Submission to the 2019 Review of Retirement Income Policies

From the Retirement Income Interest Group of the New Zealand Society of Actuaries

October 2019

Introduction

Thank you for the opportunity to make a submission to the 2019 Review.

This submission is from the Retirement Income Interest Group (RIIG) of the New Zealand Society of Actuaries, and includes:

• A report, *Longevity in New Zealand: Implications for Retirement Income Policy*, which outlines key facts on longevity in New Zealand and highlights some issues arising from analysis of longevity trends. This is particularly relevant to items 2, 6, 7 and 8 in the Terms of Reference of the Review.

• A paper, *Retirement income policy in New Zealand: A discussion of context and principles*, particularly relevant to items 2 and 7 in the Terms of Reference.

Commentary by Terms of Reference items

ToR 2: Developments and trends

Our *Context and principles* paper summarises the current complex environment for retirement income policy, and how policy has to deal with uncertain, diverse and changing needs. We suggest that retirement income policy should operate under the principles of equity, adequacy, empowerment, sustainability and access, and we outline ways in which the current system does so.

As a result of this analysis, and using our collective professional superannuation and pensions experience from New Zealand and overseas, we believe New Zealand Superannuation and New Zealand’s retirement income policies more generally, compare very favourably to pensions in other countries. If other countries are changing their pension systems, that does not necessarily mean New Zealand needs to.

Our *Longevity* report focuses on one trend, that of longer lifespans, and examines what that implies for retirement income policy. We put forward reasons why the changes that some other countries are making, such as increasing the age of eligibility to the public pension, need not necessarily be copied here (pp. 19-21 of the report).
ToR 6: Intergenerational and fiscal sustainability of New Zealand Superannuation (NZS)
We consider this in page 19-21 of our Longevity report as we step through the arguments for and against an increase in the age of eligibility, and the comparison with other potential reforms to NZS.

Briefly, we believe there is no apparent cost crisis for NZS. It is a policy choice to keep funding NZS at age 65, which can be afforded. New Zealand has unique issues of equity to consider. New Zealanders generally want their current system to stay in place, unreformed. NZS resonates with New Zealand values and the sustainability of that resonance should be considered alongside fiscal sustainability.

If, however, change is decided on, increasing the age of eligibility would be a reasonable option, with manageable consequences. If that policy choice was made, our favoured approach to deciding on the appropriate age would be to use an objective formula to keep the average proportion of life spent on NZS roughly the same for each cohort, with gradual planned increases, tempered by assessment of trends in population health, work patterns and the economy. This formula allows for intergenerational equity and allows for a changing environment. For example, it is quite possible that despite the introduction of KiwiSaver, younger cohorts will need NZS just as much as, or more than, older cohorts do, due to lower home ownership, lower wage growth, less stable jobs and lower savings rates.

ToR 7: Purpose of New Zealand Superannuation
Our Longevity report (p. 19 especially) explains why understanding longevity risk must be central to considering retirement income policy.

Our view is that the primary purpose of New Zealand Superannuation is to protect the population against longevity risk (living longer than expected) and that it should do so in a way that is consistent with the principles of equity, adequacy, empowerment, sustainability and access, as defined in more detail in our Context and principles paper.

We believe that the current structure of NZS should be kept because NZS fulfils this purpose well, is broadly equitable, understandable, easily accessed by the majority of retirees, and enables people to save and plan for their retirement with confidence.

ToR 8: The decumulation phase
The first three sections of our Longevity report describe the key trends affecting the decumulation phase. In summary: lives are getting longer, uncertainty in age at death is extending to higher ages so that longevity risk (the risk of living longer than expected) is increasingly more relevant than mortality risk (the risk of dying earlier than expected), and there is an increasing burden from the uncertainty in end-of-life health trajectories, care needs, care provision and cost of care.

We emphasise that life expectancy is not the only, or best, answer to the question How long will I live? (p. 11 of the report). We suggest the best way to illustrate the uncertainty of lifespan prospects is the projected distribution of age at death for a cohort with significant indicators added (see below for New Zealand females born in 1952 and see pp. 12-13 of the report for other cohorts).
Estimated number of deaths at each age from 100,000 female New Zealanders born in 1952 who reached (or are expected to reach) age 65

From this we take the view that there should be more information available to guide people through the options available in later life to decumulate savings. We make recommendations (see especially pp.11, 17-18 and 22-23 of the report) on the information which ideally would be available on lifespan prospects, the costs of end of life care that might require personal funding, decumulation options and possible KiwiSaver drawdown strategies and consequences.

We also refer to our previous work which may provide useful background for the Review. In our 2015 report *Income Streaming in Retirement: Options for New Zealand*, we reviewed the decumulation solutions available in New Zealand and concluded that government intervention should be directed at improving guidance for consumers, including better information. In our 2017 report *Decumulation Options in the New Zealand Market: How Rules of Thumb can help* we defined a set of Rules of Thumb by which consumers could decide how to draw down their KiwiSaver or other savings.

**Contact information**

The current members of RIIG are Alison O’Connell, Catherine Edgar, Daniel Mussett (Convenor), Janet Shirley and Kelvin Prisk.

We would welcome a meeting with the Retirement Commissioner or Commission staff to discuss this submission in more detail.

Please contact RIIG by emailing the Convenor at riigconvenor@actuaries.org.nz.
Longevity in New Zealand: Implications for Retirement Income Policy

By the Retirement Income Interest Group of the New Zealand Society of Actuaries

October 2019
Executive Summary

Longevity trends in New Zealand
- Average lifespans across New Zealand are expected to keep increasing, although at a slower pace than in the last few decades.
- The numbers of deaths will increase each year, so more New Zealanders will be affected by end-of-life situations.
- We need not concern ourselves with limits to life expectancy for practical planning purposes, as current lifespans are far from a theoretical maximum.

The lifespan distribution
- Uncertainty in age at death is extending to higher ages. Longevity risk (the risk of living longer than expected) is increasingly more relevant than mortality risk (the risk of dying earlier than expected).
- Life expectancy, as the average of age at death, is not the only or best indicator of how long life might be or how long retirement savings have to last. Charting the lifespan distribution for a cohort and the median, mode and age to which (say) one in five will live give a more complete picture of uncertainty in longevity.
- People in their 40s or older should use an estimate for their likely lifespan of 25 to 30 years after age 65 (to age 90 to 95). Testing a retirement plan to age 100 would be cautious for this group, and sensible for younger people, especially if female, with a healthy lifestyle or with long-living parents or grandparents.
- The variation in age at death in New Zealand is strongly linked to ethnicity. While the differences between groups attract attention, the variation within each group is also important. The future should look more equal, but progress towards equity may be slow and perhaps erratic.

Longevity and wellbeing
- Wellbeing is diminished by uncertainty in what later life holds. There is significant uncertainty in end-of-life health trajectories, care needs, care provision and cost of care. We encourage further policy work to help reduce this uncertainty and communicate the costs of end of life care that might require personal funding.

New Zealand Superannuation
Our view is that the primary purpose of New Zealand Superannuation (NZS) is to protect the population against longevity risk (living longer than expected) and that it should do so in a way that is consistent with the principles of equity, adequacy, empowerment, sustainability and access.

We believe that the current structure of NZS should be kept because NZS fulfils its purpose well, is broadly equitable, understandable, easily accessed by the majority of retirees, and, enables people to save and plan for their retirement with confidence.
Many New Zealanders do not want a change to NZS, and the arguments for change are not one-sided. **If change is decided on**, then:

1. Of the possible changes which could be made to NZS, **increasing the age of eligibility is a reasonable option, with manageable consequences**. Alternatives include reducing the level of benefit, which risks adequacy; or, means-testing which risks inequity, complexity and associated costs, and, barriers to working or saving.

2. Our favoured approach on age of eligibility is to use **an objective formula to keep the average proportion of life spent on NZS roughly the same for each cohort**, with gradual planned increases, tempered by assessment of trends in population health, work patterns and the economy.

