simple case study putting it into practice

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Understanding Longevity Risk



What is Longevity Risk?



Longevity Risk is the risk that a retiree will outlive their savings.

Drivers of Longevity Risk:

Not enough savings

Suffering poor market performance

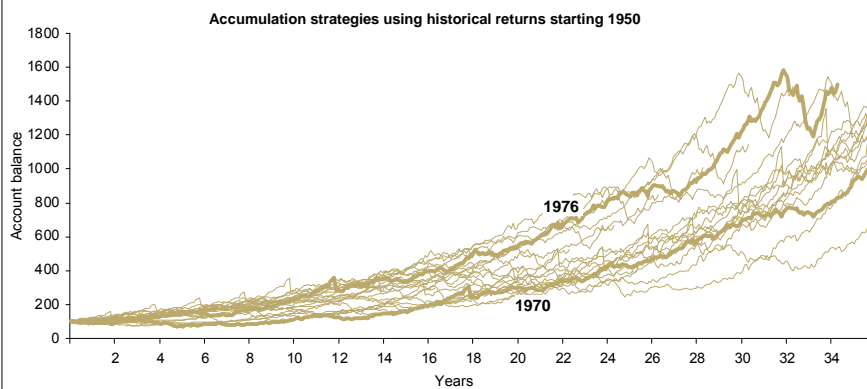
Over spending

Living longer than expected

Equity returns – accumulators



Time in the market and the equity risk premium are key for accumulators

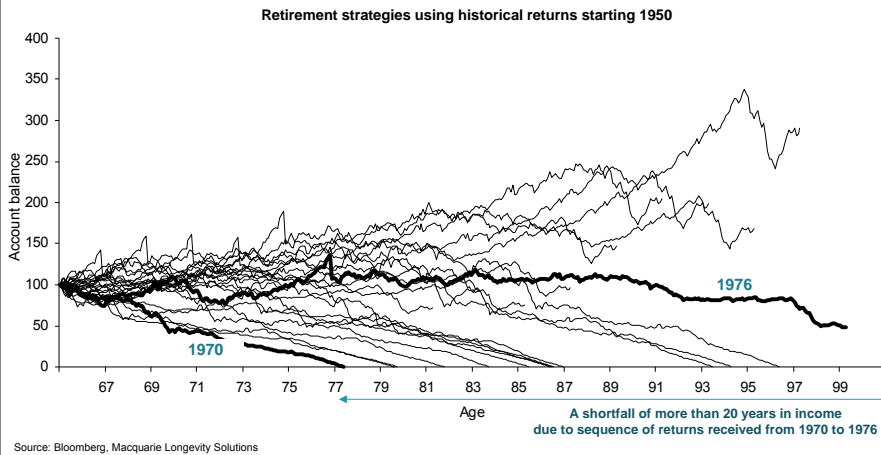


Source: Bloomberg, Macquarie Longevity Solutions
Assumptions: 50% equity exposure

Equity returns – retirees



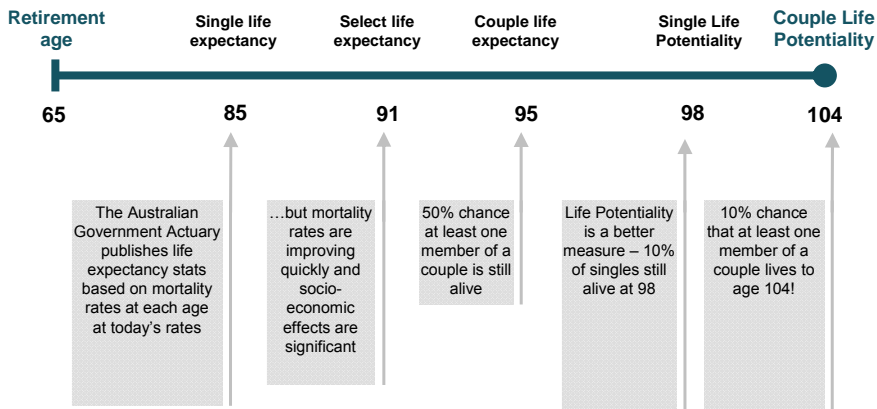
Retirees need equities but are highly exposed to 'sequence of returns' as a result



Living longer than expected



Life expectancy is for statisticians... Life Potentiality is for retirement advisers



Source: ABS, Macquarie Longevity Solutions

Sustainable income



A basic question...

