

Ngā Ihirangi

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Executive summary

It's been a challenging few years for New Zealanders as much of the population has grappled with the impacts of increasing cost-of-living and other inflationary factors. And, while the 'golden assumption' that over 65s today are mortgage-free couples living in relative comfort, there has been little research to test whether this is actually the case.

In March 2024, the Retirement Commission began work on a comprehensive qualitative and quantitative analysis of what the financial lives are like for over 65s today. It also explores how financial situations might have changed since 2022.

In-person and online focus groups and individual interviews were conducted with 36 people aged 65 or older throughout New Zealand. A national survey was also completed online by 1420 people aged 65 or older.

This work supports the 2025 Review of Retirement Income Policies which the Commission does every three years. The purpose of the review is to identify practical policies and interventions that could lead to better retirement outcomes for New Zealanders.

Financial comfort levels

The report paints a picture of what retirement looks like for people feeling financially comfortable, contrasted with those who have found the last couple of years increasingly uncomfortable. The findings show 37% say their financial situation worsened over this period, 26% of whom felt their financial situation was now poor or very poor.

It also identifies the key demographic variables most strongly associated with good or poor financial comfort. The use of demographic attributes makes it easier to identify groups that may need support from government, community, or the sector.

The second half of the report moves beyond demographic information into the underlying attitudes and experiences of older people in relation to money. It uncovers four distinct groups of people: Thrifty Gifters (50%), Financially Free (19%), Vigilant Worriers (23%) and Spend for Today (9%).

By segmenting the participants according to their underlying attitudes to money, we can provide richer insights into the financial lives of older New Zealanders and assist in shaping the way organisations (public and private) can communicate and provide support.

Case studies and stories from participants involved in the focus groups and interviews are interspersed throughout the report to bring to life the experiences of older New Zealanders.

The voices of older New Zealanders

The findings illustrated the significant financial buffer being mortgage-free provides compared to those renting. In addition, people with investments and/or KiwiSaver were nearly twice as likely to feel their financial situation was comfortable compared to those without.

For people on low incomes, completely reliant on NZ Super, the change in economic situation over the past two years has meant more than just tightening the belt, moving instead into day-to-day survival.

For people on middle incomes, belt-tightening had generally been sufficient but there was growing unease about when things would return to normal since they were eroding their security/nest egg sooner than they planned to.

Rent was nearing unaffordability for some, resulting in attempts to trim costs even on nondiscretionary expenses like food or medical treatment.

"My rent is over \$1000 a fortnight. That's more than half of what I get on the pension... And obviously the rent's going to go up each year...I'm hoping that the pension is going to support those rises." [North Island, lower income]

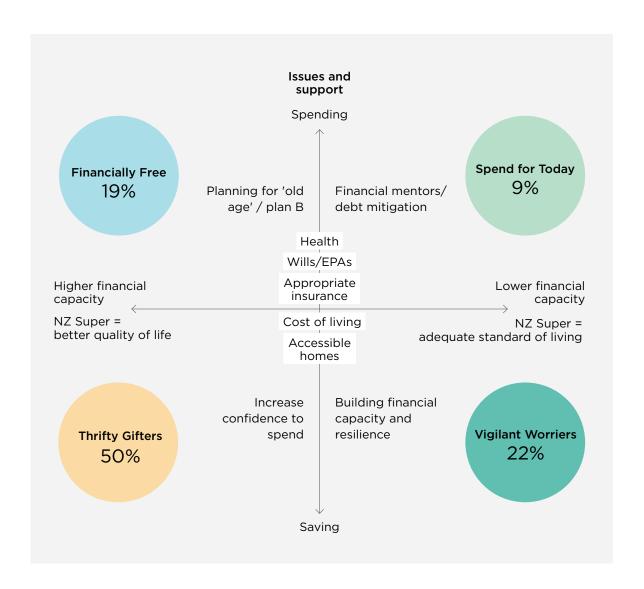
Food-price increases necessitated a change in behaviour for most, ranging from thinking twice about eating out and buying items on special or in season, through to relying on homegrown food or care packages from family or going without.

"I'm limited in what you can do to eat, because prices in the supermarket just quadrupled. Like potatoes and kumara, I couldn't afford them anymore. I grow my own now. I supplemented a lot of meat too with vegetables." [North Island, lower income]

Overall, what follows is a comprehensive depiction of what it's like to be a superannuitant in 2024. Most importantly it provides a voice to the sometimes overlooked groups of New Zealand. It stands as an important reminder that things are not always as 'golden' as some may assume.

By the numbers

- 14% of over 65s don't describe themselves as 'retired' (the proportion increases to 20% for 65-74s). Over a third (36%) of working older people primarily do so because of financial pressures.
- 39% of participants say they're completely reliant on NZ Super for their income.
- Fewer than half (48%) of participants live with their spouse/partner and own their homes mortgage free.
- 43% of mortgage-holders say they don't have any investments/savings/KiwiSaver.
- 56% say they feel financially comfortable or very comfortable, leaving 32% feeling financially exposed and a further 12% feeling as if they're in a financially poor situation.
- The past couple of years have been tough for just over a third of older New Zealanders 37% say their financial situation has worsened over this time, representing a net change of -26 (11% say their financial situation has improved).
- 46% of participants have reduced social interactions or activities important to them, 28% buy less food and 26% are putting off medical treatment.



Introduction

The Retirement Commission regularly conducts research with New Zealanders to understand attitudes and financial behaviour.

The last time the Retirement Commission conducted research focusing on over 65s was in 2022¹, involving a series of nationwide in-person and online focus groups. The study was exploratory in nature and aimed to understand older people's financial lives in detail, making a qualitative approach most appropriate.

In the current project, a two-staged research project (qualitative and quantitative) was undertaken in early 2024, with the aims of supporting the 2025 Review of Retirement Income Policies (RRIP) and updating the 2022 qualitative research.

This report explores the financial lives of older people in New Zealand and examines how financial situations might have changed over the intervening two years. In a departure from the 2022 methodology, a survey was also undertaken to validate the qualitative findings and provide some sense of prevalence of experience.

Box 1. Earlier studies

The 2022 research proposed three 'segments' of older people: 'Live day-to-day', 'Live for today' and 'Live for tomorrow', each of whom had different attitudes towards money and difference lived experiences. Although many participants had experienced life shocks or financial drains at some stage in mid-life, some experienced more or more severe shocks than others that impacted on financial wellbeing later in life. Financial planning and resources played a buffering role (although the pandemic, war in Ukraine and inflation created a challenging financial environment). The research affirmed the value of NZ Super and signalled a potentially increasing gap in quality of living between people with many assets (especially a house) and people with few.

Another survey conducted by the Retirement Commission focused on the asset decumulation (drawdown) behaviour and income/expenditure of people aged 55-64, 65-69 and 70+ living in New Zealand². The study indicated that retirement after 65 was common but one in 10 people were still working after 70, and one in five people aged 55-64 had already retired. Homeownership and savings/investments were the strongest indicators of confidence in having sufficient funds to retire comfortably.

The Retirement Commission also conducts an 'always-on' self-completed Insights Tracker of New Zealanders aged 18-plus, which generates approximately 950 completed surveys every three months. The survey provides a wealth of information on trends in New Zealanders' attitudes and financial behaviours and seeks to inform the activities of financial-sector organisations. The survey was previously used to identify six different 'segments' of people in New Zealand, based on their underlying attitudes towards finances³. Survey participants aged 65-plus are more likely to reside in the 'Steady Squirrelers' and 'Comfortable Maintainers' segments, both of which have higher levels of homeownership and more assets than average. Although useful, a more nuanced understanding of older people specifically is required.

As part of their yearly focus on 'money' via Sorted Money Month in August, the Retirement Commission prepares deepdive reports to support media activity, using data from the Insights Tracker. In 2022, a supplementary survey was undertaken⁴, again with New Zealand's general population aged 18-plus. Two-thirds of the general population sample felt the cost-of-living crisis had impacted on them negatively, with a similar proportion of over 65s feeling this way.

^{1.} TAAORC, 2022

^{2.} TAAORC, 2021

^{3.} TAAORC, 2022

^{4.} TAAORC, 2022

Structure of the report

Reporting primarily focuses on the results of the national survey, and findings are interspersed with case studies and stories from participants in the focus groups and interviews to bring to life the experiences of older New Zealanders.

The first half of the report focuses on the prevalence of people who are experiencing a financially comfortable retirement. The demographic profiles of people who are comfortable are contrasted with those of people who have found the past couple of years increasingly uncomfortable. It also identifies the key demographic variables that are most strongly associated with good or poor financial comfort. The use of demographic attributes makes it easier to identify groups that may need support from government, community, or the sector.

The second half of the report moves beyond demographic information into the underlying attitudes and experiences of older people in relation to money. It uncovers four distinct groups of people. By segmenting the participants according to their underlying attitudes to money, we can provide richer insights into the financial lives of older New Zealanders and assist in shaping the way organisations (public and private) can communicate and provide support.

Methodology

A two-stage approach was undertaken to enable both an in-depth exploration of issues and a review of the general situation in New Zealand for people aged 65 or older.

Stage one: Qualitative (interviews and focus groups)

Stage one was a repeat of the 2022 qualitative research, and used a mixture of in-person focus groups, online focus groups and individual interviews with 36 New Zealanders aged 65 or older. Participants were given a financial koha (gift) as a thank you for participating in the research.

The approach allowed the involvement of people with mobility issues, people who were apprehensive about being in proximity with others, and people living in disparate or remote areas of the country. Further details regarding demographics and group composition are contained in Appendix A1.

Areas of inquiry

The same discussion topic guide from 2022 was used in the current research, so that areas of consistency or change over the intervening two years could be revealed. Although finances were discussed, the aim was to gain a general understanding, rather than explore finances in detail. Box 2 provides further details of topics covered.

The 2022 research covered the qualitative findings in some depth. The current report will not cover the qualitative findings to the same extent – instead, case studies and stories of participants will be woven throughout to illustrate survey findings and bring to life the financial experiences of our participants.

Stage two: National survey

Stage two involved the use of an online survey self-completed by 1420 people aged 65 or older and living in New Zealand. Participants were identified by a professional panel provider (Dynata), who has over 100,000 registered people willing to take part in research. The panel provider also supplements their core database by working with partners who specialise in accessing participants with specific characteristics (e.g. older people, Māori, etc). The survey was conducted between 2 and 22 March, 2024. The margin of error is +/-3%.

Areas of inquiry

The findings of the qualitative stage significantly informed the development of the stage two survey. The survey also included questions from the 2021 research conducted by the Retirement Commission, which explored the asset drawdown and paid work profile of pre- and post- retirees in New Zealand⁵. Finally, additional questions were included that aimed to inform areas of specific interest to the Retirement Commission, and the upcoming Review of Retirement Income Policies. Box 2 provides further details of topics covered.

5. TAAORC, 2021

Box 2.

Qualitative topics explored:

- Identification of sources of income and items of expenditure, and discussion of whether these have changed over the past couple of years (with a particular focus on housing)
- Potential areas of uncertainty or anxiety about finances during retirement
- Financial-resource drawdown behaviours and the reasons behind them
- Experiences foregone due to financial pressures or the desire to leave a bequest
- How budgeting and spending habits developed in earlier life influence decumulation (and accumulation) in later life
- Reflections on actions taken (or not taken) that led to perceived good or poor financial outcomes, including the underlying reasons/motivations for those actions.