In any event:

3. We trust the age of eligibility will continue to be debated in Reviews of Retirement Income Policy. We seek to ensure that the **debate relies on good interpretation of up-to-date longevity data with consideration of a full range of indicators** to convey average expected lifespans and associated uncertainties.

**Decumulation of KiwiSaver**

We believe that New Zealanders need good information on how much to save for retirement and how to decumulate during retirement. Currently, guidance for New Zealanders is better for accumulation than for the decumulation phase.

**The readily available information on longevity risk and decumulation options is incomplete.** We welcome the new regulations for KiwiSaver statements but recognise limitations in this first attempt to show future income projections.

We recommend, specifically for KiwiSaver statements, and consistently for other market communications on decumulation whether it be general guidance, product information, personalised statements or financial advice that:

1. **Statement wording and underlying projection models are updated regularly to allow for the most recent data and best understanding of the range of longevity outcomes and trends** (as well as economic variables).

2. **Statement wording encourages KiwiSavers to consider decumulation options for a range of longevity outcomes**, for example, to age 90, 95 and 100 years, to increase understanding about the consequences of longevity risk.

3. **A future set of regulations for KiwiSaver projections includes wording to explain different possible drawdown strategies and consequences**, including illustration of two or three different rules of thumb, to allow for preferences other than the one currently in regulations.
Purpose

This report, by the Retirement Income Interest Group (RIIG) of the New Zealand Society of Actuaries, outlines key facts on longevity in New Zealand and highlights some issues arising from analysis of longevity trends.

This report first covers facts, data and trends about longevity, including the reasons behind the trends, the variation across the population and the wellbeing aspects of longevity. In the last chapter, we highlight what we think matters from this for New Zealand’s Retirement Income Policy.

This report forms part of RIIG’s submission to the 2019 Review of Retirement Income Policy, along with a companion paper Retirement income policy in New Zealand: A discussion of context and principles.

This report, in focusing on longevity, is particularly relevant to items 2, 6, 7 and 8 in the Terms of Reference of the 2019 Review.

Actuaries work day-to-day across a range of disciplines – mathematics, statistics, business, finance, economics, risk management, demography, behavioural science and politics – and “synthesize this seemingly disparate knowledge to construct accurate and insightful evaluations”1.

In this report, the members of RIIG aim to make sense of longevity data as relevant to retirement income policy. Health and wellbeing in later life are covered, but we have focused on longevity as we believe that although it is generally known and accepted that we are all living longer, on average, policy analysis requires a closer look at the implications of longevity trends.

The members of RIIG who authored this report are Alison O’Connell, Catherine Edgar, Daniel Mussett (Convenor), Janet Shirley and Kelvin Prisk.

We thank Heather McLeod, June Atkinson and Christine Ormrod for their valuable support.

This report represents the collective personal views of the members of RIIG and does not necessarily reflect the positions of our employers or other members of the New Zealand Society of Actuaries. Any errors are our own.

For further information please contact: Convenor, Retirement Income Interest Group by email society@actuaries.org.nz

Citation: RIIG (2019). "Longevity in New Zealand: Implications for Retirement Income Policy." Retirement Income Interest Group of the New Zealand Society of Actuaries

Nothing in this report should be taken as financial advice or as a recommendation for how any individual should manage his or her money.

1 Ahmed (2019)
Some definitions

**Longevity** is a general term indicating long life. More people are living longer lives than ever before.

**Lifespan** measures how long an individual has lived or might live. It is equal to age at death. For example:
- The lifespan estimated to be achieved on average by female New Zealanders aged 65 in 2017 is 88.8 years.
- The maximum verified lifespan for humans is 122 years\(^2\).

**Life expectancy** does not always mean the lifespan which anyone should expect\(^3\).
- *Period life expectancy* is often used in analysis of the health of groups of people as it measures average mortality between populations at a point in time. It is calculated as the average length of life left at a given age, assuming people experience the population’s age-specific death rates of a specific period from the given age onwards.
- *Cohort life expectancy* is a better measure of potential lifespan because it uses information on how death rates change throughout life. It is the average length of life left at a given age for a group of people born in the same year, based on their death rates over their lifetime.

Cohort life expectancy is only known when everyone from that cohort is dead, and the average lifespan of that cohort is confirmed. Cohort life expectancy for cohorts that are still alive must use estimates of future death rates. This paper uses the latest projections of cohort life expectancy from StatsNZ\(^4\), usually the median scenario of the range. The range indicates uncertainty in future death rates.

For example, estimated cohort life expectancy of female New Zealanders aged 65 in 2017 is 23.8 years, with a range (5\(^{th}\) to 95\(^{th}\) percentile) of 23.2 to 24.4 years. Adding the 65 years already lived gives an estimated average lifespan for the cohort of 88.8 years, with a range of 88.2 to 89.4 years.

We use the terms **death rates** and **mortality rates** interchangeably.

Cohort life expectancy, as the average lifespan, is just one indicator of longevity for a cohort. Other indicators should also be used to show potential lifespans and uncertainty in age at death. The most useful indicators are:
- **Median lifespan** is the age for which half the lifespans of a cohort are longer and half shorter.
- **Modal lifespan, or the mode**, is the most common age at death.
- **Probabilities of living to specific ages**, for example the probability of living to 100.

**Healthy life expectancy** is defined in chapter 3.

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\(^2\) Robine and Allard (1999)

\(^3\) Stats NZ (2016)

1. Population longevity trends in New Zealand

The key implications for retirement income policy from longevity trends in New Zealand are:

- **Average lifespans across New Zealand are expected to keep increasing**, although at a slower pace than in the last few decades.
- **The numbers of deaths will increase each year**, so more New Zealanders will be affected by end-of-life situations.
- **We need not concern ourselves with limits to life expectancy** for practical planning purposes, as current lifespans are far from a theoretical maximum.

### Current longevity

In New Zealand:

- There were around 31,500 people aged 90 years and older at the end of 2018.
- 309 people died aged 100 or over in 2018.
- Both these numbers have roughly doubled in the last 15 years.

We look first at the New Zealand population born in 1952 to illustrate today’s younger superannuitants. Of this cohort, 88% of the baby girls and 83% of baby boys survived to their 65th birthday in 2017.

Having reached age 65, what lifespan might this cohort expect?

- For women, cohort life expectancy is 89 years, but the most common (modal) age at death is expected to be 92. One in five women from this cohort is expected to live to at least age 95.
- For males, cohort life expectancy is 86 years and the most common age at death expected to be 90. One in five men from this cohort is expected to live to at least age 93.
- The probability of living to age 100 is 6% for women and 3% for men.

### Uncertainty in longevity

The people in the cohort will, of course, die at different ages. An individual does not know where they will lie within that distribution. People tend to guess or expect their own lifespan to be lower than is likely.

Looking at large groups of people who share one or more characteristics allows some associations to be made with lifespan. For example, women live longer than men on average in nearly all countries. Higher income or education level tends to be associated with longer lifespans. Everyone has a multitude of risk factors affecting their own lifespan: lifestyle, genes, the lasting influence from early life conditions and an element of chance.

We consider the variation in longevity across the population in chapter 2.

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5 Stats NZ Estimated Resident Population and Deaths  
6 All figures are author’s calculations from StatsNZ NZ complete cohort life tables: 1876–2017, updated March 2019  
7 O’Connell (2011)  
8 O’Connell (2012)
Average lifespans increasing, more slowly now

Average lifespans have increased dramatically in New Zealand over the entire period for which StatsNZ has data. Figure 1 shows the trend for cohorts born over the last 90 years.

- The narrowing of the lines shows there are fewer deaths at younger ages. People are living longer.
- The levelling of the lines shows that the pace of change in average lifespans is slowing.

Life expectancy increases when fewer people die in the population at any age, that is, death rates fall. The slowdown in life expectancy improvements is a consequence of death rates falling more slowly than they did before.