“How much can I safely spend in retirement?”

...hides complex issues...

- Risk/return?
- Future returns?
- Life length?
- Financial discipline?

...and lacks a good answer

”It depends!“

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Market gaps



Australia is behind the rest of the world... but not for long

“The current retirement income system does not provide the products that would allow a person to manage longevity risk. This is a structural weakness.”

Source: Henry Tax Review 2009

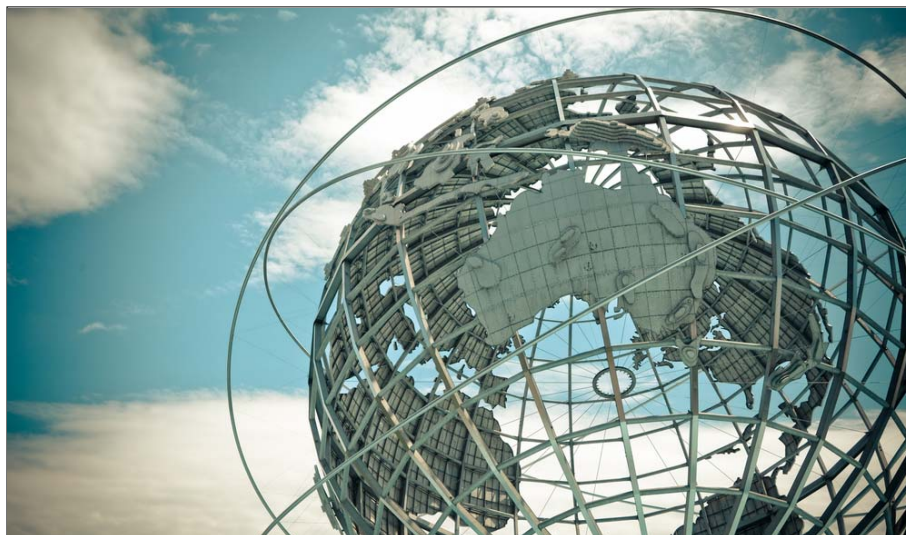
“A number of industry participants have turned their minds to the challenge of product innovation in the post retirement phase...[and exploring]...ways to better manage the key risks (investment, longevity, inflation)”

Source: Cooper Review Final Report, Chapter 7, 2010

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Dealing with Longevity Risk

Lessons from overseas



International market experience



Retirement specific strategic asset allocation models and products

EUROPE

- Market since 2005 and taking off
- Expected > EUR40bn of sales to 2015
- UK/Ger/Belg/Spain/Switz/Ned

UK

- Market since 2005
- >GBP 1bn of sales past two years

US

- Exponential growth through 90s
- Sales of approx US\$130bn p.a.
- Equities 61% / FI 39%
- Source of all product innovation
- Advanced Retirement Strategies

CANADA

- First mover with Variable Annuity regulation
- Established market

JAPAN

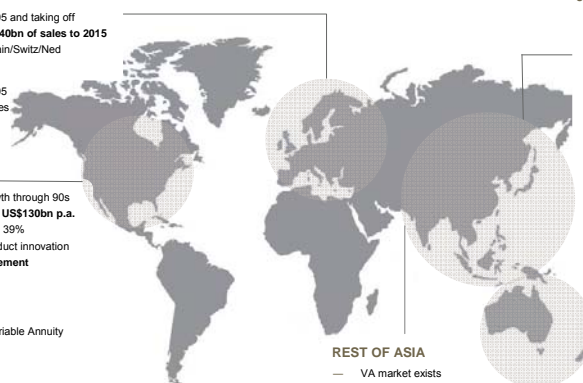
- Growing business since 2002 (CAGR of 132% from 2002 to 2006)
- AUM > US\$1 trillion
- Fastest ageing societies
- Low interest rates and conservative investors
- GMAB products dominate