Survey topics assessed:

- Retirement and self-rated financial situation
- Sources of income, including NZ Super
- Self-rated financial comparisons with two years ago
- Impacts of cost-of-living changes specifically
- Self-assessed expenditure changes following retirement
- Drawdown of assets, including KiwiSaver and other investments
- Type and effect of life shocks in later life
- Financial impact of disabilities acquired later in life and accessibility of financial assistance
- Accessible housing issues, particularly for those renting or looking for alternative living arrangements.

The survey also aimed to validate the proposed segmentation of older people from the 2022 qualitative study,⁶ so a number of statements relating to attitudes regarding finances were included. The selection of statements came predominantly from the Retirement Commission Insights Tracker survey. This was supplemented by distinguishing attitudes from the qualitative work, which reflected attitudes towards spending and saving, future orientation, confidence in money management, financial resilience, debt, financial control and financial generosity.

Data preparation

Following data cleaning (incomplete surveys, flatliners, speeders, patterns, gibberish), a total of 1420 completed surveys were received.

Weighting protocol

Data was weighted to approximate New Zealand's 2018 population⁷ for gender and ethnicity within age groups.

Statistical significance

Throughout the report, attention is drawn to statistically significant differences at the p<0.05 level of significance.

Caveats of the study are contained in Appendix A2.

Appendix A3 contains information about the key demographic variables of the sample (i.e. age, gender, ethnicity, reliance on NZ Super, living situation, tenure, personal and household income).

^{6.} TAAORC, 2022

^{7.} Stats NZ

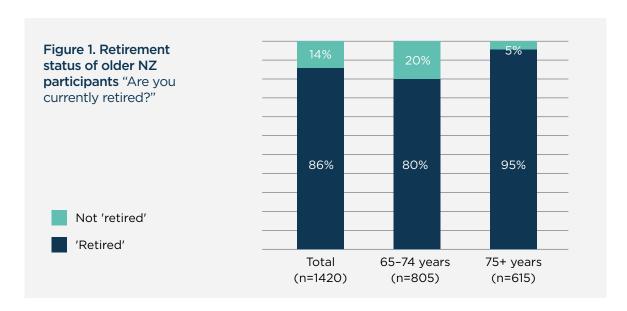
What is retirement like for over-65s in 2024?

NZ Super and working status⁸

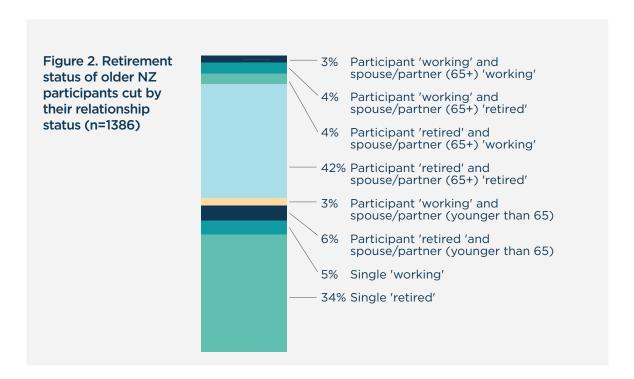
Working status

Eighty-six percent of participants said they were 'retired' (80% of 65-74s and 95% of over 75s) (Figure 1).

Looking at the survey population, 42% of the sample were made up of someone who was 'retired' and had a spouse/partner who was also 'retired, while a further 34% were a single person who was 'retired'. In contrast, 19% of participants either worked themselves or were in a partnership with someone who worked. The remainder of participants were 'retired' and had a spouse/partner who had not yet reached the age of eligibility (6%)(Figure 2).



^{8.} Older people's income (including NZ Super) and expenditure will be explored in more detail in a future paper.



Of the 269 participants who were working for pay part-time or full-time⁹, 64% said they did so primarily because they wanted to, while the remaining 36% said they had to. Paid work, part-time or full-time, is undertaken primarily for financial reasons by 7% of the overall sample of over 65s¹⁰.

When asked why they worked, most working participants in the qualitative research said they enjoyed the mental stimulation, the sense of purpose and the extra money they could spend on 'nice to haves.' Conversations revealed that the added income also provided a sense of security, sometimes enabling 'nest eggs' to stay intact for as long as possible.

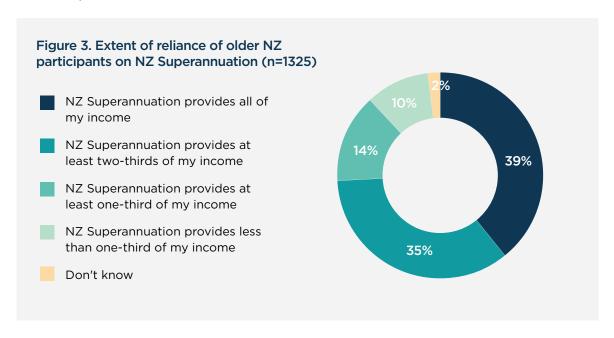
^{9.} Results are not comparable with the 2021 TAAORC 'Pre and post-retirement' report, due to the inclusion of a 'No, but I am volunteering' option in the current project.

^{10.} The question was single-select; however, the qualitative research suggested that people may work both because they want to and need to, so it's recommended that the question becomes multi-select in future to capture this.

NZ Superannuation

Almost all our survey participants (93%) received income from NZ Super and/or other pensions, and NZ Super represented the main source of household income for 73%.

Thirty-nine percent said they relied completely on NZ Super for their income (Figure 3),¹¹ consistent with Perry's study from 2019¹², which showed 40% of those aged 65-plus received less than \$100 per week from other sources.



The proportion of people who said they're completely reliant on NZ Super was significantly higher for:

- Public or private renters (65%)
- People who lived alone (53%) or in 'other' arrangements (50%)
- People who have a disability or long-term health condition (49%)
- People who have experienced a life shock after 50 (46%)
- Women (44%, compared to 32% of men)
- People aged 75-plus (42%, compared to 36% for 65-74).

Qualitative interviews revealed that NZ Super had increased the quality of living and financial situation for some people who had difficult lives financially before they turned 65.

"Now I'm getting my pension, without that stress of 'I have to get a job'... I'm probably in a far better mental state. The stress levels I've had over years! I went and bought pizza with a girlfriend the other day for lunch. What a treat!" [North Island, low-mid income]

For people who had generally lived a frugal life and who owned their home, NZ Super may be sufficient for the most part, meaning they were able to live without having to touch their 'nest egg' unless there was an emergency.

^{11.} Excluding 'Don't know/not eligible' answers brought the proportion up to 40% in our study.

^{12.} Perry. 2019

"[Before retirement], I was just trying desperately to live on the [sickness] benefit and not touch our savings because we heard all the stories of how much you need when you retire... there's nothing I could do except not spend the savings that we had. So retirement was great for me. Other people were complaining about taking a cut in income; I was going to get about \$20 more! But I'm OK. I've got money invested and I'm OK as long as I'm careful." [North Island, low-mid income]

For others, receiving extra income in the form of NZ Super enabled money to be saved.

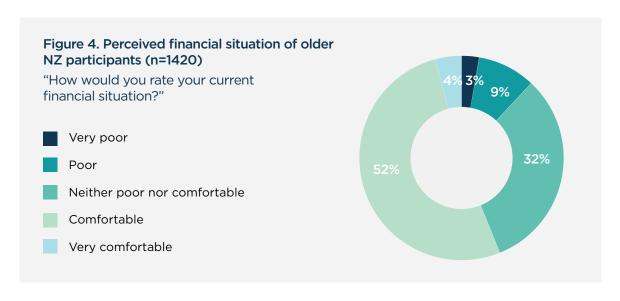
"Working [and receiving] NZ Super is wonderful. Like we need to re-roof our house, so we've been saving our national super to pay for that. I don't know what we'd have done on national super alone. There's no way we could pay to re-roof the house. We'd have to be calling out on our kids for a handout." [North Island, higher income]

Current financial situation

In this section, the current financial situation of older New Zealanders is explored, using both the qualitative findings as illustration and survey findings to indicate how many people felt a particular way. The results highlight the importance of mortgage-free homeownership and access to liquid assets.

- 48% of survey participants lived with their spouse/partner in a home they owned (or a retirement village) mortgage-free.
- 14% of homeowners (mortgage free, mortgage-holders, and people in retirement villages) said they didn't have liquid assets such as investments/savings/KiwiSaver.
- As a subset of homeowners, mortgage-holders were far more likely to say they didn't have any investments/savings/KiwiSaver (43%) than people who were mortgage free (10%).
- 24% of people who experienced a life shock after 50 didn't have any investments/savings/ KiwiSaver.
- 27% of people with a disability/long-term health condition didn't have any investments/savings/KiwiSaver.

Participants were asked to rate their current financial situation. More than half (56%) said they felt comfortable or very comfortable, 12% felt their financial situation was poor or very poor, and 32% felt it was neither poor nor comfortable (Figure 4).



People who felt comfortable financially were significantly more likely to:

- Be aged 75 (60%)
- Be living with a spouse/partner only (62%)
- Be mortgage-free homeowners (65%) or living in a retirement village (75%)
- Be mortgage-free couples (70%)
- Be degree-qualified (61%, compared to those with school qualifications or lower)
- Not have experienced life shocks after 50 (64%)
- Not have disabilities or long-term health conditions (62%)
- Have investments (73%), KiwiSaver (63%) and/or personal savings (66%)
- Have household incomes over \$50,000 (71%) or 77% for people with household incomes over \$110,000) or personal incomes over \$30,000 (57%) or 76% for people with personal incomes over \$50,000).

What explains perceptions of financial situation?

Regression analysis was conducted to reveal which of the assessed variables had independent associations with self-rated financial situation ('How would you rate your current financial situation?'). The resulting model showed that 'financial situation' scores were associated with mortgage-free homeownership, income, and possession of investments/KiwiSaver, as well as with attitudes towards finances (see Box 3). Appendix A4 contains an explanation of Ordered Logit regression and the output of the model.

Predictor variables included:

- Gender (male / female)
- Age (65-74 / 75-plus)
- Ethnicity (NZ European / Māori / Pacific / Asian / Other)
- Education (no qualification / school qualification / diploma or certificate / degree
- Living situation (living with spouse or partner / living alone / living with others)
- Tenure (owned without mortgage / has a mortgage / rented privately / other)
- Household income (under \$50,000 / \$50,001-\$70,000 / \$70,001-\$110,000 / \$110,000+ / don't know or declined) or personal income (under \$30,000 / \$30,001-\$50,000 / more than \$50,000 / don't know or declined)
- Has investments and/or KiwiSaver (no/yes)
- Has experienced a life shock after 50 (no/yes)
- Has developed a disability after the age of 65 (no/yes)
- All 17 attitudinal variables (strongly disagree + agree / neither nor / strongly agree + agree) (see Box 3 for the list of attitudinal statements).

