



New Zealand Society of Actuaries

Drawdown Rules of Thumb: Update 2023

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

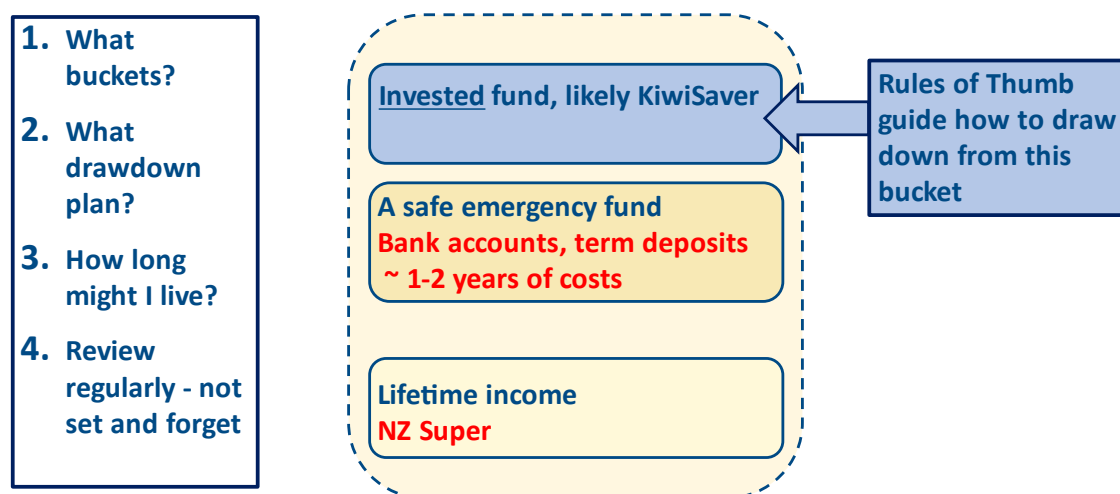
August 2023

Introduction

This report updates the drawdown Rules of Thumb first introduced to Aotearoa New Zealand by the Retirement Income Interest Group (RIIG) of the New Zealand Society of Actuaries (NZSA) in 2017.

The NZSA is the professional body for actuaries practising in New Zealand. Actuaries find insights by analysing past trends, estimating future outcomes and managing future risks. Actuaries provide advice in sectors including healthcare, superannuation and Kiwisaver, insurance, banking and investments.

In a series of reports¹, RIIG has shown that the KiwiSaver account balances for those coming up to the age when they can draw down are modest. This makes the case for simple, generalised drawdown guidance. RIIG describes a **drawdown framework**, shown below:



The Retirement Commissioner's recommendations in the 2022 Review of Retirement Income Policies framework are consistent with this framework. Related work is now underway across the KiwiSaver sector to develop content to help people thinking about drawdown in retirement.

Previous publications from the Retirement Income Interest Group of the New Zealand Society of Actuaries are available on the [Thought Leadership](#) section of the NZSA [website](#).

Current members of RIIG are: Alison O'Connell (Member, Advisory Board to the Retirement Commissioner), Christine Ormrod, Ian Perera (Convenor), Fraser McKay, Kelvin Prisk, Simon Ferry and Dinushi Jayasuriya. We would like to thank Daniel Mussett and Jonathan Lowe for their help with the drawdown model.

Where views are expressed in this paper, they are the collective personal views of the members of RIIG. This paper does not necessarily reflect the positions of our employers, other members of the New Zealand Society of Actuaries, or any KiwiSaver provider. Any errors are our own.

The paper is intended for informed readers – policy makers, regulators, providers or advisers – and we hope it is also interesting for individuals who are considering how to prepare for their own retirement. Nothing in this paper should be taken as financial advice or as a recommendation for how any individual should manage their money.

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

Summary

Rules of Thumb give a reliable, useful steer, suitable for a range of personal drawdown priorities.

The four Rules provide different income profiles, which offer a way of engaging retirees in thinking about the implications of drawdown decisions, especially investment and longevity risks.

Rule of Thumb	Most suitable for	Pros	Cons
6% Rule: Each year, take 6% of the starting value of your retirement fund.	People who want more income at the start of their retirement, to “front-load” their spending, and are not concerned with inheritance.	Very simple. Known, regular income.	Income will not rise with inflation. Risk of retirement fund running out within lifetime.
Inflated 4% Rule: Take 4% of the starting value of your retirement fund, then increase that amount each year with inflation.	People worried about running out of money in retirement or who want to leave some inheritance.	Fund likely to last near to a full lifetime. Income will rise with inflation.	Lower income initially than other options.
Fixed Date Rule: Run your retirement fund down over the period to a set date – each year take out the current value of your retirement fund divided by the number of years left to that date.	People comfortable with living on other income (for example New Zealand Superannuation) after the set date. Those wanting to maximise income for most of their life and not concerned with inheritance.	Income for a known selected period.	Amount of income varies from year to year. Annual calculation necessary.
Life Expectancy Rule: Each year take out the current value of your retirement fund divided by the average remaining life expectancy at that time.	Those wanting to maximise income throughout life and not too concerned with inheritance.	Efficient use of fund to provide income for whole of life.	Amount of income varies from year to year, low in later years. Annual calculation necessary; relatively complicated.