In many countries, life expectancy improvements are slowing down\(^9\), and for some groups within national populations over recent periods, stalling and even going backwards\(^10\). Mortality improvement in New Zealand had not slowed as dramatically as in other countries\(^11\). The slowdown in life expectancy gains has been more significant in Great Britain than in New Zealand or Australia\(^12\).

Figure 1: Life expectancy at birth, age 65 and age 80, for cohorts by birth year 1926-2017, New Zealand total population

![Graph showing life expectancy trends](Image)

Figure 2 shows how death rates are falling for each age group over age 50 in New Zealand\(^13\). Only for ages over 80 years are there now more than 30 deaths per 1,000 lives each year. In 1971, that was the case above age 70.

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\(^9\) ONS (2018)
\(^10\) Bennett et al. (2018)
\(^11\) O’Connell (2017)
\(^12\) O’Connell (2019a)
\(^13\) For the remainder of this section, see O’Connell (2019b). Data from StatsNZ Age-specific death rates by sex, December years (total population) updated February 2019
International analysis has found the period 2010-12 to be a watershed for the pace of change in death rates. Figure 3 shows New Zealand death rates falling less after 2010 than before, for all age groups over age 50 except for females aged 90 and over.

The recent rates of change in death rates are all negative - that is, death rates are falling, which means mortality is improving - except for small effects below age 60. This means:

- Life expectancy is still increasing, just not as fast as it once did.
- The numbers of the very old will continue to increase, as earlier improvements in mortality in past decades work through (as well as differences in cohort size).

**Why is mortality improvement slowing?**

A slowdown in mortality improvement should not be surprising. Mortality improved noticeably in 1980s-2000s because of specific public health and medical interventions: people gave up smoking; surgery and pharmacy innovations reduced the incidence and death risk from cardiovascular conditions.

There is less gain to be had from these interventions now. Death risks in young- to middle-age are now so low that there is little remaining death risk for medical science to work on.

Other reasons why mortality improvements have slowed include:

- **New public health interventions or medical innovations are not meeting demand**, given changing risk factors, or are not widely available. A cause of this may be scientific innovation not happening fast enough. For example, cancer and neurological conditions, now more prominent causes of death following the reduced impact of cardiovascular risk, have not seen significant recent transformative medical treatments.

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14 O’Connell (2019c)
15 Edwards (2018)
A slowdown in funding of initiatives which could mitigate or prevent some factors underlying higher death risk. For example, it is known what could be done to address diabetes, obesity, poor housing, different usage of health services, or other socio-economic detriments. It would be expected that political pressure would result in higher funding for such initiatives at some point. In countries such as the UK which followed austerity policies after the Global Financial Crisis, there are concerns that public health, medical and social care budgets have been cut back too much with consequent negative effect on mortality rates\textsuperscript{16}.

Changes in population composition, for example if there have been more migrants with higher mortality than the earlier population average. However, migrants usually bring with them a temporary healthy migrant effect\textsuperscript{17}. Another example is the super-healthy “golden cohort”\textsuperscript{18} born around 1930 in the UK who have had enhanced mortality improvements throughout their lives, but are now, naturally, diminishing in number. Their contribution to the average mortality improvement in the population is therefore reducing in the UK, and in other countries too, including New Zealand\textsuperscript{19}.

\textsuperscript{16} McKie (2019)
\textsuperscript{17} Lassetter and Callister (2009)
\textsuperscript{18} Goldring et al. (2011)
\textsuperscript{19} O’Connell and Dunstan (2009)
Projections of future lifespans
StatsNZ makes assumptions about future death rates so that projections of future population size can be made\(^\text{20}\). The mortality assumptions are used to estimate future life expectancy. Future death rates are calculated for each age and for men and women separately. The calculation method is technically detailed but is based on an extrapolation of mortality trends.

To illustrate the effect of past trends and future assumptions on average lifespans over time, we compare the cohort with 65th birthday in 2017, born in 1952, with cohorts born twenty years earlier and later, in Table 1. Retirement income policy takes some time to change, so we need to look at future longevity trends. We focus on a medium-term policy planning horizon, defined by people reaching age 65 in around 20 years’ time. Longer-term forecasting is inevitably more uncertain.

Table 1: Cohort average lifespan (age plus life expectancy) at key ages for selected birth cohorts, New Zealand, StatsNZ median (5\(^\text{th}\) percentile; 95\(^\text{th}\) percentile)

<table>
<thead>
<tr>
<th>Year of birth</th>
<th>At age:</th>
<th>In year:</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>1932</td>
<td>65</td>
<td>1997</td>
<td>85.8</td>
<td>83.0</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>2012</td>
<td>90.1</td>
<td>88.6</td>
</tr>
<tr>
<td>1952</td>
<td>65</td>
<td>2017</td>
<td>88.8</td>
<td>86.3</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>2032</td>
<td>91.5</td>
<td>90.0</td>
</tr>
<tr>
<td>1972</td>
<td>65</td>
<td>2037</td>
<td>91.0</td>
<td>88.9</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>2052</td>
<td>92.7</td>
<td>91.2</td>
</tr>
</tbody>
</table>

Table 1 shows two demographic truths, found in all developed countries: women live longer than men on average, and, expected lifespan is higher once a person has lived to age 80 than it was at age 65 as the likelihood of death between ages 65 and 80 is no longer in the calculation.

Table 1 also reveals findings useful for policy and planning:

- Expected average lifespan increases throughout. The gains between 1952 and 1972 cohorts are smaller than between 1932 and 1952, as mortality rate improvement slows down. Post-baby-boomers can still expect to live longer than their parents or grandparents.
- The range of expected lifespans across scenarios (5\(^\text{th}\) to 95\(^\text{th}\) percentile) is larger for younger cohorts than older, as more of their future mortality must be assumed. However, the range of expectations is not large. For most discussions on lifespan estimates, the median projection scenario is likely to be good enough, for any cohort. Variation across the population (that is, across the lifespan distribution for a cohort) is more critical both for individuals planning retirement and for policy issues. We discuss this in the next chapter.

More deaths, at older ages
The effect of both later ages at death and the size of cohorts means that there will be more older people in New Zealand\(^\text{21}\), so more New Zealanders will be affected by end-of-life situations:

\(^{20}\) http://datainfoplus.stats.govt.nz/Item/nz.govt.stats/S3ca9da-d6d2-41e0-b626-5743c14deaf5#/nz.govt.stats/85de9ea1-ef64-4865-bcfc-40d482aae36/18

\(^{21}\) StatsNZ National Population Projections 2016(base)-2068
• The number of people aged 65 years and older, currently around 700,000, will double by the early 2040s.
• The number of people aged 90 years and older, currently around 31,500, will double by the mid-2030s and quadruple by the mid-2040s.

This also means a significant increase in the number of deaths (all ages) from 32,600 in 2019 to an estimate of 45,500 by 2038\(^22\). The proportion of those deaths which are at ages of 90 years and older is also projected to increase, from 22% to 33%.

**How far can longevity increase?**

It is expected that lifespans will continue to lengthen in most countries, in the medium and long term, despite many questions about the factors affecting future lifespans. There are worryingly high rates of diabetes and obesity in young children. There are threats of resistance to antibiotics, and pandemics. The level of funding in public health and medical interventions is a risk. More positively, very large investments are being made in medical and life science research and development. For example, Metformin has the potential to increase protection against a range of age-related diseases significantly, although is some years away from being widely prescribed as such\(^23\).

For New Zealand, as in many higher-income countries, the top four risks to achieving life expectancy gains have been identified as tobacco use, high body-mass index, high blood pressure and alcohol use\(^24\). The general expectation is that medical advancements and public health measures are enough to surmount such risks so that average population life expectancy keeps improving.

