TE TAI ŌHANGA
THE TREASURY

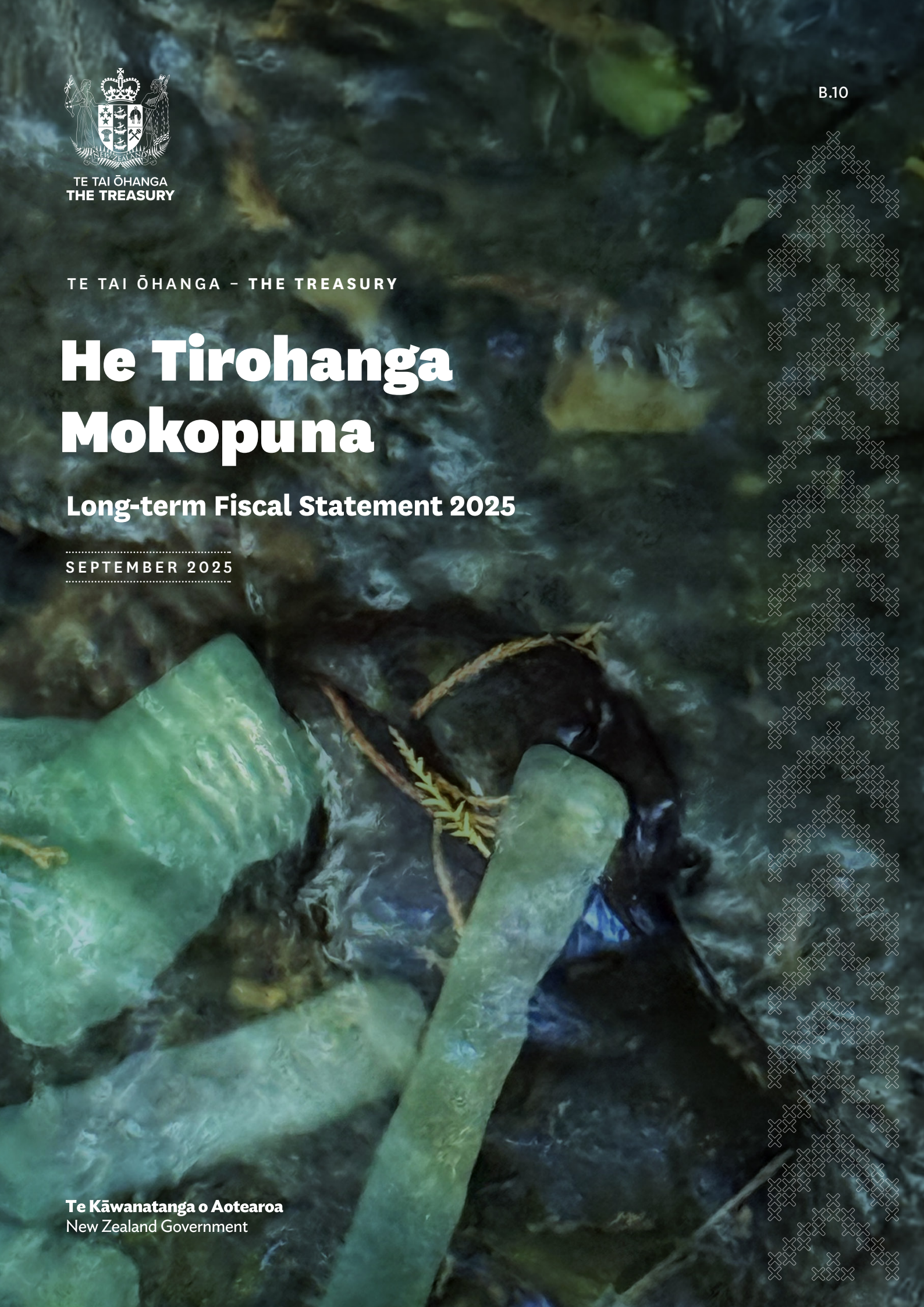
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TE TAI ŌHANGA – THE TREASURY

He Tirohanga Mokopuna

Long-term Fiscal Statement 2025

SEPTEMBER 2025



Te Kāwanatanga o Aotearoa
New Zealand Government

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Executive summary

This Statement provides a 40-year outlook on New Zealand's fiscal future. The Treasury prepares this outlook every four years to provide a longer-term perspective on the sustainability of the government's fiscal position given long-term trends, such as population ageing and climate change. This is the sixth edition of *He Tirohanga Mokopuna – the Long-term Fiscal Statement* (the Statement).

New Zealand's current policies are not sustainable for the long term. Our modelling projects what would happen if spending and revenue policies were left unchanged until 2065. With unchanged policy, by 2065 government spending per person would nearly double – from $18,300 today to $35,900 (inflation adjusted). Government revenue would rise much more slowly. These trends would result in government debt rising to around 200% of gross domestic product (GDP).

This projection of current policies is not the Treasury's prediction. The Treasury expects that policy actions will be taken to alleviate fiscal pressures. The real questions are when those changes will be made, and what they will be.

Over the last 20 years our Statements have consistently warned that population ageing will place increasing pressure on New Zealand's long-term fiscal position.