Options for more income. The most certain way to be able to draw down more income than the baseline illustration is to start drawdown at a later age. Increasing the proportion of growth assets in the invested fund should lead to higher returns which allows more income to be generated – but it also increases uncertainty and the potential for less income to be available. It is important that retirees do not ‘set and forget’ their drawdown plan. Plans should be reviewed regularly especially if investment conditions change.

1. Explaining Rules of Thumb (RoT)

RoT are guidance not advice

- The charts on the pages following show the results from the four Rules in a theoretical situation: a person aged 65 with \$100,000 in a balanced KiwiSaver fund who follows the Rule throughout life. The illustrations are intended to compare the Rules, highlighting the different outcomes, to inform someone starting to think about drawdown options.
- A drawdown decision is about all the following:
 - **How much income** is drawn down each year from a given KiwiSaver account balance.
 - **The profile** of how that income changes over time: Certain amount each year or an amount which varies every year? Rises with inflation or level amount?
 - **When the KiwiSaver fund runs down:** At a certain date or uncertain? Leave an inheritance or spend it all?
 - **How simple** it is to run the drawdown rule: Set in advance or need to make a calculation each year?
- The illustrations shown are not personal advice, which would need more personalisation around individual circumstances. They are intended to be a helpful steer as part of more general guidance that may be provided by Sorted, KiwiSaver providers or advisers.

RoT are flexible – not set and forget

- The Rules do not need to be followed exactly, nor does any Rule need to be chosen for life. Less can be drawn down in any year if the income is not needed. If more is drawn down, then the KiwiSaver account balance will be more likely to run out.
- As far as possible, it would be sensible for new retirees to keep their drawdown options flexible until they are clear about how much they are spending and what other income they may receive. Fixing a drawdown plan for life may work better later in retirement if or when spending patterns are settled and reviewing finances regularly becomes a burden.

Our updated assumptions

- RIIG last updated its RoT illustrations in 2020. Since then, investment markets have been turbulent due to disruptions including the Covid-19 pandemic and geo-political events.
- Compared to the 2020 report, this paper assumes higher returns, more volatility and higher inflation. Mortality expectations have not changed significantly, though the future chance of living to the highest ages has slightly reduced. All assumptions are detailed in the Technical Appendix.

Effect of updating

- Updating assumptions has not changed the different effects of the Rules, and who they are suitable for, as described in the table on the previous page.
- The income generated under the new assumptions appears to last for longer but is more uncertain than before. This is a reminder that a retiree on a drawdown plan should review every so often, especially if investment conditions change.

2. Rules of Thumb – Illustrative Income Profiles

The income profiles shown in the following charts are modelled using our current assumptions, which are described in the Technical Appendix.

How to read the charts

The charts show potential income patterns if each Rule is followed throughout life. Note that we encourage regular review and change if preferences change. These charts should not be read as “set and forget” options.

- **Income:** The income shown is the income to be drawn down each year from age 65 from a starting fund of \$100,000. It does not include any other income such as New Zealand Superannuation. The figures are based on forward-looking investment conditions for a ‘Balanced’ investment fund (see Technical Appendix).
- **Inflation:** The income shown is ‘real’, that is, adjusted for inflation. This is why the first Rule, which gives a flat income of \$6,000 per annum, appears to fall over time. The \$6,000 will buy less over time due to inflation. The second Rule, which provides an amount that increases with inflation each year, appears flat for the same reason. If the income looks level from one year to the next, that means it will be a higher number of dollars in future but have the same spending power as today.
- **Uncertainty of income:** As investment returns in the future are uncertain, the total available income is uncertain:
 - The dark blue bars show income that is **almost certain**, with a 95% probability of receiving income up to this level and conversely, 5% probability (**very unlikely**) of not receiving this income.
 - The mid-blue bars show additional income that is **probable**, with a 50% chance of receiving income above or below this level which is referred to as the median income.
 - The light blue bars represent further income that **is possible but less likely**, with between 5% and 50% probability of receiving income up to these levels.
- **Uncertainty in lifespan:** To help understand the income prospects in the context of how long a retiree might live, the probability of surviving from age 65 to the age where the colour of the blue bars change is shown, allowing for typical New Zealand population longevity. These probabilities are all rounded to the nearest 5%. For more on longevity prospects, see the Longevity Appendix.

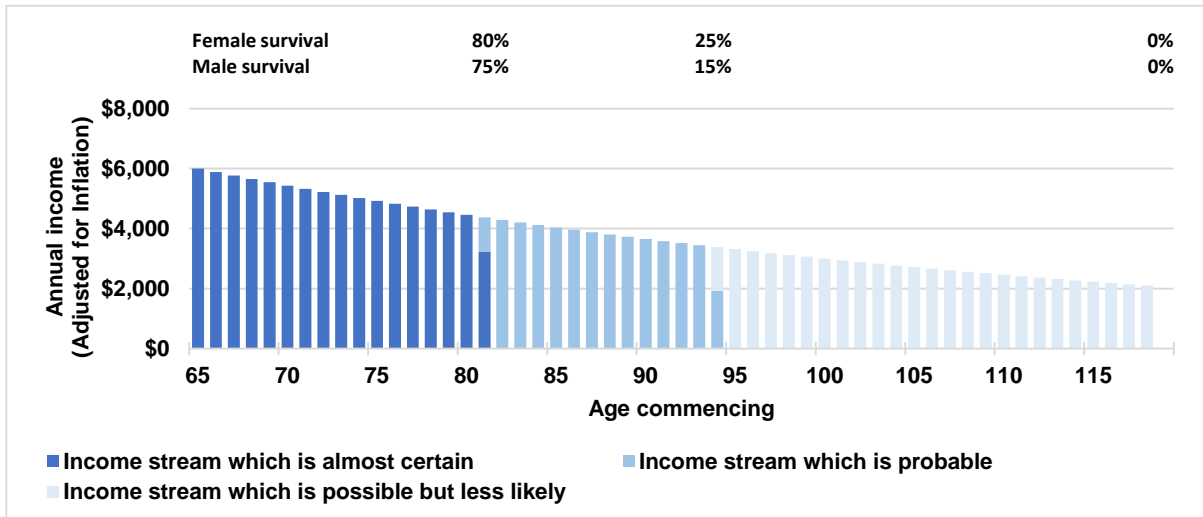
To simplify the longevity question, we suggest that people consider how their retirement plan would shape up if they lived to 90 or 95 years of age.