REST OF ASIA

- VA market exists
- Many projects underway
- Korea/Taiwan/HK/Sing

AUSTRALIA

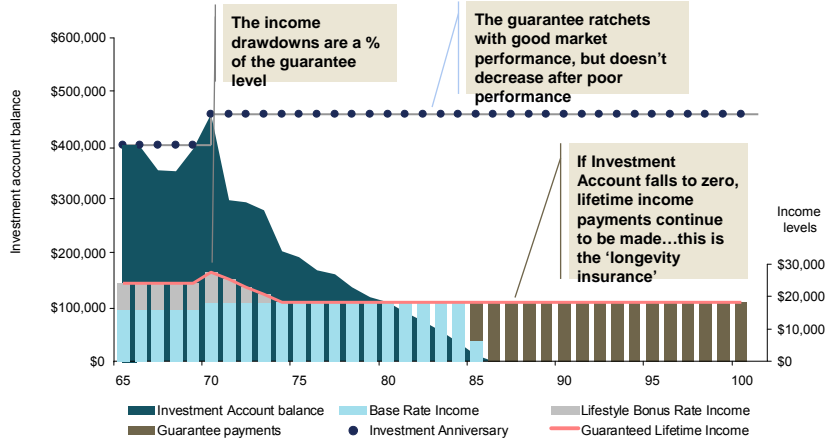
- Infant market – still in education phase
- Four providers in the market
- Income for life and capital protection



Product innovation lessons



Longevity Insurance products have been a 'game changing' success when incorporated into retirement strategies



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Making it practical

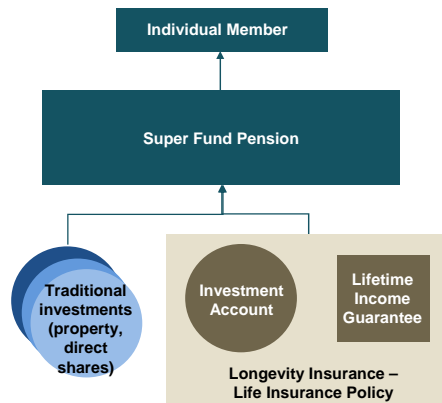
Identifying, monitoring and managing Longevity Risk



How Longevity Insurance fits in portfolio



Longevity insurance is not a silver-bullet, rather a part of a portfolio



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Longevity Risk “Rules of Thumb”



Retirees with Longevity Risk should protect 30% to 70% of savings

Factors increasing amount of longevity insurance required:

Savings of \$100k to \$2m

Investment strategy expected returns

Income as % of Wealth

Younger, healthier and married

These “Rules of Thumb” emerge from advanced retirement portfolio optimisation solvers

Identifying and managing Longevity Risk



Scenario	Longevity Risk Rating	Longevity Insurance Allocation %
> \$900k SMSF balance > Income of \$60,000 p.a. (inflated at 1.5%) > Balanced 'plus' investment strategy	HIGH	50% - 70%
> \$1.5m SMSF balance > Income of \$75,000 p.a. (inflated at 1.5%) > Moderate investment strategy	MEDIUM	30% - 40%
> \$500k SMSF balance > Income of \$50,000 p.a. (inflated at 1.5%) > Balanced investment strategy	VERY HIGH	70% +
> \$70k SMSF balance > Income of \$10,000 p.a. (inflated at 1.5%) > Cash investment strategy	N/A	N/A

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Key takeaways



1. Many self-funded retirees are **substantially exposed to Longevity Risk**
2. The “**Longevity Risk conversation**” should be encouraged/mandated when planning for retirement
3. **Product innovation** can help by providing new “asset classes” tailored to help manage Longevity Risk
4. There are no silver bullets... **new portfolio optimisation thinking** is required to get the best outcome for individuals

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Questions?