Box 3. Attitudinal statements on a five-point Likert scale: strongly disagree / disagree / neither agree nor disagree / agree / strongly agree) are:

- I am a spender rather than a saver
- I feel/we feel very optimistic and confident about my/our future right now
- When making a big purchase like a car or a holiday, I save for it first
- I talk about managing and saving money with close friends or family
- I'm confident in my ability to manage money day to day
- Before I buy something, I carefully consider whether I can afford it
- I pay my bills on time
- I keep a close personal watch on my financial affairs
- I tend to live for today and let tomorrow take care of itself

- I find it more satisfying to spend money than to save it for the long term
- Money is there to be spent
- I'm worried about the level of debt I'm in
- I'm worried about my finances from pay to pay
- If an unexpected expense comes up,
 I can easily find money to cover it
- I give money to others when I can't afford to and I don't know how to stop
- I'm generous when it comes to koha/ gifting money to others
- I often think I'm unlucky when it comes to money

Demographically (in the demographics and attitudes model), the strongest associations with financial comfort included:

- People in households earning \$50,000 or more were at least 2.4 times more likely to say their financial situation was good or very good, compared to those with household incomes under \$50,000 (the difference levelled off after \$50.000)¹³.
- Homeowners without a mortgage were nearly twice as likely to say their financial situation
 was comfortable or very comfortable compared to mortgage holders, and 2.5 times as likely
 compared to those who were renting privately or in other living arrangements.
- People with investments and/or KiwiSaver were 1.6 times more likely to feel financially comfortable or very comfortable, compared to those without.

When the above variables were accounted for, age, ethnicity, education and living situation did not have any significant association with financial comfort per se.

Experience of life shocks after 50 and acquisition of a disability after 65 also failed to have a significant association with financial discomfort if all other variables were held equal. While impacts on homeownership and other financial assets may be significant for some people experiencing life shocks or later-life health issues, the results suggest that others weather these events more comfortably. This highlights the importance of a system-wide understanding of how crucial homeownership and asset acquisition are to achieve financial comfort in later life.

Attitudinally, as perceptions of financial situation improved, so did attitudes that:

- 'If an unexpected expense comes up, I can easily find money to cover it' (6.3 times more likely to feel financially comfortable).
- 'I/we feel very optimistic about my/our future right now' (3.7 times more likely to feel financial comfortable).

^{13.} Replacing 'household income' with 'personal income' did not distinguish the models

Additionally, as financial discomfort increased, so too did opinions that:

• 'I'm worried about finances from pay to pay' (10 times more likely to feel financially uncomfortable).

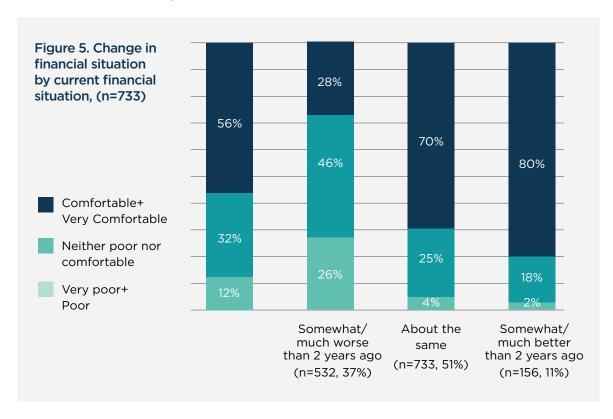
Changes over the past two years

Survey results suggest the past couple of years have been tough for just over a third of older New Zealanders. Thirty-seven percent say their financial situation worsened over this time period, 26% of whom felt their financial situation was now poor or very poor (Figure 5).

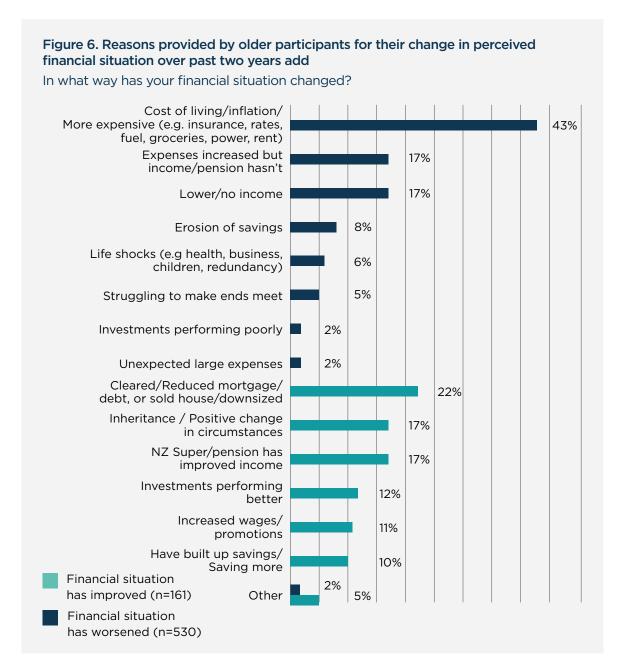
Reasons for the decline in financial situation typically related to the increase in living costs (43%) and the fact that income/NZ Super hadn't kept up with those increases (17%) (Figure 6). People using credit cards (40%), personal loans (48%) and with mortgages (47%) were particularly inclined to feel their financial situation had worsened. Similarly, people who were mortgage-free homeowners but relied completely on NZ Super for their income were also more likely to feel this way (46%).

A minority (11%) said their financial situation had improved (79% of this group felt financially comfortable or very comfortable). Reasons given by those who felt their financial situation had improved included declining outgoings (22% predominantly mortgages), improved investment/saving performance (22%) and increased income (17%) from inheritances, pay-rises, etc. A further 17% of this group indicated that NZ Super had served to increase their income.

- People with investments (13%) and/or KiwiSaver (17%) were more likely to say their situation had improved compared to those who used credit cards (10%).
- Net change in financial situation over the past two years was -26% (the difference between 37% worsened, 11% improved).¹⁴



^{14.} The question hasn't been asked in previous years but could be added to the Retirement Commission Insights Tracker so that the net change can be monitored over time.



Examination of the qualitative conversations provides more insight. When asked what had changed for people financially, the following themes were raised in the focus groups and interviews:

A change in expenses

There have been increases in insurance costs across the board. However, the impact of this was felt particularly by people who owned their homes but didn't have any liquid assets (investments, savings, KiwiSaver).

"I've gotta insure my house and I've got the funeral things, you know, and that's another cost that whacks into me that takes a big chunk out of that pension. And my house and contents. It's a couple of hundred dollars a month. But it's alright, I need it, you know, because I'm not going to rely on anybody." [North Island, lower income]

"Insurance, my goodness! And life insurance too. Guess what we're paying... \$950 a month! Car and house...! think there has been just a big change in insurance. The insurance bills have been a real surprise." [Auckland homeowner, high-mid income]

Rates were noticeably more expensive for homeowners, and this was observed in both Auckland and Christchurch focus groups.

Rent was nearing unaffordability for some renters, resulting in attempts to trim costs even on non-discretionary expenses like food or medical treatment.

"My rent is over \$1000 a fortnight. That's more than half of what I get on the pension... And obviously the rent's going to go up each year. I've got a lovely landlord, but, you know, the rent's gonna go up every year. I'm hoping that the pension is going to support those rises." [North Island, lower income]

Food-price increases necessitated a change in behaviour for most, ranging from thinking twice about 'luxury' foods or eating out and preferring to buy items that are on special or in season, through to relying on homegrown food or care packages from family, sharing what they have with neighbours and/or going without.

"What we found is you've gotta go with what's there at the time, try to get the specials. You know, if you can't afford a mango, it's \$10, don't buy it. Yeah, stick with oranges."

[Auckland, mid income]

"I'm limited in what you can do to eat, because I'll tell you what, prices in the supermarket just quadrupled. Like potatoes and kumara, I couldn't afford them anymore. I grow my own now over here. So what I did to supplement that? Diet. I went into noodles. And I supplemented a lot of meat too with vegetables, heaps of vegetables and stuff like that. And for my meat substitute I was using mushrooms, mushroom soup with mushrooms in it. So I'll bombard it with that. I just eat mince. And chicken, I don't eat sausages or anything like that anymore." [North Island, lower income]

Building and maintenance costs were not mentioned (in comparison to 2022).

Impact of income

For people on low incomes, completely reliant on NZ Super, the change in economic situation meant more than just tightening the belt, moving instead into day-to-day survival.

For people on middle incomes, belt-tightening had generally been sufficient but there was growing unease about when things would return to normal since they were eroding their security/ nest egg sooner than they planned to (several participants indicated that they moved their investments to term deposits or conservative funds during the pandemic). Because nest eggs represented security and peace of mind, the erosion concerned them and limited other activities. The sentiment highlights the need for advice or tools that allow calculation of how long a nest egg/savings would last.

"Yes, in the way that with my investments, I've always had the dividends reinvested and the interest reinvested, but recently I've had the money paid into my account. So I'm not managing on Super anymore." [North Island, mid income]

People on higher incomes felt relatively unscathed but expressed feelings of irritation concerning their high insurance and rates. Although participants offered acknowledgement and sympathy that others were suffering, this was at an abstract level.

"I know we're seeing an increase in costs, but I really feel for some people. They're struggling, I know!" [Auckland, higher income]

Attitudes to spending

People who have always been frugal, or those who learned to be frugal (due to difficult circumstances) and worked hard to think about their future were weathering the cost of living increases comparatively well, especially if they owned their home without a mortgage.

They used words like 'We're not extravagant', 'We think carefully of what we need', 'It's about what we need, not what we want', 'We're fairly disciplined'.

"And when we had our first child, my husband lost his job, so neither of us were working. We had this baby and a mortgage and no income coming in. Well, that sort of brings everything into very sharp focus. And you know, when you've got \$20 a week for food, that kind of thing. So, we never really lost it. You know, I still don't waste money, and we don't replace appliances until they clap out – much to our children's disgust, if we don't get the newest phone the minute it comes out or anything like that. But I think that's possibly a generational thing, and we repair things if possible and do it ourselves." [North Island, higher income]

People who had not learned to be frugal, or who experienced difficulties and remained in 'survival mode' were feeling far less comfortable.

The protection of homeownership

Discussions from the qualitative phase suggested that people who owned their homes without mortgages continued to be protected, whereas those who were renting were not (and their demeanour showed how it's weighing on them). However, some homeowners without liquid assets were only just keeping their head above water. Participants in those instances felt apprehensive about how they might afford the unexpected.

"I used to have shares and stuff like that before I turned 65. I've had to just sell them off as the years have gone by, but I haven't had anything in the past five years. I'm just living off the pension now and it's a real tough one. I had to try to keep up and be comfortable because I was bringing up my grandson by myself. I wasn't getting any support or anything. I was doing it alone. But yeah, I'm a little bit apprehensive about what's gonna happen when I can't move anymore and stuff like that. It's gonna get tough and I'll probably have to go into a home or something, and I've only got this home unit." [North Island, lower income]

People with property/rental income appeared comparatively relaxed compared to those with only savings/investments.

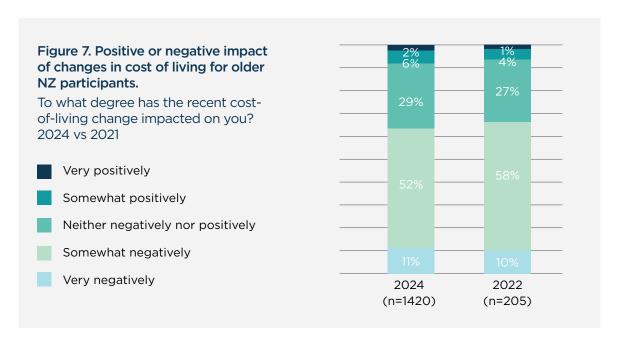
The interviews identified one participant in a rent-to-own scheme (nearing mortgage-free status), something that gave him a significant degree of comfort. Because the property was in his 'birthplace village', he said he was living in 'paradise', had a role as kaumātua and was committed to providing a home for his future generations (his son already had a separate cabin to live in on the property).