These Rules are designed specifically for the New Zealand environment.

After the first set of charts for the general case of someone aged 65 with \$100,000 invested in a balanced fund, we then discuss the impacts of changing fund type, starting age, drawdown level or drawdown pace.

Rule 1: 6% Rule

Balanced fund, starting age 65, starting fund \$100,000

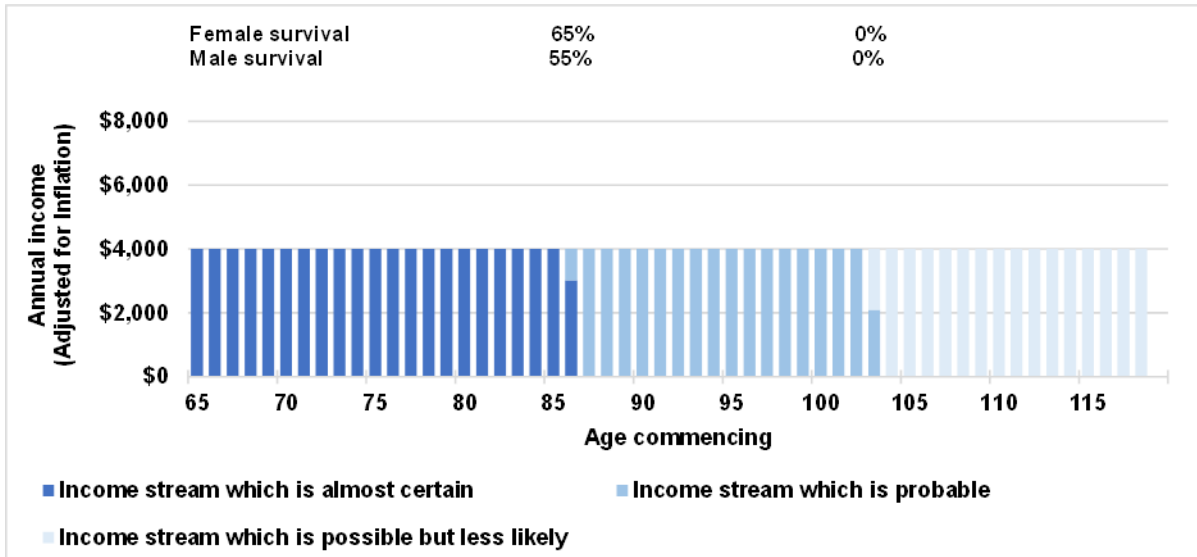


6% Rule: Each year, take 6% of the starting value of your retirement fund.

- Under this Rule, income appears to fall as it provides the same dollar amount each year, the value of which is eroded by inflation. With inflation at 2% per year, the income will have fallen by half in “real” terms by age 100.
- Income will probably last to age 94 and 15% of males and 25% of females are expected to live longer than this.
- It is very unlikely that income will run out before age 81 and 75% of males and 80% of females are expected to live longer than this.
- Because there is some risk of money running out, this is a good choice for people planning to ‘front-load’ spending at the start of their retirement and willing to run the risk of needing to rely on other income towards the end of their retirement.
- This Rule is simple to operate, needing just one calculation at the start.