After all, life expectancy is only a mathematical construct made up of mortality rates at each age over a lifetime. Mortality rates are very small numbers at most ages (around 0.33 even at age 100\(^25\)) and they change slowly (Figure 3). There are short-term perturbations, but the long-run experience is smooth. There is no realistic means by which this would suddenly change.

The rate of change needed in death rates to reach average lifespans of 100 years is too high for it to be a realistic prospect for many decades. We estimate that death rates of the female 1952 New Zealand cohort would need to reduce by around 80% at all ages above age 65 to achieve this. If death rates were to halve, the life expectancy of 65-year-old women in this cohort would increase from 88.8 years to 93.9 years. This is consistent with estimates using English life tables\(^26\) and US analysis suggesting that lifespans can continue to improve but that to increase the average beyond age 95 is unlikely unless there is a “fundamental change in our ability to delay the aging process”\(^27\).

The question of what the maximum lifespan might be is interesting, but a distraction to practical policy considerations. Current lifespans are far from a theoretical upper limit of 123 years\(^28\). The long-held record for lifespan is 122 years, but on a global database of validated supercentenarians\(^29\), the oldest living person is currently aged 116.

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\(^22\) From DHB Births and Deaths Projections 2019-2038 (2018 Update) supplied to Ministry of Health by StatsNZ
\(^23\) Armstrong (2019)
\(^24\) Blakely (2018), Foreman et al. (2018) Supplementary Appendix Figure 3
\(^25\) For the cohort born 1952, StatsNZ Complete cohort life tables: 1876–2017, median projection
\(^26\) Crayford (2019)
\(^27\) Crimmins (2015)
\(^28\) Hanayama and Sibuya (2015)
\(^29\) [http://www.grg.org](http://www.grg.org), Gerontology Research Group, as at 29 August 2019
2. The lifespan distribution

Variation across the population
Lifespan, or age at death, varies across the population. We chart this distribution for the three cohorts considered earlier – first for women, then men. We add indicators in addition to cohort life expectancy: the median and modal lifespan and the age to which one in five will live.

The charts in Figure 4 are rich in data by which to understand longevity and its implications. They confirm points made previously: that women live longer than men on average and that life expectancy is expected to continue improving for subsequent cohorts, although at a slower pace in future.

The life expectancy indicator at age 65 is higher than life expectancy at birth because the group of 65-year-olds is relatively healthier than the group was at birth. The gap between these two indicators narrows with successive cohorts as mortality improves in the ages in between. Both life expectancy indicators are lower than other indicators, showing that life expectancy, even for a cohort, is not the only, or best, answer to the question How long will I live?

The charts also show how the distribution of ages at death changes shape over time. With successive cohorts the distribution has moved to the right, towards older ages, and the modal peak has narrowed. This is consistent with improvement in life expectancy across the population now being largely driven by mortality improvements at older ages. It is a more marked effect for females, as male death rates in middle age through to age 65 have not yet improved as far.

Another way of expressing the effect is that the age at death has become more similar across the population. This is called “mortality compression”. This is good news as it means inequality, defined as people dying too early, has reduced. But the range of age at death is still wide, and the uncertainty is extending to the right. Uncertainty becomes more important at the oldest ages.

The key implications for retirement income policy are:

- **Uncertainty in age at death is extending to higher ages.** Longevity risk (the risk of living longer than expected) is increasingly more relevant than mortality risk (the risk of dying earlier than expected).
- **Life expectancy, as the average of age at death, is not the only or best indicator** of how long life might be or how long retirement savings have to last. Charting the lifespan distribution for a cohort and the median, mode and age to which (say) one in five will live give a more complete picture of uncertainty in longevity.
- **People in their 40s or older should use an estimate for their likely lifespan of 25 to 30 years after age 65 (to age 90 to 95).** Testing a retirement plan to age 100 would be cautious for this group, and sensible for younger people, especially if female, with a healthy lifestyle or with long-living parents or grandparents.
- **The variation in age at death in New Zealand is strongly linked to ethnicity.** While the differences between groups attract attention, the variation within each group is also important. The future should look more equal, but progress towards equity may be slow and perhaps erratic.
Figure 4\textsuperscript{30}: Estimated number of deaths at each age from 100,000 New Zealanders born in year shown who reached (or are expected to reach) age 65

**Female, born 1932**

Life expectancy at birth was 76; at age 65 is 86

Median lifespan is 87

Most common lifespan is 90

One in five live to at least 93

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**Female, born 1952**

Life expectancy at birth was 82; at age 65 is 89

Median lifespan is 91

Most common lifespan is 92

One in five live to at least 95

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**Female, born 1972**

Life expectancy at birth was 87; at age 65 is 91

Median lifespan is 93

Most common lifespan is 93

One in five live to at least 97

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\textsuperscript{30} Calculated from StatsNZ Complete cohort life tables March 2019 update, with future survival experience estimated using mortality projections (median scenario) from the 2016-base National population projections (published October 2016). Pattern of deaths at ages 100-110+ estimated from StatsNZ estimate of number of deaths at ages 100+. 
Male, born 1932

Most common age at death so far for this cohort has occurred at age 84, but peak age at death is projected at age 87.

Median lifespan is 84
Most common lifespan is (84)/87
One in five live to at least 91

Male, born 1952

Median lifespan is 88
Most common lifespan is 90
One in five live to at least 93

Male, born 1972

Median lifespan is 91
Most common lifespan is 92
One in five live to at least 95

Life expectancy at birth was 78; at age 65 is 86

Life expectancy at birth was 83; at age 65 is 89

31 Most common age at death so far for this cohort has occurred at age 84, but peak age at death is projected at age 87
Variation by ethnicity

New Zealand is unusual in that it produces period life tables for different ethnic groups. There are problems using period life tables for comparing mortality by ethnicity:

- StatsNZ only produces cohort life expectancies for the total population. Comparing period life expectancy between New Zealand ethnicities gives an indicator of relative mortality levels, not of differences in current average lifespans. The latest period data, 2012-14, is five years old.
- Historic trends in mortality comparisons between ethnicities are difficult to analyse because of different definitions of ethnicity on death registration, birth registration and census forms during the 1980s and early 1990s.

However, the data point to an undeniable mortality disadvantage for Māori and Pacific ethnicities:

- While non-Māori period life expectancy has steadily increased, Māori period life expectancy increased more rapidly up until around 1980, after which it was stable until increasing again from the late 1990s32.
- The gap between Māori and non-Māori period life expectancy has fluctuated, but over the long term narrowed. For the period 2012-14, period life expectancy at age 65 for Māori men was 15.4 years, and women 17.5 years. The non-Māori figures were 19.1 and 21.6 years, implying a gap for that period of 3.8 years for men and 4.1 years for women33.
- The mortality disadvantage starts for Māori and Pacific people at early ages, and fewer reach age 65. The chances of living to older ages are lower for both groups than for non-Māori.

Figure 5 shows the estimated number of deaths34 from 2019 to 2038. The proportionate increase in the total number of deaths is close to that in the total population for Māori (38% compared with 40%) and Pacific (36%). The ageing of Māori and Pacific deaths is very marked. Fewer people are expected to die aged 45-69, and many more at ages 70 and above.

Figure 535: Estimated actual number of Māori and Pacific deaths in each age band in 2019 and 2038 in New Zealand

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33 StatsNZ Complete New Zealand Period Life Tables: 2012–14, median estimates
34 Estimated actual deaths in the population, not deaths from a cohort of 100,000 lives at age 65 as in Figure 4
35 From DHB Births and Deaths Projections 2019-2038 (2018 Update) supplied to Ministry of Health by StatsNZ
The gap in average life expectancy between groups such as Māori compared to non-Māori attracts much attention. But the variation within each group is critically important. Variation means some people are dying early. Variation is higher within Māori and Pacific groups than within the non-Māori group because proportionately more people die early.

**Causes and importance of variation**

Variation in lifespan stems from the accumulation of differences in the factors which affect mortality.