"It's literal paradise here and I feel quite spoiled. I get to play a role in the community, I have family, the water is close, and I even have a boat. I can get my dinner and share with the village!" [North Island, low income]

Renters who relied completely on NZ Super were doing it tough and there appeared to be significant apprehension about how they would cope if something unexpected happened. They were also worried about rents increasing every year. Several participants noted that NZ Super increases hadn't kept pace with rental inflation.

Cost-of-living pressures

In the survey, participants were also asked about the impact of changes in cost-of-living specifically. Nearly two-thirds (63%) said the cost-of-living changes over the past two years impacted them somewhat or very negatively, whereas only 8% said they had a somewhat or very positive impact (Figure 7). The proportion seeing no impact was 29%. Results are essentially unchanged statistically from 2022.¹⁵



A negative impact was disproportionately seen among:

- Mortgage holders (73%)
- 65 to 74-year-olds (70% said somewhat or very negative)
- People who had experienced life shocks after 50 (75%).

People with investments (32%) and/or personal savings (30%) were comparatively more likely to say they hadn't seen any impact, positive or negative. Mortgage-free homeowners were also more likely to feel this way (30% hadn't seen any impact).

Survey participants were asked what impacts, if any, they had experienced because of cost-of-living changes over the past two years (Table 2). The biggest impact was simply having to be more careful about money (56%); however, there were specific changes that had the potential to impact on mental or physical health, particularly:

- 46% had reduced social interactions or activities important to them
- 28% bought less food
- 26% were putting off medical treatment.

15. <u>TAAO 2022</u>

People who had experienced a financial life shock after the age of 50 and/or who had disabilities and/long-term health conditions were significantly more likely to list many impacts compared to the general population (Table 2). Over a third of people with disabilities and/or long-term health conditions (35%) said they had put off getting medical assistance (e.g. from doctors, dentists etc).

People who owned their home without a mortgage were more likely to say there were no impacts resulting from the cost-of-living changes.

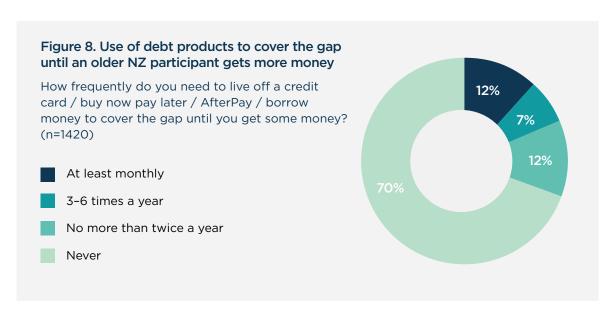
Table 2.

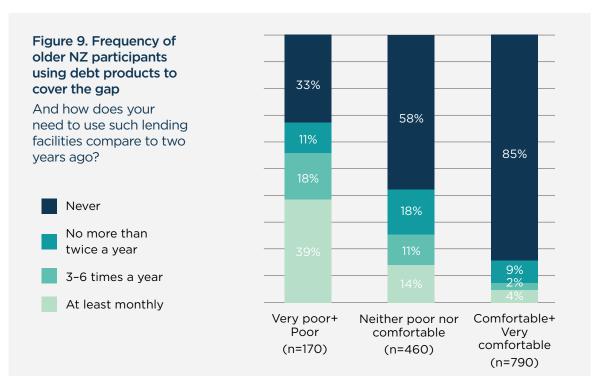
Top 12 impacts of cost-of-living increases, cut by home tenure, incidence of life shock after 50, and presence of disabilities/long-term health conditions

Bold denotes significantly higher at p<0.05) mentioned by at least 4%	Total	I live in a home I own without a mortgage	I live in a home I own with a mortgage	I live in a rented home/flat - private landlord	Life shock after 50	Disability or long- term health condition
I'm more careful with my money now	56%	56%	64%	59%	66%	61%
Reduced the frequency of socialising/ activities important to me	46%	43%	61%	55%	60%	54%
Changed the types of food I buy or where I shop for it	45%	42%	58%	57%	60%	51%
Reduced car use to save money on petrol	43%	43%	55%	52%	59%	52%
Rely more on food I grow myself	30%	33%	38%	24%	35%	33%
Buy less food	28%	25%	39%	40%	39%	36%
Put off getting medical assistance	26%	23%	42%	38%	40%	35%
Cancelled subscriptions	23%	21%	31%	27%	32%	26%
Put renovation plans on hold	14%	14%	30%	1%	18%	14%
Talked more to family or friends about money	12%	11%	18%	12%	17%	16%
Regularly run out of money before next payday	11%	6%	18%	29%	17%	15%
Used buy now, pay later/Afterpay more frequently	4%	2%	8%	11%	7%	6%
No impacts	16%	17%	7%	8%	6%	10%
N=	1420	933	150	156	546	576

Just under a third (31%) of older participants said they used a credit card/buy now, pay later/ AfterPay/borrowed money at least once a year to cover the gap until they got some money (Figure 8).

- Use of lending facilities to cover a gap in money was more than twice as common for the 12% who felt their financial situation was poor (to 67%).
- Use of lending facilities for this purpose had increased for 39% of users over the past two years (51% hadn't changed use frequency) (Figure 9).





Differences in retirement experiences

The previous section explored how people aged over 65 are currently experiencing retirement in New Zealand. However, not everyone experiences retirement in the same way.

About a third of the participants felt financially exposed and a similar proportion felt their financial situation had worsened in the past couple of years. Although homeownership, income and financial assets were associated with greater financial comfort, the results of the regression for 'financial comfort' (above) demonstrated a role for attitudes as well.

The 2022 qualitative research conducted by the Retirement Commission proposed three groups (or segments) of retirement experience¹⁶, but the segments were conceptual in nature and didn't allow for any estimation of prevalence. The next section uses the survey data to develop a more robust understanding of retirement experience and highlights areas of unmet needs.

Grouping attitudes into themes

The first step towards understanding attitudinal differences in experience of retirement was to reduce the attitudinal statements (Box 3) into key themes. To do so, Principal Components Analysis (PCA) was conducted. Appendix A5 contains a description of the dimension-reduction process.

Box 4. What is Principal Components Analysis (PCA)?

Sometimes we want to understand how different variables relate to each other. For instance, are people who like to spend money also more optimistic about their finances?

PCA is a technique used to simplify complex datasets. Imagine a huge spreadsheet with lots of columns (variables) and rows (individual participants). Sometimes, it's hard to see patterns or make sense of all that data. PCA helps by reducing the number of columns while keeping as much important information as possible.

PCA looks for patterns in the data by finding directions (called principal components) where the data varies most. These principal components are new variables that are combinations of the original ones. The first component captures the most information (described by the percentage variance explained), followed by the second component, and so on. In a way, each component can be thought of as a 'theme'.

Think of it like summarising a long book into a few key points. You lose some details, but you keep the main ideas. By reducing the number of variables we need to look at into themes (or components), it becomes easier to analyse.

The relationship between our variables can also be visualised by creating a visual space (scatter plot) where one component (theme) makes up the x axis and one makes up the y axis. The contributing variables (in our case, the 17 attitudes) will sit in unique positions relative to each component. Variables that are close together are related. Variables that are a long way from the origin (0'0) contribute to the component more than variables that sit closer to the origin.

The more information explained by each component, the larger the spread of the data points along the component continuum¹⁷.

16. <u>TAAO 2022</u>

^{17.} For a more detailed understanding of PCA, see: Principal Component Analysis (PCA) Explained | Built In

Dimension reduction using PCA revealed four components/themes: Worry over Optimism, Spending over Saving, Conscientiousness, and Generosity. Appendix A5 plots the two main components/dimensions against each other.

- Worry over Optimism (explaining 22% of the variance): key statements related to 'I am worried about my finances' and 'I can easily find the money to pay for unexpected expenses'.
- Spending over Saving (13%): key statements primarily related to the propensity to spend ('Money is there to be spent'), but also identified a sense of immediacy to life ('I prefer to live for today and let tomorrow take care of itself').
- Conscientiousness (12%): key statements related to how much attention was given to spending behaviour, such as bill payments, or the purchase of larger items.
- Generosity (8%): key statements primarily related to the inclination to give to others. Two statements didn't quite qualify under the +/-0.6 cut-off: one also relating to generosity, the other relating to the propensity to talk about money.

The four components were also helpful in understanding the role of the two demographic variables most strongly associated with financial comfort (home tenure and personal/ household income) (Table 3), and shows that they are not simple, linear relationships.

Income:

- People worried less about their finances as their income (personal or household) increased.
- Spending sentiment increased for both the lowest and highest household incomes, with saving sentiment more prevalent for mid/high-household incomes (\$50-110k). Personal income had little influence on spending sentiment.
- Financial conscientiousness peaked for mid household incomes (\$50-69k) but declined once
 incomes of over \$70k were reached. In comparison, conscientiousness decreased linearly as
 personal income increased.
- Generosity increased with income (either personal or household).

Home tenure:

- Mortgage-free homeowners (including those in retirement villages) were least concerned financially, whereas renters and mortgage holders were most concerned.
- Renters were most inclined to a spending sentiment, whereas homeowners were more inclined towards a saving mentality. However, those in retirement villages and those in alternative living arrangements (e.g. living with others rent-free) were also more inclined to spend.
- Conscientiousness didn't distinguish home tenure to any great extent.
- Those living in alternative home arrangements were particularly inclined to generosity, whereas renters were least inclined.

Table 3. The relationship of income and home tenure with the four principal components

	Average component coordinate score ¹⁸	Worry over Optimism	Spending	Conscien- tiousness	Generosity
Personal income p.a. before tax	Under \$30k	0.20	0.00	0.10	-0.15
	\$30,001-\$50,000	0.03	0.01	0.00	0.13
	More than \$50k	-0.43	0.06	-0.08	0.23
	Don't know / Declined	-O.11	-0.09	-0.15	0.00
Household income p.a. before tax	Under \$50k	0.25	0.04	0.03	-0.10
	\$50,001-\$70,000	-0.20	-0.10	0.21	0.06
	\$70,001-\$110,000	-0.21	-0.02	-0.05	O.11
	\$110,001+	-0.46	0.09	-0.20	0.20
	Don't know / Declined	-0.07	-0.06	-0.10	0.02
Home tenure	Other / Rent-free with others	0.32	0.10	-0.21	0.23
	Own without mortgage	-0.20	-0.05	0.05	0.02
	Own with mortgage	0.60	-0.12	-0.10	-0.05
	Private renter	0.64	0.26	-0.11	-0.18
	Public renter	0.52	0.37	-0.10	-0.10
	Retirement village	-0.46	0.12	-0.02	0.09

^{18.} Cell values represent the average component coordinate score (i.e. the location coordinates on a biplot) for that household income/homeownership category. See Appendix A5. Cell colours represent a 'heat map' identifying comparatively strong positive (green) or negative (black/grey) scores.

Meet our four groups of older people

Creating our groups

The first part of the puzzle was to reduce the number of attributes into themes/components using PCA. Four components were revealed. The second part was to examine patterns in the way different groups of participants answered the original 17 attitudinal questions. Latent Class¹9 (needs-based) segmentation using Q Research Software was used to explore those patterns. The different groups of participants produced by Latent Class segmentation are traditionally called 'segments'.