Rule 2: Inflated 4% Rule

Balanced fund, starting age 65, starting fund \$100,000

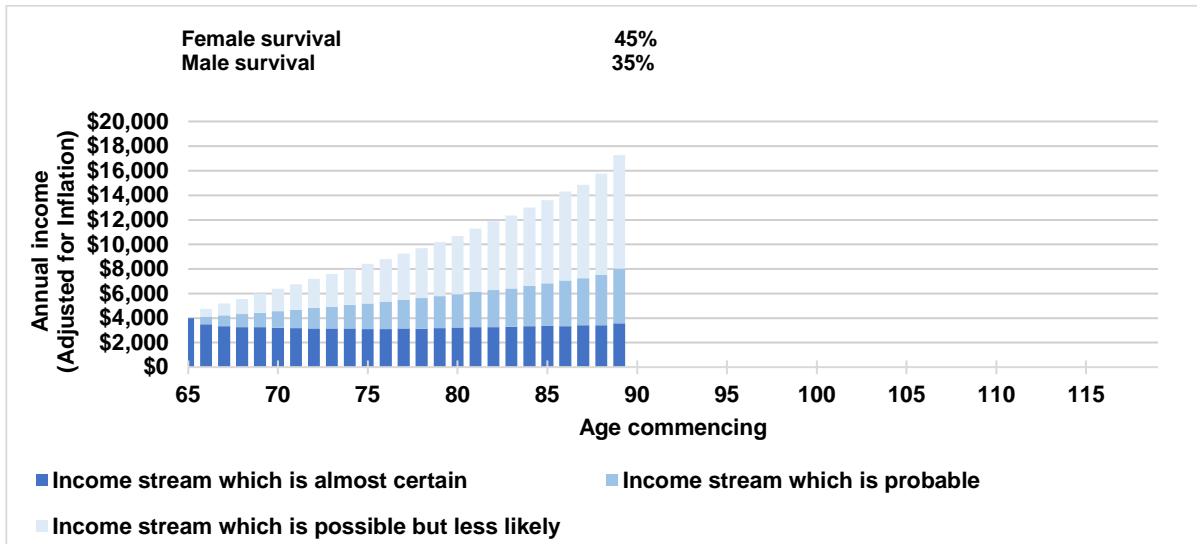


Inflated 4% Rule: Take 4% of the starting value of your retirement fund, then increase that amount each year with inflation.

- Under this Rule, income appears level in the chart above but would increase in dollar amount each year. After inflation is taken into account, the income will be worth the same each year.
- Income will probably last to age 103 and less than 2% of people are expected to live longer than this.
- It is very unlikely that income will run out before age 86 and 55% of males and 65% of females are expected to live longer than this.
- Because this has a small risk of money running out during retirement, this is a good choice for people concerned to make their fund last throughout their lifetime and who don't mind the possibility of some money being left in their fund when they die as an inheritance.
- This Rule is likely to give lower income each year than others.
- This Rule is relatively simple to operate, needing one calculation at the start, although the amount does need increasing each year for inflation.

Rule 3: Fixed Date Rule (25 years)

Balanced fund, starting age 65, starting fund \$100,000

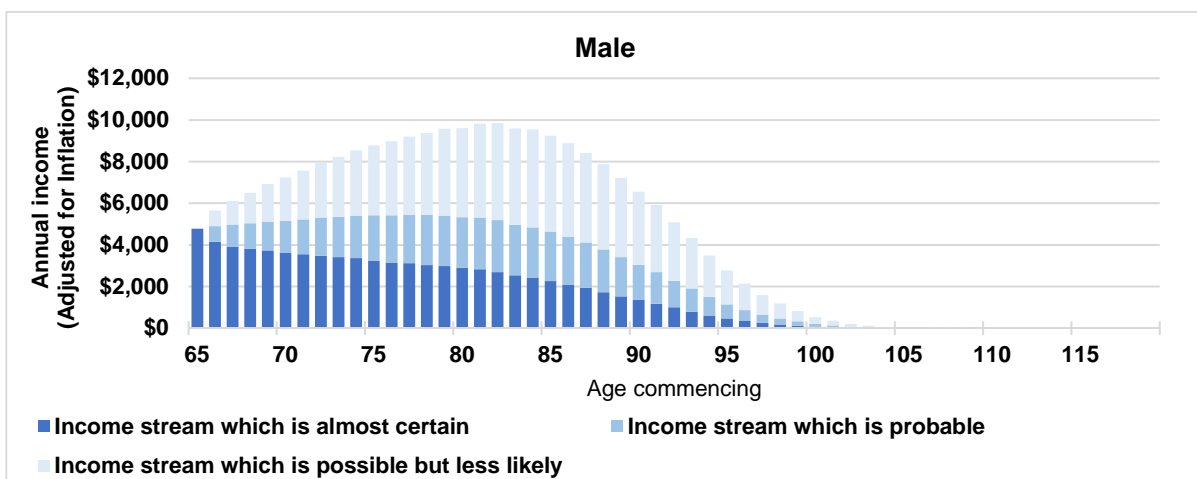
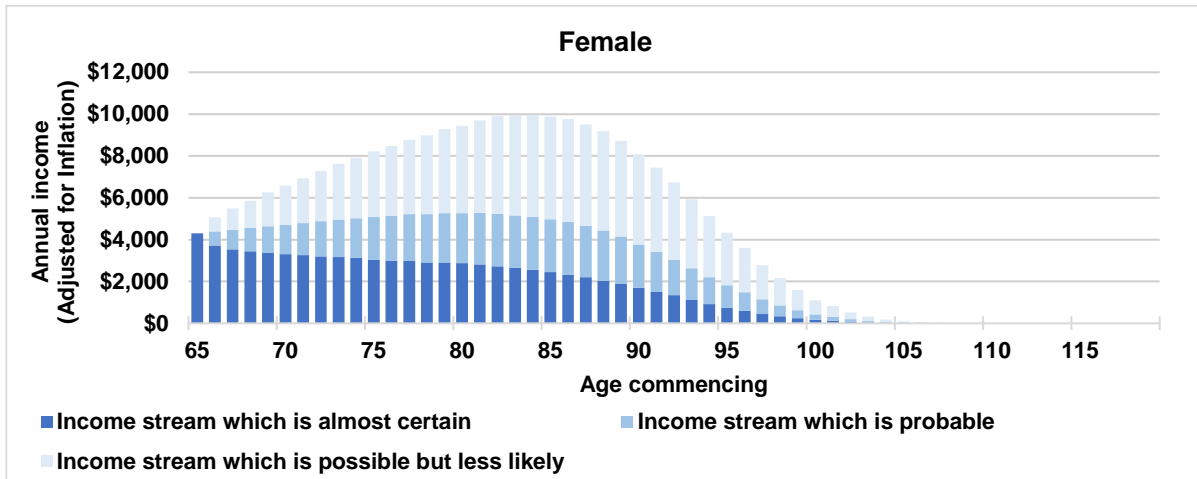


Fixed Date Rule: Run your retirement fund down over the period to a set date – each year take out the current value of your retirement fund divided by the number of years left to that date.