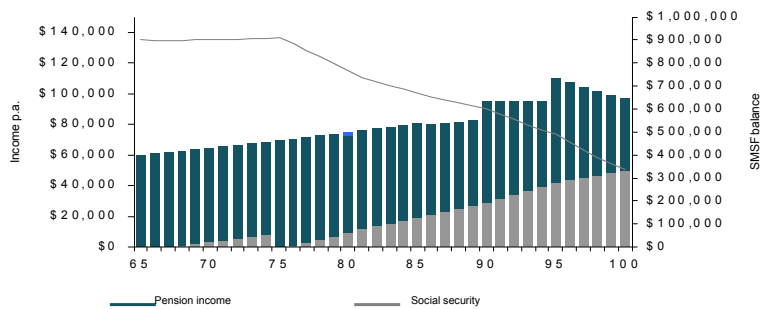


What it looks like as a strategy



When things go well the retiree is significantly better off than cash

Good market scenario



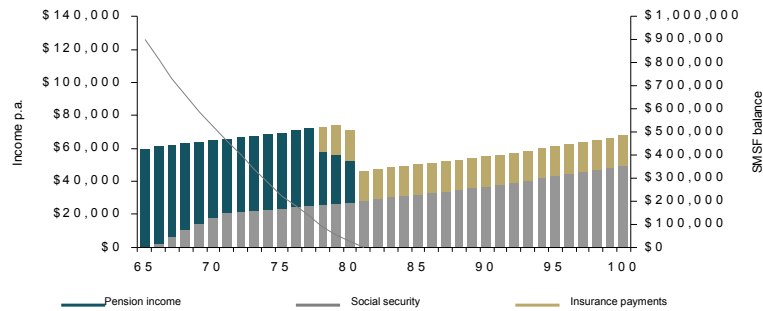
Despite paying longevity insurance premiums retiree is over **\$500k** ahead of a cash investment due to equity risk premium

What it looks like as a strategy



When things go bad longevity insurance significantly improves income levels

Bad market scenario



Without Longevity insurance the retiree would have run out of savings at age 84 yearsMLIG tops up their income for life

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MFG Longevity Solutions



Mandate

- > To identify the best international thinking in the area of pensions and longevity risk and to tailor it for delivery into Australian markets utilising the expertise, resources & capabilities of the Macquarie Funds Group
- > Able to work across a broad range of markets, including retail financial products, wholesale financial products, investment funds and capital markets

Expertise

- Specialty expertise in longevity risk product development for the Australian superannuation market
- Deep derivatives trading and dynamic hedging expertise
- Specialty expertise in 'embedded guarantee' pricing and hedging
- Market-leading risk management processes and functions
- One of Australia's largest wholesale funds managers with both passive and active management expertise
- Retail and wholesale financial product manufacturing expertise
- Sophisticated retail and wholesale product operations infrastructure
- Deep financial product legal and regulatory expertise
- Retail and wholesale sales and distribution capabilities

* Currently under development

Resources

- MFG Longevity Solutions is a team of 17 dedicated personnel
- MFG Longevity Solutions is able to draw on the resources of the broader Macquarie Funds Group and Macquarie Life organisations on an 'as-needed' basis
- Custom-built guarantee pricing and hedging application
- Access to Macquarie Life as product issuing entity
- Sophisticated, robust administration platform
- Innovative 'rules-based' web-service-enabled electronic platform interface capability*
- Access to Macquarie's sophisticated 'wrap' administration platforms

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