A needs-based market segmentation was run for three-, four- or five-segment solutions (using participants' answers to the attitudinal statements), with a four-segment solution eventually settled on due to the location of the segments in each of the four quadrants produced in the biplot of the two main principal components (Worry over Optimism and Spending over Saving). See Appendix A6 for a discussion on the selection process:



^{19.} Latent Class Analysis (LCA) is a statistical procedure used to identify qualitatively different subgroups within populations based on their pattern of answers on a set of categorical variables (in this case, their scores on the 17 attitudinal statements). Because the variables relate to attitudes (or underlying needs) rather than demographics, the model is referred to as 'needs-based'. Groups with similar underlying needs can be understood further by overlaying demographic variables



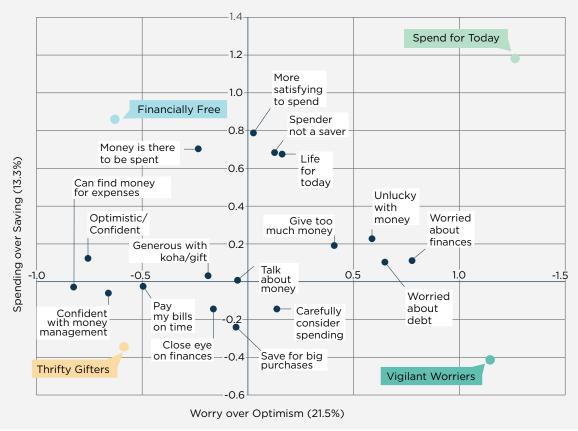


Figure 11 is the biplot of the two main components (Worry over Optimism vs Spending over Saving) and the attribute loadings for those components. The average component scores for each of the four segments are then overlaid in the two-dimensional space, visually revealing the attributes that best distiguish each segment.

- Thrifty Gifters are positioned predominantly in the quadrant aligned with financial optimism and saving propensity.
- Financially Free are positioned predominantly in the quadrant aligned with financial optimism and spending propensity.
- Vigilant Worriers are positioned predominantly in the quadrant aligned with financial worry and saving propensity.
- Spend for Today are positioned predominantly in the quadrant aligned with financial worry and spending/live for today propensity.

Once a four-segment solution was decided on, the groups/segments were explored in greater depth. Further biplots could be created by plotting components one versus three, one versus four, two versus three, two versus four and three versus four, but for brevity's sake, the table of average coordinates is contained in Appendix A6. A conceptual landscape can be created to identify potential areas of unmet needs for the four segments (Figure 12).



Segment 1: Thrifty Gifters (50%)

The large Thrifty Gifters segment scores comparatively highly on generosity and financial conscientiousness (columns three and four in Appendix A6). They're future focused and err towards a saving mentality rather than being spenders. They're more likely to have paid off their home and have some savings/investments. Living expenses are controlled enough that dividends can be reinvested or used for emergencies only. The segment skews towards being female.

This segment shares many demographic traits of the Financially Free. They have good financial inclusion and are particularly likely to have insurance, but are more likely to use credit cards than the Financially Free. They're the most likely of the four segments to have estimated how many years their assets and investments might last in retirement. Qualitative interviews with this segment suggest they may be concerned that their expenses are currently exceeding the income they get from their investments. This segment would benefit from tools/advice that enable estimation of how long their investments and savings will last them. Depending on their intentions regarding inheritances, they could also be encouraged to spend some of their hard-earned savings, rather than trying to 'do without'.

Key statistics that distinguish Thrifty Gifters from the overall population as a whole

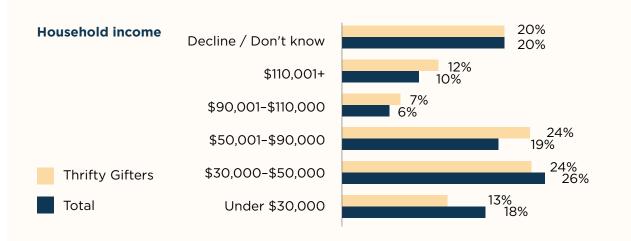


Needs /issues: Increase confidence to spend

- Decumulation tools for greater certainty
- Changing risk profiles
- · Financial/legal advice
- Legacies/trusts
- Downsizing/retirement villages
- · Costs of homeownership

Attitudes to money

- 1'm generous with koha/gifting to others
- ↑ If an unexpected expense comes up, I can easily find the money
- I'm confident in my ability to manage money day to day
- I talk about money with close friends/ family
- → I'm a spender rather than a saver
- → I'm worried about the level of debt I'm in



"If you ask somebody about how I am with money, they'd say, 'Very careful'. I've got two adult children, but we do have one teenage grandchild that we support quite a lot financially with things like school uniforms and public transport, and we just bought a Chromebook for college, that sort of thing.

"Back [in our 50s], we seemed to have more disposable income, or maybe we were just a bit freer with our spending. As retirement gets closer, we're much, much more aware of saving and not frittering money away. Life was good when we were in our 50s, and we had no health issues, but as you get older, you find that health issues start to crop up and you realise how important good health and mobility is when you're younger. My parents did leave me money and that was, you know, a big leg-up. I would like to leave something for each of my three grandchildren and my two children, but it doesn't have to be a huge amount."

[North Island, higher income]



Segment 2: Financially Free (19%)

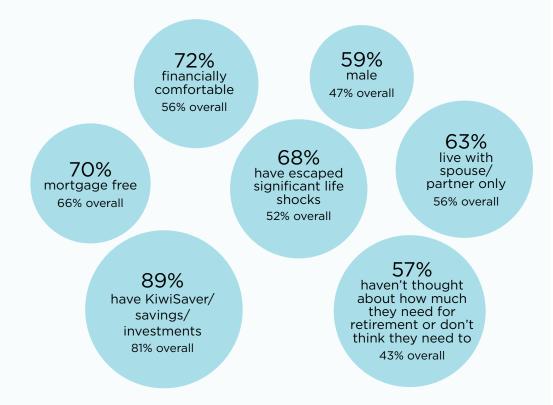
Members of this segment are optimistic and believe they can easily find money to cover unexpected expenses. They don't need to have much of a 'saver' mindset because they feel well set up financially and have the freedom to spend as they wish (even if that is relatively frugally). They're confident in their money-management skills, but don't feel inclined to discuss them with other people. If they still work, it's by choice. The group skews to being male.

The people in this segment are more likely to be mortgage-free homeowners and have savings and investments that serve to provide an income if desired. However, they may be able to leave their investments intact, either reinvesting the dividends or taking some to supplement their NZ Super.

As a group, they're less likely to have disabilities or have experienced life shocks. Those who have experienced the latter are more likely to feel they have nearly or completely recovered financially.

Although this segment has reached retirement relatively unscathed, they could benefit from advice to help them plan for 'old age' (such as what they want to happen should they no longer be physically able, and whether their assets preclude them from aged-care subsidies). This segment could also benefit from drawdown tools/advice.

Key statistics that distinguish Financially Free from the overall population as a whole



Needs /issues: Planning for 'old age'/plan B (e.g. health, self-funded aged-care costs)

- Financial/legal advice
- Legacies/trusts
- Decumulation tools for scenario testing
- Downsizing/retirement villages
- · Costs of homeownership
- · Changing risk profiles

Attitudes to money

- ↑ If an unexpected expense comes up, I can easily find the money
- I'm confident in my ability to manage money day to day
- Money is there to be spent
- I feel very optimistic/confident about my future right now
- ↓ I'm worried about my finances from pay to pay
- I talk about money with close friends/ family



"I guess what set us up was that I had a high-paying job. For the last few years of working life, mortgages were all gone and I bought a couple of new cars and I just thought, 'Right, all these costs are pretty much under control, that's how we planned for retirement'. We now have rentals and took out a managed fund.

"We like to travel a bit and gave two of our boys a bunch of money to go buy a house and they pay us back on a regular basis now. Anyways it works for us. We do have a couple of rentals, but we've had extraordinary expenses recently. I mean, the insurance!

"I have sometimes wondered... what if I had not taken that job, where would we have been now? You think life... well we'd have been pretty miserable. We've been able to do things that otherwise we couldn't, so I feel we've been quite lucky."

[Auckland, higher income]



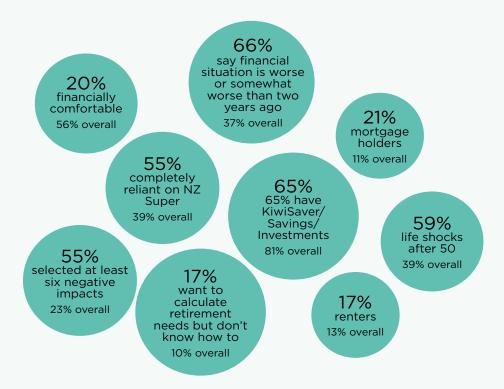
Segment 3: Vigilant Worriers (23%)

Life has not turned out as expected for this segment. The defining dimension for this group is financial worry, although they also score positively on conscientiousness, in that they keep a close watch on their personal spending. The past two years have been tough, and two-thirds feel their already uncomfortable financial situation has worsened. Age, gender and ethnicity do not distinguish this group.

The segment is more likely to say they're unlucky with their finances, and to have experienced life shocks from the age of 50 onwards, with many still struggling to recover. They're less likely to have savings and may be renters or mortgage holders, so their expenses are comparatively high with less potential for increasing equity in anything. Not surprisingly, those in this segment feel comparatively uncomfortable about having sufficient funds for retirement. A sizable proportion just don't want to think about it, and others would like to but don't know how to go about it.

This segment is more likely to rely completely on NZ Super, and more likely to access various government transfers. As such, these New Zealanders would benefit from affordable advice that ensures they receive all the financial support they're entitled to, to help build their financial capacity and resilience.

Key statistics that distinguish Vigilant Worriers from the overall population as a whole

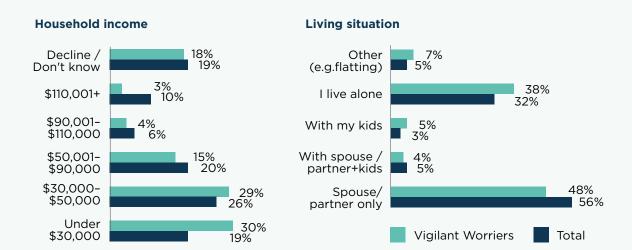


Needs /issues: Building financial capacity and resilience

- Government transfers (awareness and access)
- Home loan interest rates
- · Affordable financial advice
- Affordable private rentals and security of tenure

Attitudes to money

- ↑ I'm worried about my finances from pay to pay
- ↑ I keep a close personal watch on my financial affairs
- ↑ Before I buy something, I carefully consider whether I can afford it
- When making a big purchase like a car or a holiday, I save for it first
- I often think I'm unlucky when it comes to money
- ↓ I/we feel very optimistic and confident about my/our future right now
- ◆ I find it more satisfying to spend money than to save it for the long term



"I lost quite a bit of KiwiSaver during Covid. We sold our house because it was costing us too much [when my husband got sick], but we didn't get enough to pay off the mortgage. So I got some money out of KiwiSaver and paid it off. And I've learned to say 'no' to people.

"If I didn't have money put in from my daughters and my son, I would have nothing left after everything's paid because **the rent is so high.** And the doctor's bills are very high. They're charging \$65 for doctors for 10 minutes. But I've made sure I've got funeral insurance because I don't want the kids to pay.