The period life expectancy gap across socio-economic groups can fluctuate over short time periods\(^{36,37}\). Analysis of the period life expectancy gap is often used to highlight warning signs in population health issues. For example, a recent analysis showed that nearly half of deaths among Pacific people and over half in Māori can be attributed to potentially avoidable causes of death, compared with less than one quarter in the non-Māori/non-Pacific population\(^{38}\).

It has been shown in many different countries, including New Zealand\(^{39}\), that persistent variation in mortality or life expectancy is linked to levels of deprivation and the accumulation of income- and education-related inequalities\(^{40}\). The widening of the period life expectancy gap between Māori and non-Māori in the 1980s and 1990s was linked to unequal socio-economic outcomes\(^{41}\). Variation because of systemic differences, which could be addressed, is inequitable.

The association of ethnicity to multiple factors of socio-economic position means that a single explanation to ‘define’ or ‘solve’ inequality in life expectancy does not exist. The long-term trend of a narrowing gap between groups (defined by socio-economic position or by ethnicity) would be expected to continue, as improvements in life expectancy are driven first by mortality improvements at younger ages, then at older ages.

The speed at which the gap narrows, and whether progress is steady or with short-term fluctuations, will depend on the successful impact of health and wellbeing policies\(^{42}\) on the factors associated with levels of mortality. Retirement income policy can play a role in improving economic wellbeing in later life.

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\(^{36}\) Longevity Science Panel (2018)

\(^{37}\) O’Connell (2019c)

\(^{38}\) Walsh and Grey (2019)

\(^{39}\) MSD (2016)

\(^{40}\) Marmot (2005)

\(^{41}\) Wilson et al. (2018); Woodward and Blakely (2014)

3. Longevity and wellbeing

The key implication for retirement income policy is that:

- **Wellbeing is diminished by uncertainty in what later life holds.** There is significant uncertainty in end-of-life health trajectories, care needs, care provision and cost of care. We encourage further policy work to help reduce this uncertainty and communicate the costs of end of life care that might require personal funding.

**Attention shifts to healthspan**

An increase in life expectancy is often used as an indicator of success, but as progress slows, many people may believe there are diminishing returns from policies seeking to extend life. Attention naturally shifts “from lifespan to healthspan”\(^43\).

The goal becomes to extend the period of life without health issues and minimise the period during which ill-health affects quality of life. The global trend to focus on how healthy people are in later life, and their wellbeing, is consistent with New Zealand policy. New Zealand’s draft Strategy for an Ageing Population\(^44\), reflects that aspiration in its title: *Better Later Life – He Oranga Kaumātua* 2019 to 2034.

The key areas for action in *Better Later Life – He Oranga Kaumātua* reflect multiple dimensions of wellbeing for older people: financial and economic security, access to health and social services, housing choices, social connection and participation, and, accessible built environments.

One way to identify factors for wellbeing in later life is to ask what makes people want to live relatively long or short lives\(^45\). From the limited research available a complex picture emerges of the different positive and negative expectations for old age individuals hold. It implies that wellbeing for all ages might be improved if expectations for later life could be framed more positively.

**Healthy life expectancy as a wellbeing measure?**

Healthy life expectancy (HLE), defined as “the number of years that a person at birth can expect to live in good health, taking into account premature mortality and disability” is included in Indicators Aotearoa New Zealand\(^46\) which are the measures StatsNZ is developing for New Zealand’s wellbeing.

A similar indicator is included in the Treasury’s Living Standards Framework (LSF)\(^47\), along with period life expectancy at birth and measures related to specific causes of death.

However, HLEs do not relate to actual lifespans. HLEs indicate proportions of life that may be subject to disability or lack of function, but as they are on a period basis they are parts of a hypothetical lifespan. They can only be “the number of years a person can expect to live in good health” if the rates of ill-health and mortality rates, at all ages, stay as they were in the period measured.

HLEs can change over short time periods which make them important warning signs of health issues within groups in the population, but not good predictors of future situations.

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\(^43\) Olshansky (2018)

\(^44\) Office for Seniors (2019)

\(^45\) Bowen and Skirbekk (2016)


There are other reasons why care needs to be taken interpreting HLEs:

- The ‘unhealthy’ part is often assumed to always be a single period at the end of life, but periods of relative ill-health can and do occur at different times.
- HLE combines data on mortality with subjective assessments of being in good health from surveys. There are different HLEs depending on the survey question asked about health, for example: active life expectancy (ALE), independent life expectancy (ILE), life expectancy with dependency (LED), disability-free life expectancy (DFLE).
- All HLEs depend on survey respondents’ self-reports, which may not tally with an objective assessment of "health" or ability. Self-reports may not provide consistent measures over time, or between groups.

The latest analysis of New Zealand’s HLE used measures of ILE, ALE and DFLE to 2013. It concluded that people in New Zealand live longer in good health but spend proportionally more time living with dependency than in 2006. Roughly speaking, after age 65, New Zealanders on average would have half their remaining lifespan living independently, needing some assistance thereafter, with daily assistance needed for three to five years. It also highlighted substantial inequality between Māori and non-Māori groups.

**Wellbeing at end of life**

In terms of wellbeing and understanding healthcare needs, the nature of health at the end of life is clearly an important topic on which HLE sheds some light. Recent work on health trajectories at the end of life adds further evidence.

By linking data on deaths in 2015 from multiple sources, it has been possible to estimate future numbers of deaths in New Zealand, by age, in each of five “trajectories”, meaning a group of people who have similar care needs at end of life. The projections are made to 2038. Figure 6 shows the proportions of projected deaths in 2019 by trajectory. From age 80 onwards, the largest trajectory group is people who will die with some dementia, meaning that their residential or at home care needs at the end of life are high. Many of the frail elderly with chronic disease also need residential or at-home care, and those who will die of cancer will have more need of care in a hospice or hospital.

The projections of numbers of deaths by trajectory to 2038 show that the dementia group is likely to grow the fastest. Total deaths are projected to increase from 32,600 in 2019 to 45,500 in FY2038, an increase of 40%. Over the same time period, cancer group deaths are projected to increase by 14%, chronic disease group deaths by 59% and dementia group deaths by 73%.

The funding and provision of end-of-life care is complex and inconsistent across health trajectories. (Figure 7). People do not know what health situation they will be in at the end of life, how long they will need care, where they will receive it, how much of the cost they will need to cover and the financial implications for themselves or whānau. Those in the dementia group are most likely to be in Aged Residential Care, to which most of their New Zealand Superannuination is paid directly.

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48 Ministry of Health (2015)
Figure 6: Estimated proportion of deaths in each age band in 2019 by trajectory group

Figure 7: End of life care financial flows

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49 From DHB Births and Deaths Projections 2019-2038 (2018 Update) supplied to Ministry of Health by StatsNZ. Analysis of trajectory groups by Heather McLeod and June Atkinson for Trajectories Project, linked data for deaths in New Zealand in 2015.

50 From McLeod and Atkinson (2019)
4. What matters from understanding longevity for Retirement Income Policy

**Centrality of longevity risk**

Anyone planning retirement should ask *How long will I live?* As we have discussed in previous publications\(^51,52\), and emphasised in the above, a critical problem in later life stems from longevity risk: the risk of living longer than expected so that income runs out too early. New Zealanders need tools to help them:

- accumulate savings, usually in KiwiSaver or housing, which will be enough to supply the income expected in retirement.
- decumulate savings, managing longevity risk, so that income expectations are met throughout life.

Both of these aims are made more difficult as lifespans lengthen if the retirement phase gets longer while the working (and saving) period stays constant. The increasing proportion of people working past age 65\(^53\) shows one way in which people are responding to this reality.

New Zealand Superannuation (NZS) and KiwiSaver both contribute to these aims.