- Under this Rule, income varies each year depending on the fund value at the start of each year.
- In this example the Fixed Date has been chosen as 25 years, until the 90th birthday.
- Starting at \$4,000 in the first year ($=\$100,000/25$) the income is almost certain to stay above \$3,100 in today's values for the 25 years and will probably grow to around \$8,000. The uncertainty is due to the variation in investment returns each year.
- 35% of males and 45% of females are expected to live longer than the fixed date when income stops.
- This is a good choice for people who don't mind some uncertainty in the amount of annual income and who are comfortable setting a date after which they will receive no income from the fund.
- This Rule is relatively simple to operate, although it does need a simple calculation each year.

Rule 4: Life Expectancy Rule

Balanced fund, starting age 65, starting fund \$100,000



Life Expectancy Rule: Each year take out the current value of your retirement fund divided by the average remaining life expectancy at that time.

- Under this Rule, income varies each year depending on fund value and the estimate of remaining life expectancy at that time.
- Starting at around \$4,000 in the first year, the income may reduce, but will probably increase before it reduces. Income is adjusted each year with the aim of the fund running out at the date of death.
- This is a good choice for people who like the idea of targeting the most efficient way to run down the fund through their lifetime and are comfortable with some uncertainty in the amount of annual income.
- This Rule is quite complex to operate on a DIY basis, as it needs the income to be calculated each year, based on a life expectancy number which needs to be looked up from a StatsNZ table, possibly modified by personal choice.

3. Options to consider for more income

1. Invest in a fund with higher expected returns, but at higher risk

The following table summarises the income potential from each Rule for a 65-year-old starting drawdown with \$100,000 invested in a Balanced, Growth or Conservative Fund.

Rule of Thumb	Balanced Fund	Growth Fund	Conservative Fund
6% Rule	<p>Income will probably last to age 94 and 15% of males and 25% of females are expected to live longer than this.</p> <p>It is very unlikely that income will run out before age 81 and 75% of males and 80% of females are expected to live longer than this.</p>	<p>Income will probably last to age 104 and less than 1% of males and females are expected to live longer than this.</p> <p>It is very unlikely that income will run out before age 80 and 75% of males and 85% of females are expected to live longer than this.</p>	<p>Income will probably last to age 89 and 40% of males and 50% of females are expected to live longer than this.</p> <p>It is very unlikely that income will run out before age 82 and 70% of males and 80% of females are expected to live longer than this.</p>
Inflated 4% Rule	<p>Income will probably last to age 103 and less than 2% of people are expected to live longer than this.</p> <p>It is very unlikely that income will run out before age 86 and 55% of males and 65% of females are expected to live longer than this.</p>	<p>Income will probably last to age 110 and less than 1% of people are expected to live longer than this.</p> <p>It is very unlikely that income will run out before age 84 and 60% of males and 75% of females are expected to live longer than this.</p>	<p>Income will probably last to age 96 and less than 10% of males and 20% females are expected to live longer than this.</p> <p>It is very unlikely that income will run out before age 87 and 50% of males and 60% of females are expected to live longer than this.</p>
Fixed Date Rule – to age 90	<p>In the final year of drawdown, annual income is almost certain to be at least \$3,600 in today's terms. There is a 50% chance it will be at least \$8,000.</p> <p>35% of males and 45% of females are expected to live longer than this fixed date when income stops.</p>	<p>In the final year of drawdown, income is almost certain to be at least \$3,100 in today's terms. There is a 50% chance it will be at least \$10,300.</p> <p>35% of males and 45% of females are expected to live longer than this fixed date when income stops.</p>	<p>In the final year of drawdown, income is almost certain to be at least \$3,700 in today's terms. There is a 50% chance it will be at least \$6,100.</p> <p>35% of males and 45% of females are expected to live longer than this fixed date when income stops.</p>
Life Expectancy Rule	<p>There is a 50% chance peak annual income will be \$5,400.</p>	<p>There is a 50% chance peak annual income will be \$6,200.</p>	<p>There is a 50% chance peak annual income will be \$4,800.</p>

- Compared to investing in a Balanced Fund, a Growth Fund is more likely to increase income or allow it to last for longer. However, uncertainty increases. Both the range of potential income levels and the range of ages at which income runs out become wider.
- Compared to investing in a Balanced Fund, a Conservative Fund is more likely to decrease income or reduce the length of time for which it lasts. However, outcomes are more certain.
- The different types of fund suggest similar ages to which a regular income withdrawal will “almost certainly” last. This could be interpreted that a “safe” withdrawal rate does not vary significantly between fund choices. **However, there is more uncertainty of outcomes with increasing proportion of Growth assets in the fund.** A retiree should consider whether they can withstand possible less favourable outcomes if investing in a Growth Fund rather than a Balanced Fund, and could choose a Conservative Fund if that gives sufficient income.

2. Start drawdown later

Starting drawdown later would normally mean starting with a higher fund amount, as more contributions can be made. In addition, the fund is more likely to last to a higher age and/or give more income. The following table summarises the income potential from each Rule for the same starting amount of \$100,000 in a Balanced Fund for a 70-year-old, compared to a 65-year-old.