"My rent has gone up twice in the past two years by \$60, and the house – there's a lot of stuff wrong with it, like it hasn't been insulated. I'm too scared to complain. Always think that if I don't have anything to eat, at least no one would know because I live on my own and I've got a roof over my head. I'd never ask my kids for anything ever because I grew up in a culture where, you know, it's always looking after the others.

"But I'm grateful for the Super. I'm really grateful that I get help from WINZ. That's the only help I get. But I haven't been to them for food grant and clothes and stuff like that. I'm just grateful for what I've got."

[North Island, lower income]



Segment 4: Spend for Today (9%)

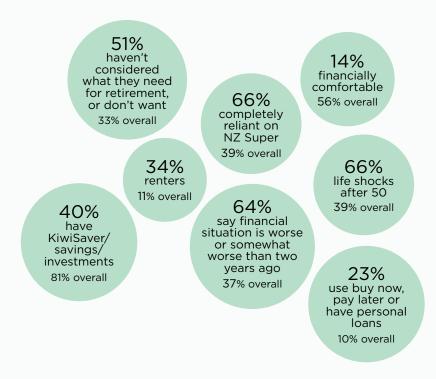
The final segment is inclined to 'live for today'. The people in it score the highest on the spending component and lowest on the conscientiousness component. They tend to be single, rent their home, and may either live alone or share with other adults (e.g. flatting/boarding/family). Age, gender and ethnicity do not distinguish this group²⁰.

People in this segment don't feel confident about managing their money day to day and are less likely to feel comfortable about talking about money with others. They're more likely to have a disability or long-term health condition, and/or to have experienced life shocks after the age of 50. Many in this group are still struggling in the aftermath of these life shocks. They're second only to Vigilant Worriers in terms of the negative impact of the cost-of-living crisis, with 64% feeling their financial situation has worsened in the past two years.

Although this segment scores highly on the spending dimension, this may relate more to the fact that their expenses tend to exceed their limited income (many rely completely on NZ Super). They're twice as likely as any of the other segments to have debt products like buy now, pay later or personal loans, albeit at low levels. This segment is the most likely to access government transfers. Decumulation and estimation of finances through retirement feel irrelevant to this segment, since they have no assets to draw down on.

The New Zealanders in this segment would be the most likely to benefit from financial mentors who can help to boost financial literacy and support debt mitigation.

Key statistics that distinguish Spend for Today from the overall population as a whole



 $20. \ \ Although \ Pacific \ people \ are \ disproportionally \ represented, this \ must \ be \ treated \ with \ caution \ given \ low \ sample \ size$

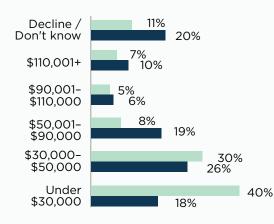
Needs /issues: Financial mentors/ debt mitigation

- Adequacy of NZ Super and sources of financial support
- Public housing/alternative housing options or affordable private rentals
- · Security of tenure

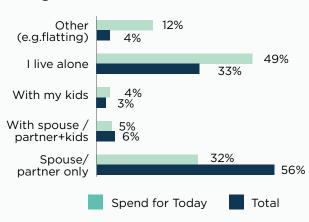
Attitudes to money

- † I'm a spender rather than a saver
- I tend to live for today and let tomorrow take care of itself
- ↑ Money is there to be spent
- ↓ I talk about managing and saving money with close friends or family
- → I feel very optimistic and confident about my future right now
- → When making a big purchase like a car or a holiday I save for it first
- ◆ I keep a close personal watch on my financial affairs

Household income



Living situation



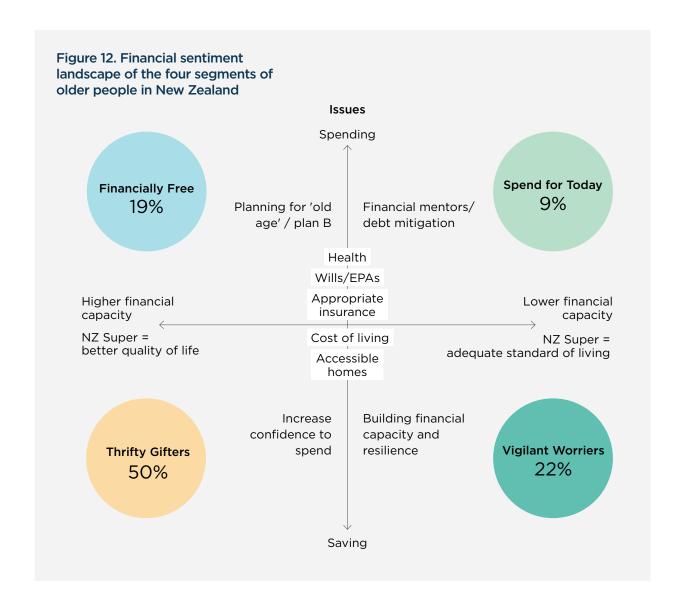
"I won't say we're 'on the bones' because we're not. I'm lucky that I have **children that help out** if we go down that road, you know?

"My last husband asked if I'd go into business with them. And this was before we were on benefits, pensions. And anyway, **that was really the worst thing ever.** What do you call it? Taxes and stuff like that – I didn't realise that his boss wasn't doing them for me.

"Other people have wise people to guide them, and we were never ever guided in that area, you know? So, you should really teach your children to prepare for later on in life. I remember a party where my father bought me a little car for my birthday and about a month later, where's my car? And he says I had to give it back because I couldn't pay the payments. We laugh about it now...

"Teach your grandchildren. Now, you can't teach your grandchildren something that you never imagined yourself. [The grandkids] come and they'll say, 'Nanny, should we go for lunch? I said, 'I can't go for lunch today, I've got no money'. They said, 'It's okay, Nanny, let's go to the park then'. But you know, I don't want to say it to my grandchildren. **That's shameful."**

[Auckland, lower income]



Conclusion

The net change in self-rated financial situation is -26%, highlighting that one in four older people in Aotearoa feel they're doing it harder than two years ago.

The increased financial strain resulting from cost-of-living/inflationary forces that emerged in 2022 has continued into 2024 for many older people, with the increase in non-discretionary expenses (like insurance, rates, rent and food) perceived to be outpacing any increase in income.

Although there doesn't appear to be a change in the proportion completely reliant on NZ Super since 2019 (39%), over a third of working older people (36%) are now working due to financial need, higher than that recorded in the 2021 Retirement Commission research (29%).

When controlling for mortgage-free homeownership, income and assets, many remaining demographics fail to be directly associated with financial comfort (e.g. life shocks after 50, disability/long-term health conditions, gender, ethnicity, education). The finding highlights the importance of providing people who are struggling financially in their pre-retirement years with sufficient opportunities to grow financially and develop financial resilience prior to 'retiring'. Of note, our findings indicate that fewer than half (48%) of participants meet the 'golden assumption' that NZ Super settings are based on (a mortgage-free couple living in their own home).

Cost-of-living pressures are significantly less likely to be noted by people who have personal savings and/or investments, and for mortgage-free homeowners; this suggests these have provided a buffering effect. In contrast, over four in 10 older mortgage holders and renters are now going without medical treatment, isolating themselves socially and going without food due to the cost-of-living crisis. The results bring into stark relief the impact of unaffordable housing.

The segmentation of New Zealanders aged 65-plus in the current study supplemented understanding of how demographically different groups of older people in New Zealand experience retirement by also exploring the underlying attitudes held. It identified many consistencies with the framework proposed in the 2022 research but was able to provide a more nuanced perspective, highlighting the heterogeneity in retirement experience.

The conceptual segmentation proposed in the 2022 qualitative research was revised to reveal four distinct data-driven 'segments' of older people: Thrifty Gifters, Financially Free, Vigilant Worriers and Spend for Today. The segments were distinguished predominantly by how concerned they were by their financial situation, and by their inclination to spend versus save. Two additional factors (an inclination to generosity, and the degree of financial conscientiousness) further described the segments. The more nuanced understanding can be helpful in shaping how older people are communicated with, and the services and products that could be targeted to them.

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Appendices

A1. Qualitative methodology

The aim of the qualitative stage of research was to obtain a broad range of perspectives; however, it was also important to ensure that groups were composed sympathetically. Income (including wages, dividends, pensions, rental, etc) was the main factor used to differentiate between the groups because income disparity was likely to create intra-group dynamics. Participants were also asked about their reliance on NZ Super and whether they had savings/investments. Beyond income, focus groups were composed to ensure diversity of opinion and experience by including a mix of gender and ethnicity.

Table A1. Composition of the stage-one sample, showing gender, age, location of residence, ethnicity, housing tenure and personal/household income of participants

Demographic		N=
Gender	Female	17
Gender	Male	19
A	65-74	22
Age	75+	14
Residential location	Auckland	12
	Christchurch	6
	Other North Island	12
	Other South Island	6
	NZ European	19
Ethnicity	Māori	7
	Pasifika	4
	Other	5
	Freehold	22
	Mortgage	2
Housing	Renting	7
Housing tenure	Retirement Village	1
	Other	3
	Unspecified	1

Demographic		N=
	Under \$30k	8
Personal income	\$30-49k	7
(used if	\$50-69k	1
renting/ sharing with	\$70-99k	7
others/ family)	\$100k+	9
	Unspecified	4
Household	Under \$30k	10
income	\$30-49k	7
(used if living alone	\$50-69k	7
or with spouse/ partner	\$70-99k	8
	\$100k+	3
only)	Unspecified	1

Focus groups were composed as follows:

- 1. Auckland (in-person): lower income income below \$50,000 p.a. before tax and/or NZ Super provides at least two-thirds of income
- 2. Auckland (in-person): higher income income above \$70,000 p.a and/or NZ Super provides at most one-third of income, has savings and/or investments and/or KiwiSaver
- 3. Christchurch (in-person): higher income income above \$70,000 p.a. and/or NZ Super provides at most one-third of income, has savings and/or investments and/or KiwiSaver
- 4. Other North Island (online): higher income income above \$70,000 p.a. and/or NZ Super provides at most one-third of income, has savings and/or investments and/or KiwiSaver.

Interviews were composed as follows:

- 1. Other South Island: low/mid income six respondents with an income under \$70,000 p.a. (three \$30,000-\$50,000) and/or NZ Super provides at least two-thirds of income
- 2. Other North Island: low/mid income five respondents with an income under \$50,000 p.a, and one \$70,000-100,000 p.a.

In hindsight, home tenure should also have been considered in group composition because there were some homeowners in lower-income groups who were comparatively more financially comfortable than renters in higher-income groups. Some of these homeowners were able to live on their NZ Super, without having to access their savings, so they counted themselves as having a low income, even though they had access to other funds if required (a finding in itself). Future studies should ensure that homeownership and access to other funds is considered in group composition.

Analysis approach

The fairly loose structure of the discussions allowed the researcher to interpret participants' stories via narrative analysis, using the financial journey people had experienced from the age of 50 to start the discussion. Additionally, across the focus groups and interviews, thematic analysis was used to identify emerging patterns and themes, comparing and contrasting between groups (and other demographics such as home tenure) where appropriate. The themes then fed into development of the national survey.