**New Zealand Superannuation (NZS)**

NZS gives a ‘backstop’ income base in retirement, so reducing the amount needed to be saved. It is government-backed insurance against longevity risk: it lasts however long we survive. Even if people use an online longevity calculator to find their average or likely life expectancy, and even accounting for individual health prospects, the element of chance means it is still possible to live longer than the answer given. This point is critical for understanding the equity of NZS, and that it is a necessary complement to policies enabling saving.

Our view is that the primary purpose of New Zealand Superannuation (NZS) is to **protect the population against longevity risk (living longer than expected)** and that it should do so in a way that is consistent with the principles of equity, adequacy, empowerment, sustainability and access\(^54\).

We believe that the current structure of NZS should be kept because NZS fulfils its purpose well, is broadly equitable, understandable, easily accessed by the majority of retirees, and, enables people to save and plan for their retirement with confidence.

**NZS age of eligibility**

The trend towards longer lifespans argues, on the one hand, for an increase in the age of eligibility to New Zealand Superannuation:

- **Increasing the age of eligibility has a direct impact on a significant stress to the cost of NZS** – lifespan gains already made and those expected in future. The same stress affects private retirement income, and raising the age is an important public indicator that could encourage people to plan for longevity.

\(^{51}\) RIIG (2015)  
\(^{52}\) RIIG (2017)  
\(^{54}\) For more detail, see the companion paper to this report RIIG (2019)
• **An objective method of setting the age of eligibility, such as keeping the average proportion of life receiving NZS roughly constant, is intergenerationally fair.** “Even with an eligibility age of 68 years, today’s 25-year-olds would be expected to receive NZS for longer than the cohort aged 85 who had an eligibility age of 60 years”55.

• **As people live longer, we are proving generally healthier, able and willing to work for longer**, so raising the age of eligibility would not be difficult for many, and supplementary assistance would be available for those in need.

• **Sooner is better** for making the announcement to ensure enough time is given for people to plan for an increase in the age of eligibility. A planned increase could be shelved if longevity starts to go backwards.

• **An increase in the age of eligibility would keep NZS in line with other countries** including Australia and the UK. There is a cost to paying NZS to migrants before the deduction of their overseas public pensions can take effect.

• **As people live longer, NZS costs more**: from around 5% of GDP now to around 7% of GDP in 2045, gross of tax56. Net of tax paid on NZS this is an increase from 4.1% of GDP now to 5.7% of GDP in 204557.

• **The money saved by increasing the age of eligibility could be used for other social purposes**, for example, to address health disparities or the increasing costs of end-of-life care. The savings from a proposal to increase gradually the age of eligibility to 67, from 2037 to 2040 were estimated to be 0.53% of GDP in 2040/41, gross of tax and net of additional supplementary benefits58.

On the other hand, there are arguments for keeping the age of eligibility at age 65:

• **New Zealanders generally want their current system to stay in place, unreformed.** NZS resonates with New Zealand values59.

• **There is no apparent cost crisis for NZS.** It is a policy choice to keep funding NZS at age 65, which can be afforded. A Living Standards Framework analysis of a policy proposal to raise age of eligibility would not have cost as the only measure.

• **Although average lifespans are increasing, there is significant variation in lifespans.** Equity is put at risk if eligibility is based on the average of the total population when we know the distribution of lifespans in Māori and Pacific communities are skewed towards younger ages than the distribution of non-Māori lifespans.

• **There is no practical way the age of eligibility can vary** according to ethnicity or socio-economic position, so equity suggests it should be kept at the age which makes sense for the groups with lowest life expectancy.

• **Keeping the age of eligibility at age 65 is one way everyone can share in the wealth of the country**, recognising the changing nature of work, and that younger people may need NZS more than older generations because of lower savings and less home ownership.

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55 O’Connell (2013)
56 The Treasury (2016). This assumes contributions to the NZ Superannuation Fund from 2020/21 and withdrawals from 2032/33; all other policy settings as current.
58 Office of the Minister of Finance (2017)
59 O’Connell (2018), Gill et al. (2018)
Many New Zealanders do not want a change to NZS, and the arguments for change are not one-sided. **If change is decided on**, then:

1. Of the possible changes which could be made to NZS, **increasing the age of eligibility is a reasonable option, with manageable consequences**. Alternatives include reducing the level of benefit, which risks adequacy; or, means-testing which risks inequity, complexity and associated costs, and, barriers to working or saving.

2. Our favoured approach on age of eligibility is to use **an objective formula to keep the average proportion of life spent on NZS roughly the same for each cohort**, with gradual planned increases, tempered by assessment of trends in population health, work patterns and the economy. A multidisciplinary expert panel should make recommendations. This approach, working in the UK, was set out in more detail in a paper for the Review of Retirement Income Policy 2013\(^60\).

In any event:

3. We trust the age of eligibility will continue to be debated in Reviews of Retirement Income Policy. We seek to ensure that the **debate relies on good interpretation of up-to-date longevity data with consideration of a full range of indicators** to convey average expected lifespans and associated uncertainties.

**KiwiSaver (and other lump sum retirement savings schemes)**

Policies to enable access to and protection of KiwiSaver (and other retirement savings schemes) directly help New Zealanders accumulate savings which can then be decumulated to provide income in retirement.

Analysis of the success of such policies often looks at the gap in self-provision – the difference between what is accumulated and what is deemed to be a suitable amount for income in retirement. There can be different views of the latter, so such analysis needs to be interpreted with care, but the gap can be surprisingly large. A recent analysis by the World Economic Forum put the gap at between 8 to 20 years of retirement income as the average shortfall across the developed countries considered, with the gap more pronounced for women than for men\(^61\).

Recent changes to policy on KiwiSaver allow members to contribute or join after NZS eligibility age (currently age 65), albeit without compulsory employer or Government contributions. Existing policy allows members to leave their account, withdraw their account or draw down their account at any time after this age. There is flexibility in KiwiSaver for the decumulation phase.

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\(^{60}\) O’Connell (2013)  
\(^{61}\) WEF (2019)
Tools for the accumulation phase
KiwiSaver started in 2007 so it is not surprising that emphasis has been on the accumulation phase. There is a significant amount of general guidance available to individuals on how much they might need to save to provide a reasonable income in retirement. Financial advice tailored to individual circumstances is also available and recommended especially for those who are not confident in managing their financial affairs, or who are in unusual situations.

Tools for the decumulation phase
As member balances increase, and more members reach NZS eligibility age, more attention is now being given to the decumulation phase.

Compared with the accumulation phase (where it is usually agreed that any saving is better than none), decumulation is harder to generalise and there are more risks involved. People have limited resources in later life, especially once they have finished working, so it is hard to recover from a mistake or bad luck. People have different starting points, and preferences and ambitions for retirement vary. Investment, inflation, and, as this paper emphasises, longevity risks are important in later life, but are not well understood.

Longevity risk can be dealt with by buying an annuity product, but the New Zealand market is currently limited to one product which will not be right for everyone.

In a previous paper ¹, we concluded that products are available by which to decumulate savings, but we identified a lack of access to guidance to help individuals decide on how much to draw down from savings over time, understanding the risks in doing so. To help bridge this gap, we published a paper suggesting Rules of Thumb for decumulating using KiwiSaver drawdowns ².

Rules of Thumb are not intended to be a definitive solution for all individuals in all circumstances, or a replacement for full financial advice, but are a broad steer for retirees with modest savings who have little other information. We suggested a set of four Rules of Thumb to capture a range of different preferences of drawdown patterns.

- **Fixed % Rule**: Each year, take a fixed percent of the starting value of retirement savings.
- **Inflated % Rule**: Each year, take a fixed percent of the starting value of retirement savings, but increase that amount each year with inflation.
- **Fixed Date Rule**: Run retirement savings down over the period to a set date – each year taking an amount equal to the current value of retirement savings divided by the number of years left to the set date.
- **Life Expectancy Rule**: Each year take out the current value of retirement savings divided by the average remaining life expectancy at that time.