	A 65-year-old starting drawdown in 2023	A 70-year-old starting drawdown in 2023
6% Rule	Income will probably last to age 94 and 15% of males and 25% of females are expected to live longer than this. It is very unlikely that income will run out before age 81 and 75% of males and 80% of females are expected to live longer than this.	Income will probably last to age 99 and 5% of males and 10% of females are expected to live longer than this. It is very unlikely that income will run out before age 86 and 55% of males and 65% of females are expected to live longer than this.
Inflated 4% Rule	Income will probably last to age 103 and less than 2% of males and females are expected to live longer than this. It is very unlikely that income will run out before age 86 and 55% of males and 65% of females are expected to live longer than this.	Income will probably last to age 108 and less than 2% of males and females are expected to live longer than this. It is very unlikely that income will run out before age 91 and 30% of males and 40% of females are expected to live longer than this.
Fixed Date Rule – to age 90	In the final year of drawdown, annual income is almost certain to be at least \$3,600 in today’s terms. There is a 50% chance it will be at least \$8,000.	In the final year of drawdown, annual income is almost certain to be at least \$4,200 in today’s terms. There is a 50% chance it will be at least \$8,800.
Life Expectancy Rule	There is a 50% chance peak annual income will be \$5,500 for males and \$5,300 for females.	There is a 50% chance peak annual income will be \$6,300 for males and \$5,900 for females.

3. Draw more

Retirees can simply choose to increase the amount taken each year, or in some years, although income will then not last as long. The following table illustrates the impact of increasing the 6% Rule to a 7% Rule, using a Balanced Fund, for a 65-year-old.

	A 65-year-old starting drawdown in 2023, \$100,000 in a Balanced Fund
6% Rule: \$6,000 income in first year	<p>Income will probably last to age 94 and 15% of males and 25% of females are expected to live longer than this.</p> <p>It is very unlikely that income will run out before age 81 and 75% of males and 80% of females are expected to live longer than this.</p>
7% Rule: \$7,000 income in first year	<p>Income will probably last to age 87 and 50% of males and 60% of females are expected to live longer than this.</p> <p>It is very unlikely that income will run out before age 78 and 80% of males and 85% of females are expected to live longer than this.</p>

4. Draw down faster

Drawing down faster also increases the amount of income available for a shorter period. The following table illustrates the impact of reducing the term of the Fixed Date Rule from 25 years to 15 years, using a Balanced Fund, for a 65-year-old.

	A 65-year-old starting drawdown in 2023, \$100,000 in a Balanced Fund
Fixed Date Rule 25 years – to age 90	<p>In the final year of drawdown, annual income is almost certain to be at least \$3,600 in today’s terms. There is a 50% chance it will be at least \$8,000.</p> <p>35% of males and 45% of females are expected to live longer than this fixed date when income stops.</p>
Fixed Date Rule 15 years – to age 80	<p>In the final year of drawdown, annual income is almost certain to be at least \$5,400 in today’s terms. There is a 50% chance it will be at least \$10,300.</p> <p>75% of males and 85% of females are expected to live longer than this fixed date when income stops.</p>

4. Illustrative outcomes for real KiwiSavers

Using a database of actual individual KiwiSaver accounts, RIIG has estimated the median KiwiSaver account balance at age 65 for those aged 45+ in 2021. The median is an indicator that is more representative of the typical KiwiSaver than the oft-quoted average. The following table summarises the income potential from each Rule for these median incomes.

The table shows the median account balance available at age 65 in today's dollars, as at 2021 for consistency with previous papers. The values of most KiwiSaver account balances have fluctuated since then, but we expect most will be similar to 2021 values. Large falls in 2022 will have been compensated to a varying degree by gains in 2021 and 2023. The table assumes drawdown starts from a Balanced Fund at age 65, and that all KiwiSaver members continue to contribute at the rates at which they were contributing in 2021.

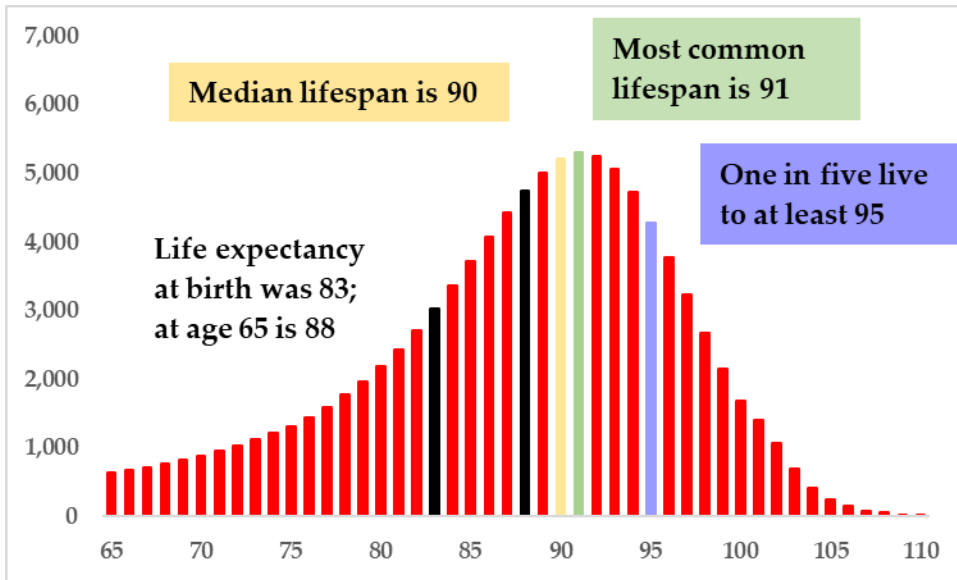
	Age at birthday in 2021			
	Age 59	Age 55	Age 50	Age 45
Median balance at age 65 in present-day (2021) dollars	72,400	95,200	124,400	156,900
Rule of Thumb				
6% Rule income each year	4,344	5,712	7,464	9,414
Inflated 4% Rule income in first year, increases with inflation	2,896	3,808	4,976	6,276
Fixed Date Rule income in first year	2,896	3,808	4,976	6,276
Life Expectancy Rule (Female) income in first year ²	3,055	3,967	5,098	6,327
Life Expectancy Rule (Male) income in first year ²	3,415	4,407	5,629	6,973