A2. Caveats to the methodology

Ethnicity

Although we oversampled for Māori, eventually attaining a subsample of 7% (similar to 6.7% in 2018 census data²¹), we struggled to meet both Pacific (1.1% as opposed to 2.8%) and Asian+MELAA (3.3% as opposed to 6.7% in 2018 census data) representation. Cutting data by these ethnic categories is already problematic, since they represent a large array of ethnicities within those categories. We recorded 7% of people categorising themselves across Pacific, Asian, MELAA and 'Other' ethnicity. As such, participants were grouped as European, Māori and 'Other' ethnicity.

Digital exclusion

Digital exclusion presents a challenge when surveying over 65s (and even more so for Māori and Pasifika over 65s). For instance, in their 2019 report²² exploring digital inclusion and wellbeing in NZ, Motu found that access to the internet decreases as the age group gets older, sharply so beyond age 65 (14% to 16% don't have access to the internet, depending on the survey source); however, cohort differences between age groups could suggest comfort with digital technology rather than financial capacity. The study also revealed differences depending on which survey was used.

^{21.} Stats NZ

^{22.} Motu, 2019 The project used four sources of data for analysis: the NZ Crime and Victims survey (NZCVS), the NZ Electoral survey (NZES), the Programme for International Students Assessment survey (PISA) and the Programme for International Assessment for Adult Competencies survey (PIAAC).

For instance, while the NZ Electoral survey (NZES) showed that Māori (12.23%) and Pasifika (10.55%) in general were the least likely to have internet access, the NZ Crimes and Victims survey (NZCVS) showed little difference between Pākehā and Māori access, although Pasifika were still underrepresented.

The NZCVS indicated that as household income increased above \$20,000, the proportion of people with access to the internet increased. However, the NZES results indicated that the wellbeing (dissatisfaction) of those who were without internet (and those with unknown internet status) was no different to that of people with internet once demographic (e.g. income, age, ethnicity and gender) and other factors were controlled for.

Nevertheless, results should be treated with caution when it comes to extrapolating findings to the broader population of older New Zealanders as a whole.

A3. Key demographic variables

Table A2 shows the key variables that were used throughout the report, showing both unweighted and weighted counts. Prevalence can be referred to when identifying variables where a certain demographic is significantly more or less common than expected.

Table A2. Demographic variables shown as counts and % (weighted to ethnicity and gender within age, and unweighted)

Demographic		Weig	hted	Unweighted	
		%	N	%	N
٨ ٥٠٥	65-74 years	57%	805	59%	837
Age	75+ years	43%	615	41%	583
Gender	Male	47%	666	48%	680
Gender	Female	53%	754	52%	740
	European	88%	1253	91%	1292
	NZ Māori	7%	95	7%	104
Ethnicity	Pasifika	4%	53	1%	16
	Asian	7%	101	3%	48
	Another ethnic group	1%	9	3%	38
	NZ Superannuation provides all of my income	39%	551	39%	547
	NZ Superannuation provides at least two-thirds of my income	34%	483	35%	493
Reliance on NZ Super	NZ Superannuation provides at least one-third of my income	14%	192	14%	194
112 Gaper	NZ Superannuation provides less than one-third of my income	10%	143	10%	148
	I'm not eligible for NZ Superannuation at all + Don't know	4%	51	3%	38

D	Combinated	,	Weighted	Unweighted	
Demograpni	c Continued	%	N	%	N
	I live with my spouse/partner	56%	789	57%	803
Living	I live with my spouse/partner and child/children	6%	83	6%	80
situation	I live alone	33%	464	32%	454
	Other	8%	119	8%	107
	Other (please specify)	5%	65	5%	64
	I live in a home that I own without a mortgage	66%	931	66%	933
	I live in a home that I own with a mortgage	11%	163	11%	151
Tenure	I live in a rented home/flat - private landlord	11%	150	11%	157
	I live in a rented home/flat - renting from Kāinga Ora or council	2%	32	2%	34
	I live in a retirement village	6%	78	6%	81
	\$20,000 or under	10%	144	10%	143
	\$20,001-\$30,000	33%	469	34%	483
	\$30,001-\$50,000	20%	284	20%	284
	\$50,001-\$70,000	8%	113	8%	117
	\$70,001-\$110,000	6%	88	6%	88
	Over \$110,001	3%	49	4%	54
	I'd prefer not to answer	13%	182	12%	176
	I'm not sure	6%	91	5%	75
	\$30,000 or under	19%	264	19%	269
	\$30,001-\$50,000	26%	371	26%	372
Household	\$50,001-\$70,000	13%	188	14%	199
income	\$70,001-\$110,000	12%	169	12%	167
	Over \$110,001	10%	136	10%	143
	I'd prefer not to answer	13%	179	12%	177
	I'm not sure	8%	111	7%	93

A4. Ordered Logit modelling

An Ordered Logit regression was run using Q Research Software.²³

Both a 'demographics only' model and a 'demographics + attitudes' model were run.

Excluding the attitudinal statements produced a model that explained only 24% of the variability seen in 'financial situation' scores (Table A3). Including all 17 attitudinal statements increased the explained variability in 'financial comfort' scores to 50%.

Table A3. Relevant statistics identifying best model for understanding perceived financial situation scores

	R-squared	McFaddens's rho-squared ²⁴	AIC ²⁵
Demographics only	0.2433	0.1769	1,865.2
Demographics + attitudinal	0.4966	0.3767	1,492.5

Linear regression modelling attempts to identify how strongly associated different variables are with the dependent variable (in this case 'financial comfort'), independent of all other variables. A variable with a p-value of <0.05 can be considered to contribute significantly to our understanding of the variability in the 'financial comfort' score, in the direction of the estimate value (i.e. a positive or inverse relationship). For instance, when all other variables are held equal, being male is not associated with different 'financial comfort' scores to that of being female (Table A4).

Looking at the same model, we can also see that people with household incomes brackets over \$50,000 give significantly higher 'financial comfort' scores than people with household incomes under \$50,000. In this instance, we can also see that the estimate doesn't change much beyond the \$50,000-\$70,000 bracket.

The raw scores for 'living situation', show 62% of people living with a spouse say they are 'financially comfortable' and 48% of people living alone say the same, suggesting that living situation is a distinguishing factor in financial comfort. However, in Table A4, we see that living with a spouse is actually not a distinguishing factor per se given the absence of statistical significance. Rather, financial scores may be driven by the fact that a household with two people in it may have a higher household income than a household with only one person (or has lower expenses per person), or that a person living with a spouse is more likely to own their home rather than rent (for instance).

The final model is shown below.

^{23.} Ordered Logit is a form of regression analysis that models a discrete and ordinal dependent variable with more than two outcomes (in this instance, 'perceived financial situation'). Ordered logit is the appropriate methodology since the independent variable's answer options are ordered from 1 (very poor) to 5 (very comfortable) and discrete (as opposed to continuous). Variable statistics measure the impact and significance of individual variables within a model, whereas overall statistics apply to the model as a whole.

^{24.} Assesses the goodness of fit of the model. A larger number indicates that the model captures more of the variation in the dependent variable.

^{25.} A measure of the quality of the model - the lower the score, the better.

Table A4. Ordered Logit model: Significant demographic and attitudinal variables associated with increasing financial comfort (estimate coefficients and odds ratios), accounting for 50% of the variability of 'financial comfort' scores

	Estimate	Std. Error	t value	p	Likelihood (exp* Estimate)			
-	-	-	-	-	1			
	Re	ef: 65-74						
Age: 75+	0.0	0.2	0.2	0.84	1.0			
	Ref: Male							
Q2 - Are you: Female	0.3	0.2	1.6	0.10	1.3			
Ref: N	o disability/l	ong-term hea	llth condition	ı				
Disabled after 65: Selected	0.1	0.2	0.6	0.54	1.1			
	Ref: No	o qualificatio	า					
Education: School qualification	0.1	0.3	0.2	0.81	1.1			
Education: Diploma/certificate	0.1	0.3	0.2	0.83	1.1			
Education: Bachelor's degree + postgraduate degree	0.1	0.3	0.2	0.85	1.1			
Ref	: Household	income unde	r \$50,000					
Household income: \$50,001- \$70,000	1.0	0.2	4.7	0.00	2.8			
Household income: \$70,001- \$110,000	1.1	0.3	4.1	0.00	3.0			
Household income: over \$110,001	0.9	0.3	2.8	0.00	2.4			
Re	f: No investm	nents and/or	KiwiSaver					
Investments and/or KiwiSaver: Selected	0.5	0.2	2.9	0.00	1.6			
	Ref: No li	fe shock after	50					
Life shock after 50: Selected	0.0	0.2	0.1	0.91	1.0			
	Ref: Livi	ng with spou	se					
Living situation: Alone	0.1	0.2	0.8	0.41	1.2			
Living situation: With others	0.0	0.3	0.1	0.93	1.0			

Continued	Estimate	Std. Error	t value	р	Likelihood (exp* Estimate)	
Ref: European						
Primary ethnic: Māori	0.6	0.3	1.8	0.08	1.8	
Primary ethnic: Pacific	-0.2	1.1	-0.2	0.82	0.8	
Primary ethnic: Asian	-0.4	0.4	-0.9	0.37	0.7	
Primary ethnic: Other	-0.3	0.2	-1.4	0.17	0.7	

Ref: For all psychographics 'Disagree + Strongly disagree'

Before I buy something, I carefully consider whether I can afford it: Agree + Strongly agree	O.1	0.4	0.2	0.84	1.1
Before I buy something, I carefully consider whether I can afford it: Neither disagree nor agree	0.4	0.5	1.0	0.32	1.6
I am a spender rather than a saver: Agree + Strongly agree	0.1	0.3	0.3	0.77	1.1
I am a spender rather than a saver: Neither disagree nor agree	0.2	0.2	0.9	0.36	1.2
I am confident in my ability to manage money day-to-day: Agree + Strongly agree	-0.6	0.5	-1.3	0.21	0.5
I am confident in my ability to manage money day-to-day: Neither disagree nor agree	-0.9	0.5	-1.8	0.07	0.4
I feel / we feel very optimistic and confident about my / our future right now: Agree + Strongly agree	1.3	0.2	5.6	0.00	3.7
I feel / we feel very optimistic and confident about my / our future right now: Neither disagree nor agree	0.6	0.2	3.4	0.00	1.9
I keep a close personal watch on my financial affairs: Agree + Strongly agree	-0.4	0.6	-0.7	0.51	0.7
I keep a close personal watch on my financial affairs: Neither disagree nor agree	0.0	0.6	-0.1	0.94	1.0
I pay my bills on time: Agree + Strongly agree	-0.4	0.4	-0.9	0.37	0.7

Continued	Estimate	Std. Error	t value	р	Likelihood (exp* Estimate)
I pay my bills on time: Neither disagree nor agree	-0.4	0.5	-0.8	0.43	0.6
I talk about managing and saving money with close friends or family: Agree + Strongly agree	-0.2	0.2	-1.3	0.21	0.8
I talk about managing and saving money with close friends or family: Neither disagree nor agree	-0.2	0.2	-1.3	0.20	0.8
I tend to live for today and let tomorrow take care of itself: Agree + Strongly agree	-0.2	0.2	-1.0	0.31	0.8
I tend to live for today and let tomorrow take care of itself: Neither disagree nor agree	-0.3	0.2	-1.5	0.15	0.8
When making a big purchase like a car or a holiday, I save for it first: Agree + Strongly agree	-0.2	0.3	-0.7	0.47	0.8
When making a big purchase like a car or a holiday, I save for it first: Neither disagree nor agree	-O.1	0.3	-0.4	0.71	0.9
I am generous when it comes to koha / gifting money to others: Agree + Strongly agree	0.2	0.2	0.9	0.39	1.2
I am generous when it comes to koha / gifting money to others: Neither disagree nor agree	0.1	0.2	0.8	0.42	1.2
I find it more satisfying to spend money than to save it for the long term: Agree + Strongly agree	-0.5	0.3	-1.6	0.12	0.6
I find it more satisfying to spend money than to save it for the long term: Neither disagree nor agree	0.3	0.2	1.5	0.14	1.3
I give money to others when I can't afford to and I don't know how to stop: Agree + Strongly agree	0.1	0.3	0.3	0.73	1.1