From 2020, KiwiSaver providers will have to send their KiwiSaver members projections of their retirement savings and the income likely to be available in annual statements. The projections will be calculated on a standard basis so that comparisons between providers will be like-for-like. It is anticipated that the information will help people project forward to see what their retirement savings might yield and how choices on contribution rate and fund selection might influence the level of retirement income.

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¹ RIIG (2015)
² RIIG (2017)
The projection of annual income will be individualised, using the accrual projected balance for that KiwiSaver, and uses a Rule of Thumb: income is taken out each year so that the fund runs out at a set date, at age 90 years\(^{65}\).

While this approach should increase empowerment to save, it could go further in increasing understanding of retirement income outcomes by reflecting more on the uncertainty of lifespans.

**Lesson from longevity trends: uncertainty of lifespan**

We showed earlier that StatsNZ’s cohort life expectancy median scenario for the individual’s cohort is a reasonable base for future planning (see Table 1). As we have seen, this gives the average of a distribution of ages at death. Uncertainty remains:

- What if future mortality is different from the past? Will the scenario change significantly, so that the whole distribution changes?
- Where on the distribution will I fall? Will I die relatively young or old?

The uncertainty in future scenarios is of less importance for an individual and can be taken into account by considering the different scenarios presented in StatsNZ’s *How long will I live?* calculator\(^{66}\). The recent slowdown in life expectancy gains discussed in earlier sections helps here, at least for individual planning, as the projections of population mortality will change less than they have been doing over time.

The second uncertainty, across the distribution within a scenario, is more problematic for an individual. Take for example, an individual starting income drawdown from a fund at age 65 intending it to last for a lifespan of 90 years. We estimate the fund would be 20-30\% too low to provide the same income for an actual lifespan of 100 years, depending on future investment returns.

We suggested following the analysis of lifespan variation in chapter 2 of this paper that people should test their retirement plans for more than a single age, to capture the uncertainty in longevity risk and the importance of it in later life. We recommended that **people in their 40s or older should use an estimate for their likely lifespan of 25 to 30 years after age 65** (to age 90 to 95). Testing a retirement plan to age 100 would be cautious for this group and sensible for younger people, especially if female, with a healthy lifestyle or with long-living parents or grandparents.

This suggests that the “run down to age 90” rule to be used in regulations is not intended to give a guide to income lasting throughout life. The implicit assumption is that people using this rule, in many circumstances with no other saving, would rely on NZS after age 90. While that is a valid strategy, it is possible the projections will not be understood as such, as people are not likely to appreciate the probability of living beyond age 90.

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We believe that New Zealanders need good information on how much to save for retirement and how to decumulate during retirement. Currently, guidance for New Zealanders is better for accumulation than for the decumulation phase.

The readily available information on longevity risk and decumulation options is incomplete. We welcome the new regulations for KiwiSaver statements but recognise limitations in this first attempt to show future income projections.

We recommend, specifically for KiwiSaver statements, and consistently for other market communications on decumulation whether it be general guidance, product information, personalised statements or financial advice that:

1. Statement wording and underlying projection models are updated regularly to allow for the most recent data and best understanding of the range of longevity outcomes and trends (as well as economic variables).

2. Statement wording encourages KiwiSavers to consider decumulation options for a range of longevity outcomes, for example, to age 90, 95 and 100 years, to increase understanding about the consequences of longevity risk.

3. A future set of regulations for KiwiSaver projections includes wording to explain different possible drawdown strategies and consequences, including illustration of two or three different rules of thumb, to allow for preferences other than the one currently in regulations.
Bibliography


Retirement income policy in New Zealand: A discussion of context and principles

By the Retirement Income Interest Group of the New Zealand Society of Actuaries

September 2019
Purpose

This discussion paper outlines the views of the Retirement Income Interest Group (RIIG) of the New Zealand Society of Actuaries on what makes for good retirement income policy in New Zealand.

We set out first some key points of context in which retirement income policy operates. We then set out our views on a set of principles which retirement income policy should follow and comment on the extent to which current policy is consistent with each principle.

This discussion paper forms part of our submission to the 2019 Review of Retirement Income Policy, along with a research report *Longevity in New Zealand: Implications for Retirement Income Policy*.

This paper relates to items 2 and, especially, item 7 in the Terms of Reference. Item 7 asks about the purpose and principles of NZ Superannuation.

Our view is that the primary purpose of New Zealand Superannuation is to protect the population against longevity risk (living longer than expected) and that it should do so in a way that is consistent with the principles of equity, adequacy, empowerment, sustainability and access, as defined in more detail in what follows.

The term “retirement” is used in this paper for the phase of life when most people do significantly less or no paid work and generally need income from their savings or other sources. While some individuals may transition from full employment to being fully retired on a specific, pre-planned day, the reality is rarely this straightforward.

The members of RIIG who authored this paper are Alison O’Connell, Catherine Edgar, Christine Ormrod, Daniel Mussett (Convenor), Janet Shirley and Kelvin Prisk. With thanks to Janet Brownlie for valuable input.

This paper represents the collective personal views of the members of RIIG and does not necessarily reflect the positions of our employers or other members of the New Zealand Society of Actuaries. Any errors are our own.

For further information please contact: Convenor, Retirement Income Interest Group by email society@actuaries.org.nz

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Retirement income context

1. Retirement income policy operates in a complex environment.
2. Retirement income comes from many sources.
3. The New Zealand population is diverse; individuals’ resources and needs are diverse.
4. The factors influencing future income requirements are uncertain.
5. Needs change throughout retirement.
6. There is a wide range of financial capability among New Zealanders.
7. Many different areas of legislation affect retirement income outcomes.
8. Once in retirement, retirees have limited ability to improve their financial position.

Retirement income principles

Retirement policy should:

1. be equitable,
2. provide for an adequate level of income for retirees,
3. be empowering, by encouraging people to save for their retirement and enabling people to plan for their retirement with confidence,
4. be sustainable, and
5. be understandable and easily accessed by the majority of retirees.
Context

1. Retirement income policy operates in a complex environment

There are many challenges to creating effective retirement income policy. As with many other areas of public policy it is about trade-offs, especially equity vs. adequacy vs. sustainability vs. simplicity.

There are many other sectors of society needing resources and attention.

Many areas of policy affect retirement income outcomes including those governing entitlements to statutory benefits, employment, taxation, financial services regulation, healthcare, aged care and more.

Individual lives are complex, and there is no standard path to, or through, retirement. Health, life choices or financial shocks can make large differences to retirement outcomes.

2. Retirement income comes from many sources

Private income in retirement may come from:

- wages from employment
- KiwiSaver
- retirement savings
- an employer-sponsored retirement scheme
- income from rental property or business ownership.

New Zealand Superannuation is provided if an individual:

- is aged 65 or older
- is a New Zealand citizen or permanent resident
- has been resident and present in New Zealand for not less than 10 years since age 20, of which 5 years must be since age 50
- is ordinarily resident in New Zealand at the time of application.

A Super Gold card is provided to all New Zealand Super recipients. It gives discounts at participating retailers and service providers. The most valuable benefit is likely to be the local public transport benefit (often free).

There are various means-tested supplementary benefits provided to persons in need, for example:

- disability allowance
- accommodation supplement
- temporary additional support
- residential care subsidies
- residential care loans
- funeral grants
- council rates rebate scheme.

There is fairly comprehensive universal healthcare. The Community Services Card provides subsidised healthcare services to those on low incomes including those over 65 years of age. Costs relating to accidents are covered by ACC.
3. The New Zealand population is diverse; individuals’ resources and needs are diverse

Health and employment opportunities vary among individuals and over time, before and after retirement. Income during working life varies both among individuals and over time, affecting the ability to contribute to the individual’s private and public retirement benefits. While most people living in New Zealand are entitled to New Zealand Superannuation, not all are.

Support networks and dependents’ requirements vary both among individuals and over time.

Income expectations and concepts of what is “adequate” vary.