- The income expected to be available from typical actual KiwiSaver account balances is helpful but modest. For comparison, NZ Super pays \$25,800 a year (net of tax at the M rate) for a qualifying single person living alone.
- The starting level of income varies by Rule, but generally is lower the longer it is expected to last.
- The table does not show how the income might change over the drawdown period. The choice of age 90 for the Fixed Date Rule makes the starting income the same as for the Inflated 4% Rule. However, the income profiles for the two Rules are different as the charts show.
- The 6% Rule has a higher starting income than the others. A choice for the 6% Rule is primarily about high spending at the start of retirement. The other Rules anticipate more even spending profiles, with different tolerances for running out of money.

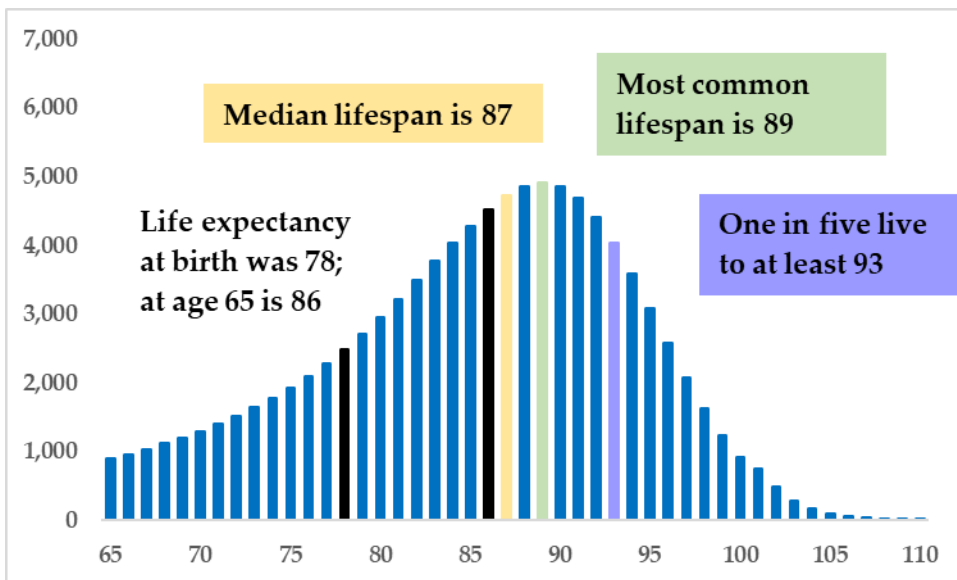
Longevity Appendix

The following charts show the latest estimates of the distribution of lifespan at age 65 for the cohort of those born in 1958. We show the estimates separately for males and females.

Estimated number of deaths at each age from 100,000 female New Zealanders born in 1958 who reached their 65th birthday in 2023



Estimated number of deaths at each age from 100,000 male New Zealanders born in 1958 who reached their 65th birthday in 2023



Source: Calculated from StatsNZ complete cohort life tables 1876-2021 (March 2023 update) with future survival experience estimated using mortality projections (median scenario) from the 2022(base)-2073 National population projections published July 2022. Author estimate of number of deaths at each age 101+.

a. Uncertainty within a cohort – individual vs average

The Rule of Thumb charts earlier in the paper show the probability of surviving from age 65 to the age where the colour of the blue bars change, allowing for typical New Zealand population longevity.

Some people may consider themselves not “typical” for various reasons and believe they will have a shorter or longer life span than average.

The purpose of the charts on the previous page is to show how the likely age at death varies for people of the same age. The charts show all the expected ages at death for a cohort on one chart rather than showing only one number (such as a survival rate or life expectancy) for the population. They are intended to present useful indicators to help people be realistic in considering by how much they may have a short or long lifespan. It should also be borne in mind that:

- When people think of their own potential lifespan, they are more likely to choose a lower lifespan compared to likely reality than choose a higher one³. This means they take on some longevity risk, defined as living longer than you expected your money to last. To guard against longevity risk, it is better to err on the side of assuming a higher lifespan than a shorter one.
- Although there are known risk factors that suggest an individual is more or less likely to live to a higher or lower age, there is still an element of chance in how life turns out.

Although life expectancy is the most often quoted indicator, these charts show other indicators to give a more complete view of the likelihood of living longer. The charts show the median lifespan (half of the cohort die younger; half older), the mode (most common age at death), and the age to which one in five of the cohort lives.

b. Uncertainty in future estimates

There is another source of uncertainty in estimating future lifespans, which is from the estimation process itself. In the above charts we use StatsNZ most likely (“median scenario”) for future mortality rates. This is at the centre of a range of possible outcomes. At the more extreme scenarios (“5th and 95th percentile”), both median age at death and the age to which one in five of the 1958 cohort live from age 65 are at most one year lower or higher (rounding to nearest age). This means that this source of uncertainty is less important than the uncertainty within a cohort.