Continued	Estimate	Std. Error	t value	р	Likelihood (exp* Estimate)
I give money to others when I can't afford to and I don't know how to stop: Neither disagree nor agree	-0.3	0.2	-1.4	0.17	0.8
I often think I'm unlucky when it comes to money: Agree + Strongly agree	-0.4	0.2	-1.7	0.08	0.7
I often think I'm unlucky when it comes to money: Neither disagree nor agree	-0.3	0.2	-1.7	0.09	0.7
If an unexpected expense comes up, I can easily find money to cover it: Agree + Strongly agree	1.8	0.3	7.4	0.00	6.3
If an unexpected expense comes up, I can easily find money to cover it: Neither disagree nor agree	0.8	0.2	3.8	0.00	2.2
I'm worried about my finances from pay to pay: Agree + Strongly agree	-2.0	0.3	-7.2	0.00	0.1
I'm worried about my finances from pay to pay: Neither disagree nor agree	-0.6	0.2	-2.9	0.00	0.5
I'm worried about the level of debt I'm in: Agree + Strongly agree	-0.4	0.3	-1.5	0.14	0.7
I'm worried about the level of debt I'm in: Neither disagree nor agree	-0.1	0.2	-0.6	0.53	0.9
Money is there to be spent: Agree + Strongly agree	0.2	0.3	0.7	0.45	1.2
Money is there to be spent: Neither disagree nor agree	0.3	0.2	1.5	0.14	1.3

Continued	Estimate	Std. Error	t value	р	Likelihood (exp* Estimate)		
Ref: Live in a home that I own without a mortgage							
Tenure: I live in a home that I own with a mortgage	-0.6	0.2	-2.4	0.02	0.6		
Tenure: I live in a rented home/ flat – private landlord + I live in a rented home/flat – renting from Kāinga Ora or council	-1.0	0.2	-4.6	0.00	0.4		
Tenure: I live in a retirement village	0.2	0.4	0.4	0.67	1.2		
Tenure: Other (please specify) + Rent-free with others	-0.8	0.4	-1.9	0.06	0.5		

n = 1149 cases used in estimation of a total sample size of 1420; data has been weighted (Weight); cases containing missing values have been excluded; R-squared: 0.4966; Correct predictions: 73.27%; McFadden's rho-squared: 0.3767; AIC: 1492.5; multiple comparisons correction: None

A5. Dimension reduction using Principal Components Analysis (PCA)

The aim of using PCA is to reduce the set of attitudinal variables into a smaller set of components, putting the maximum possible information into the first component, then the maximum remaining information into the second, and so on. It's then possible to plot the components against each other in a biplot to understand their interrelationship (Figure A1). The larger the variance (i.e. the more information explained) by each component, the larger the spread of the data points along it.²⁶ Dimension coordinate scores are calculated for each participant, placing them along the continuum of each dimension. The coordinate scores are normalised to produce a mean of 'O'.

Attitudinal statements needed to be answered by all participants (using a five-point scaled anchored by 'Disagree strongly' and 'Agree strongly'), and a 'Don't know' option was not provided. Dimension reduction used the average scores of all 17 attributes.

A four-component solution was produced using the Kaiser Rule and Varimax rotation. The solution explained 55.1% of the variance (or 'amount of information explained'). Missing data was managed via partial data (pairwise correlations).

On the basis of the attitudes with loadings of >+0.6/<-0.6, the components were titled: Worry over Optimism, Spending over Saving, Conscientiousness and Generosity (Table A5).

- Worry over Optimism: had the greatest variance and thus explained the greatest amount of information. Key statements related to pessimism about money and concern about debt and the inability to pay for unexpected expenses.
- Spending over Saving: key statements primarily related to the propensity to spend, and also identified a sense of immediacy to spending.

^{26.} For a more detailed understanding of PCA, see: Principal Component Analysis (PCA) Explained | Built In

- Conscientiousness: key statements related to how much attention is given to spending behaviour, such as bill payments and purchase of larger items.
- Generosity: key statements primarily related to the inclination to give to others. Two statements didn't quite qualify under the +/-0.6 cut-off one also relating to generosity, the other relating to propensity to talk about money.

Three of the statements also had moderate loading on a secondary dimension:

- Confidence in managing money loaded negatively on Worry over Optimism but positively on Conscientiousness
- On-time bill payment loaded positively on Conscientiousness, but also on Worry over Optimism
- Excess generosity loaded equally (and positively) on the Generosity and Worry over Optimism dimensions.

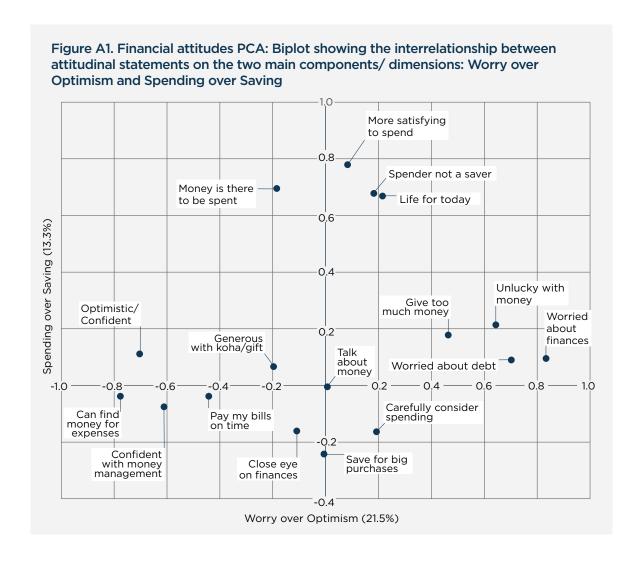


Table A5. Attribute loadings²⁷ on each of the four principal components: Worry Over Optimism, Spending over Saving, Conscientiousness and Generosity, accounting for 55% of the variance²⁸

	Worry over Optimism (21.5%)	Spending over Saving (13.3%)	Conscien- tiousness (12.4%)	Generosity (7.98%)
55.1% of variance	Eigenvalue ²⁸ : 3.65	Eigenvalue: 2.25	Eigenvalue: 2.11	Eigenvalue: 1.3
I'm worried about my finances from pay to pay	0.8	0.1	0.1	0.0
If an unexpected expense comes up, I can easily find money to cover it	-0.8	0.0	0.0	0.1
I'm worried about the level of debt I'm in	0.7	O.1	-O.1	0.1
I feel / we feel very optimistic and confident about my / our future right now	-0.7	0.1	0.0	0.1
I often think I'm unlucky when it comes to money	0.6	0.2	0.0	0.0
I'm confident in my ability to manage money day to day	-0.6	-0.1	0.5	0.0
I find it more satisfying to spend money than to save it for the long term	0.1	0.8	-0.1	0.1
Money is there to be spent	-0.2	0.7	-0.1	0.2
I'm a spender rather than a saver	0.2	0.7	-0.2	0.0
I tend to live for today and let tomorrow take care of itself	0.2	0.7	-O.1	-0.1
I keep a close personal watch on my financial affairs	-O.1	-O.1	0.8	0.0
Before I buy something, I carefully consider whether I can afford it	0.2	-O.1	0.7	-0.1
I pay my bills on time	-0.4	0.0	0.6	0.0
When making a big purchase like a car or a holiday, I save for it first	0.0	-0.2	0.5	0.2
I'm generous when it comes to koha/gifting money to others	-O.1	0.0	-O.1	0.8
I talk about managing and saving money with close friends or family	0.0	0.0	0.2	0.5
I give money to others when I can't afford to and I don't know how to stop	0.5	0.2	-0.2	0.5

^{27.} Loadings are the covariances/correlations between the original variables (in the far-left column) and the unit-scaled component (e.g. Worry over Ontimism)

 $^{28. \ \ \}text{Cell colours represent a 'heat map' identifying comparatively strong positive (green) or negative (black/grey) scores.}$

 $^{29. \ \ \}text{Eigenvalues essentially represent the spread of the component from the centre of a plot (0,0)}$

A6. Market segmentation

The process of segmenting the data focused primarily on the attitudinal statements and hence used Latent Class model-based clustering to produce the segments²⁹. For our Latent Class Analysis (LCA) we use Q Research software.

Again, average scores for all 17 attitudinal statements were included. Data was first standardised within case to allow for individual differences in scale use.

The segmentation process focused on three-, four and five-segment solutions. Segments were run by the four components revealed in the PCA to explore how well each mapped on the four components.

The three-segment solution produced a segment that failed to distinguish nearly two-thirds of the sample (Financially Unworried), while a four-segment solution separated out the large Financially Unworried segment into those who were simply unconcerned about their finances (Financially Free) and those who loaded moderately on conscientiousness and generosity (Thrifty Gifters). A five-segment solution further distinguished the Spend for Today segment into spenders who were comparatively less concerned about their finances (She'll be Right) and those who were very concerned (Worried Spenders), but this resulted in a very small segment (Table A6).

Table A6. Segmentation membership probabilities for each of the four principal components, using three-, four- and five-segment solutions.³¹

			Worry over Optimism	Spending over Saving	Conscien- tiousness	Generosity
Three Segments	Financially Unworried	63%	-0.56	-0.14	0.04	0.12
	Financially Worried	24%	1.22	-0.32	0.24	0.03
	Casual Spenders	13%	0.48	1.18	-0.58	-0.63
Four Segments	Thrifty Gifters	50%	-0.49	-0.34	0.18	0.29
	Financially Free	19%	-0.63	0.76	-0.45	-0.57
	Vigilant Worriers	23%	1.16	-0.36	0.27	0.00
	Spend for Today	9%	1.03	1.10	-0.67	-0.45
Five Segments	Thrifty Gifters	52%	-0.46	-0.30	0.19	0.22
	Financially Free	11%	-1.01	0.74	-0.84	-0.22
	Vigilant Worriers	21%	1.23	-0.39	0.25	0.07
	She'll be Right	10%	0.34	0.89	-0.02	-1.02
	Worried Spenders	5%	1.17	1.14	-1.06	-0.04

^{30.} Appropriate when creating segments from attitudinal data. It is an improvement on cluster analysis because it can deal with multiple types of data (rather than just numeric data) and automatically addresses missing values.

^{31.} Cell colours represent a 'heat map' identifying comparatively strong positive (green) or negative (black/grey) scores.

To further examine an appropriate number of segments, the principal component loadings for components one and two were plotted against each other (Figure A2), to produce four quadrants, and combined explained 35% of the variance. Overlaying segment membership probabilities for the same components demonstrated that a four-segment solution located segments in each of the four quadrants. Based on parsimoniousness and strategic usefulness, a four-segment solution was therefore settled on.