Average life expectancies for certain groups within the general population vary. People in some groups can be expected, on average, not to need retirement income for as long than the all-population average. People with certain risk factors may be expected to spend longer in ill-health than the average, or to be at higher risk of multiple years with cognitive challenges, such as dementia. However, individual experiences within groups can vary even more widely, with some individuals living significantly longer or dying significantly earlier than their group average.

4. The factors influencing future income requirements are uncertain

There are many unknowns influencing future income requirements on an individual basis, but the most significant are a person’s actual lifespan and future health. This uncertainty affects the individual’s ability to plan, especially:

- the amount of time the person will spend in each of the stages of retirement (see below) and spending requirements throughout
- the amount of private savings required and the rate at which to consume those savings.

Other factors which affect the retirement system and make planning difficult for policy makers and individuals include the unknown future changes to:

- the New Zealand economy
- the global economy
- political priorities
- society’s expectations
- technology
- the nature of the workforce

A person may not plan in detail for retirement or do so only implicitly. Longevity risk is the possibility that people live for longer than they expected when they did their financial planning for retirement.

5. Needs change throughout retirement

It can be helpful to think of retirement as broadly three phases: active, restricted and frail. Not all retirees will spend time in every phase and the duration spent within phases will differ. For many people, the boundaries between phases will blur.
This framework suggests that spending is U-shaped, that is, high when newly retired, low when activity reduces and then higher again if health worsens, but this largely depends on the nature and incidence of any health problems and the availability of support. Individuals will move through these stages at different ages based on their own health and financial situation.

6. There is a wide range of financial capability among New Zealanders

This means it is an ongoing challenge to equip all New Zealanders with the knowledge and tools they need to plan and manage their retirement effectively. Product providers have a responsibility in this area, as well as regulators and government agencies.

7. Many different areas of legislation affect retirement income outcomes

As described above, retirement income can come from many sources and includes indirect income and benefits. Legislation affecting any of these will affect retirement income.

The impact can be indirect, for example the amount of New Zealand Superannuation is determined based on wages and so any legislation affecting wage growth or remuneration definitions may affect the amount of New Zealand Superannuation payable. In addition, taxation has a strong influence on employment and investment choices both before and after eligibility for New Zealand Superannuation. It affects the way in which people save and how much they save.

Legislation relating to statutory benefit entitlements directly affects retirees. Eligibility for the benefits available from New Zealand Superannuation, the health system, ACC, the Gold Card and the welfare system, and the quantum of those benefits, can and do change over time.

8. Once in retirement, retirees have limited ability to increase their savings

Individuals’ outcomes are uncertain: private savings may not grow as quickly as expected, inflation may erode spending power, expenses may be greater than expected and individuals may live longer than they expect.

There has been a strong trend of increased employment after age 65 in New Zealand. Even so, as people age it generally becomes harder to provide for unexpected changes which require increased personal income or capital. Additional future income or capital can only come from further employment (including self-employment), release of equity from property, unexpected gains on accumulated assets, or gifts, whether from family, trust, or some other voluntary contributions whether in the form of money or in kind.
Policy Principles

1. Equitable

What
Retirement policy should aim to treat all retirees and potential retirees fairly and equitably, regardless of their circumstances or personal attributes, including across generations.

Why
While retirement income policy should work for a diverse population, it should not be at the expense or advantage of any particular group if it is to serve the population as a whole fairly.

Fair and equitable can mean different things to different people but, in this context, we mean fair and equitable in line with social conscience and natural justice. Treating people fairly and equitably does not necessarily mean that everyone should receive the same level of income but neither does it preclude doing so.

How
The near-universal nature of New Zealand Superannuation is the main contributor to equity in New Zealand retirement income policy. Employer contributions to KiwiSaver are at the same rate of earnings (3%) for all employed members, and the member tax credit is at the same matching rate to members contributions, capped at $521.43 a year, which prevents significant inequity between high and low earners.

2. Adequate

What
The amount of income a retiree has in retirement should be adequate to provide for their individual needs and take account of their individual circumstances e.g. their lifestyle, family situation, related spending patterns and how long they live.

However, at a minimum, Government-provided income should alleviate old age poverty and hardship, promote positive and active ageing, and facilitate the development and maintenance of social cohesion.

Why
An adequate level of retirement income enables individuals to sustain themselves and contributes to social cohesion, positive aging and individual and societal wellbeing.

However, not everyone will be able to build up their individual private resources to achieve an adequate income. Government-provided income is the efficient and effective way to provide a modest basic income for all.

How
The level of New Zealand Superannuation and KiwiSaver policy settings (especially default member contribution rates and employer contributions) contribute to a basic level of adequacy of retirement income. Adequacy beyond this is a matter of personal choice and circumstances, with information and tools provided (for example, on sorted.org.nz) for individuals to plan for their own perceived adequacy gaps. Retirement saving through other retirement vehicles is further supported by a regulatory framework.
3. Empowering

What
Retirement systems should at least not penalise, and at best encourage, individuals to save towards their own retirement income.

In addition, whilst retirement systems need to react and evolve in response to changes in the environment in which they operate, changes should be gradual rather than sudden so as to allow people to plan for their retirement with confidence.

Public confidence should be safeguarded with appropriate supervision. Regulatory authorities have a key role in this regard. However, it is important that an optimal balance of regulatory requirements is struck: too much regulation can be onerous, stifle innovation and discourage participation and hence undermine competition. Too little regulation can leave stakeholders vulnerable to risks and unfair treatment.

Why
Systems which discourage personal saving, or a failure of public confidence in retirement policy or retirement savings products, could result in a reluctance to save and lead to a decline in standards of income adequacy and wellbeing in retirement.

People need to be able to plan many years ahead for their retirement and once they are retired their ability to increase savings is limited. Therefore, any adjustments to an individual’s savings requirements, or in policy settings, should be eased in gradually where possible. “Cliff-edge” changes can create intractable unfairness and adversely affect confidence in the system.

How
New Zealand Superannuation empowers people by being an individual entitlement and by not dis-incentivising work or saving, as it is not means-tested. KiwiSaver incentivises saving, empowering through choice of participation, scheme provider, fund options and savings rate. Prudential and market conduct regulation applies to promote confidence in sound and efficient financial markets.

4. Sustainable

What
Retirement income policy should be sustainable in the sense of being likely to be affordable in future, and to have the continued support of New Zealanders.

Why
Retirement income is largely met from general taxation and personal savings. To be sustainable, retirement income policy needs to be able to be paid for. Future changes to population and employment in New Zealand have a direct impact on the future cost of New Zealand Superannuation and other government benefits to retirees, including healthcare, and the sources of revenue to pay for such benefits. Future longevity and health are critical determinants of the future cost of State-provided benefits to retirees and of the amount retirees will need to accumulate in private savings.

How
Regular reviews of retirement policy help to keep policy sustainable. The Retirement Commissioner has a crucial role in ensuring that reviews are informed by up to date evidence on key trends, changing needs and public perception that policy is addressing their needs and values.
5. Understandable and easily accessed

**What**
Retirement income policy should be simple to understand and easily accessible, with decision-making made easy for all individuals.

**Why**
Retirement income policy has to operate in an environment where complexity and suboptimal financial capability is widespread.

As a result, retirement income policy must cater for those who do not have high levels of knowledge, capability or for other reasons cannot deal with retirement income choices throughout their life or at times. For example, many New Zealanders underestimate how long they are likely to live, how much income they may need and how much they may therefore need to save. As individuals age, cognitive abilities can reduce, with some individuals being less likely to be able to (or want to) make well-reasoned decisions for themselves.

**How**
New Zealand has well-developed financial capability tools in public and private sectors. Compared to other countries’ systems, New Zealand’s retirement income policy is relatively simple, which helps greatly in making it understandable and accessible. The eligibility criteria for New Zealand Superannuation are straightforward to understand and operate. It is easy to join and stay a member of KiwiSaver because of auto-enrolment to a KiwiSaver account which is kept throughout life.