We suggest that this analysis, together with the indicators on the charts on the previous page, show the wisdom of testing a retirement plan for living to between ages 90 and 95.

Technical Appendix: Modelling assumptions used in our Rule of Thumb illustrations

Mortality

- We used StatsNZ New Zealand Complete Cohort Life Tables (1876–2021)⁴, released in March 2023, and extrapolated death rates after age 100 to age 120. We used median scenario death rates for the relevant cohort aged 65 (or 70 for the “starting older” option) in 2023, born in 1958 or 1953 respectively.

Fund types

- We model outcomes from three fund types: Conservative, Balanced and Growth. The assumed percentages of Growth assets and Income assets in our modelled funds are shown in the table below. These are consistent with Financial Markets Authority (FMA) classifications.

Expected net investment returns and volatility

- Investment returns for each fund type are assumed to be normally distributed. The expected long term geometric average return and standard deviations of that return for each fund type shown in the table.
- We have estimated these future investment returns and standard deviations taking a view on a time horizon of 10 years or more and bearing in mind current market expectations.
- The fund returns and volatilities are higher than our previous paper in 2020, but returns are more consistent with our 2017 paper. Volatilities are higher than previously, particularly for conservative funds, as we have seen more volatility in the returns from the fixed interest assets which form a significant proportion of these funds.
- The fund returns are shown net of an allowance for investment management wholesale fees and retail KiwiSaver administration fees.

Fund type	Proportion of Growth assets/ Income assets	Expected return per annum, after tax and fees	Assumed annualised standard deviation	Risk indicator ⁵
Conservative	20% / 80%	3.5%	6.0%	4
Balanced	50% / 50%	4.5%	9.5%	4
Growth	80% / 20%	5.5%	14.0%	5

- For each fund type, our overall expected returns are 1.0% a year higher than the assumptions prescribed by the FMA for the purposes of making balance projections for KiwiSaver statements⁶ at the time of writing. The FMA does not directly prescribe point-estimate assumptions for standard deviations.

Inflation

- Our expected rate of inflation is 2.0% a year. This is an increase from our previous paper but is consistent with the mid-point of the Reserve Bank NZ target and heightened current inflation.

Glossary

KiwiSaver is New Zealand's regulated private retirement investment scheme. KiwiSaver started in 2007 and has just over 3 million members, from a total population of 5.1 million people. Members choose, or are auto-enrolled into, a KiwiSaver account from one of more than 30 providers.

New Zealand Superannuation (NZS) is New Zealand's public (tier one) near-universal pension.

Typically, people save into a retirement fund during their working life, then seek to supplement New Zealand Superannuation and other income in retirement, if any, by taking money from that fund. This process of spending down a fund in later life is known as **decumulation, income streaming or drawdown**. The focus in RIIG's work is on drawing down money from a fund each year, not necessarily of the same amount each year.

"Drawdown" is the process by which amounts are taken each year from an accumulated investment fund (such as KiwiSaver) which remains invested and so continues to benefit from investment growth. The amount taken – the **"income"** each year – will normally exceed the investment return on the fund, with the rest of the **"income"** coming from the investment fund itself. The investment fund is therefore expected to reduce in size over time.

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, investments, 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.

By **"retiree"** we mean an individual who is close to or in retirement and thinking about how much income to draw down from their retirement fund. A retiree need not be of any particular age, but we envisage that people start thinking about their drawdown options at any time over age 50 and start drawing down after age 65. For people who work beyond age 65, age 70 may be a typical time to start drawing down.

End notes

¹ All RIIG reports can be found at <https://actuaries.org.nz/resources-and-publications/publications/>.

The earlier papers on Rules of Thumb are: RIIG. (2017). "Decumulation Options in the New Zealand Market: How Rules of Thumb can help." and RIIG. (2020). "Decumulation Rules of Thumb - Update."

The drawdown framework is in: RIIG. (2021). "How to make drawdown a success."

The estimates of current and future KiwiSaver balances available to retirees are in: RIIG. (2022a). "Insights into pre-retirement KiwiSaver accounts." and RIIG. (2022b). "Future KiwiSaver balances and implications for retirement income policy."

² For the Life Expectancy Rule, remaining average length of life expected is taken from StatsNZ *How long will I live?* calculator at age 65 nearest birthday for cohorts born in 1962, 1966, 1971 and 1976. <https://www.stats.govt.nz/tools/how-long-will-i-live> Accessed May 2023. Based on Stats NZ, complete cohort life tables 1876–2021 (updated March 2023) and national population projections 2022(base)–2073, mortality assumptions (published July 2022), medium scenario.

³ O'Connell, A. (2016). " Why do we underestimate how long we might live?" <https://longlifepensions.com/2016/03/10/why-do-we-underestimate-how-long-we-might-live/>

⁴ <https://www.stats.govt.nz/information-releases/new-zealand-cohort-life-tables-march-2023-update/>

⁵ Financial Markets Conduct Regulations 2014, s. 6, <https://www.legislation.govt.nz/regulation/public/2014/0326/latest/DLM6294204.html>

⁶ <https://www.legislation.govt.nz/regulation/public/2019/0104/latest/whole.html>

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