Some demographic and economic factors have proved less challenging than projected in earlier Statements. Net migration has been much higher than projected, meaning the population has aged more slowly. Workforce participation has also turned out higher than expected. Productivity growth has been surprisingly low, but a stronger-than-expected terms of trade has supported living standards. Consequently, some expenditure components, such as New Zealand Superannuation (NZS), have risen less quickly than projected in past Statements. Interest rates have been lower than our earliest projections, mitigating debt servicing costs.

Despite this, government debt is higher today than most Statements projected. This is partly because government responses to adverse events have become larger over time, averaging 10% of GDP per decade. There has not been sufficient saving between events to keep debt steady over time.

Over the past 20 years, fiscal policy choices have not always addressed longer term challenges. Core Crown tax revenue as a share of GDP has been lower than projected in earlier Statements, and government spending as a share of GDP has increased outside of health and superannuation. This combination has contributed to higher debt.

New Zealand is currently running a significant structural fiscal deficit, meaning that even without future pressures arising from population ageing, climate change and other long-term factors, adjustment is required to bring expenditure and revenue into balance. The projections assume the fiscal deficit closes over the next few years, reflecting the 2025 Budget Update. Failure to achieve that consolidation in the short term would make it more difficult to manage longer-term fiscal pressures.

We expect fiscal pressures to accelerate in coming decades. Population ageing will increase the cost of providing retirement income. Most New Zealanders aged over 65 receive a pension paid out of general taxation, known as New Zealand Superannuation or NZS. The number of New Zealanders receiving NZS is rising faster than the number of New Zealanders aged 15–64, the age bracket that pays the most tax revenue. In the 1960s there were seven

New Zealanders aged 15–64 for every Kiwi aged over 65. Now there are four, and in 2065 there are projected be two. As the age structure of the population changes, the cost of maintaining NZS in its current form will rise. NZS expenditure was 3.9% of GDP in 2006, is 5.1% now, and if current policies are maintained is expected to grow to around 8% of GDP by 2065.

Healthcare costs are also rising relative to GDP. The bulk of New Zealanders' healthcare is provided publicly, paid for out of general taxation. Because we tend to pay most of our tax in midlife but use the most healthcare later in life, the changing age structure of our population, combined with the rising cost of providing healthcare, would see health expenditure rise from 7.1% of GDP now to around 10% in 2065 if policies were left unchanged.

Although less certain, other forces could also put pressure on government finances over time. Climate change could bring new fiscal pressures associated with the costs of reducing emissions and adapting to a changing environment. Defence spending is expected to rise in response to growing global tensions, and the growing population could lead to higher infrastructure costs. Technological advances may help ease some pressures, but they cannot be relied upon to close the gap between revenue and expenditure.

While the future is uncertain, even in favourable scenarios adjustment would be required. Our key result, that unchanged policy would lead to debt rising to around 200% of GDP by 2065, was consistent using two different models. The results are sensitive to assumptions, especially interest rates and migration. However, even if global, economic and demographic conditions are more benign, our sensitivity analysis implies New Zealand would still need to make some adjustments to put fiscal policy on a sustainable path. Conversely, adverse conditions would require more rapid and substantial fiscal reform than in our central projections.

Starting sooner rather than later will reduce the overall cost, make change less disruptive and give us more choices. As an example, our modelling suggests that starting sooner would mean that per capita incomes would be permanently higher, and tax rates permanently lower, than if we delay for 40 years. An important first step is returning to surplus. Signalling changes well in advance will enable people to adjust their savings decisions and plan for retirement.

A portfolio of changes is likely to be needed, with a series of responses over coming decades. There are a range of policy choices available to decision-makers, some of which are outlined below. Relying exclusively on only one lever may require large changes, so smaller changes across a portfolio of policy areas may be preferable.

- **Reforming New Zealand Superannuation and savings:**

  The Treasury's modelling suggests the cost of NZS could be kept stable as a percentage of GDP by increasing payment rates in line with inflation rather than wages. Achieving the same by steadily increasing the age of eligibility would require it to rise to 72 by 2065. Means testing would need to kick in at relatively low levels of non-NZS income to generate similar levels of savings.

  Reforming superannuation would reduce current entitlements, but over time it would lead to lower taxes and a stronger economy than without reforms. Our modelling suggested that median-income earners born after 2037 would benefit overall, while those born before would bear more costs than benefits. Future high-income earners would benefit more than future low-income earners.

Reforms to NZS could be supplemented by strengthening savings. Governments could increase revenue or reduce expenditure to contribute to the New Zealand Superannuation Fund (NZSF). Options to increase private savings into KiwiSaver could also be explored.

- **Broader expenditure restraint:**

  To fully offset the projected increases in NZS by reducing other forms of welfare spending, non-NZS welfare spending would need to fall to 2.2% of GDP by 2065, compared to an average of 5.7% between 2006 and 2025.

  Controlling health costs through health prevention, increasing efficiency, and increases to user pays could help slow government expenditure. Health savings alone are unlikely to be sufficient for achieving overall fiscal sustainability, but small changes now could make a big contribution over 40 years.

  Governments could reduce other expenditure on non-health public services, like education and law and order. However, to fully offset the projected rise in the cost of NZS and health spend, our modelling shows that other expenditure would need to fall from about 13% of GDP to only 5% of GDP by 2065 (and keep declining thereafter).

- **Tax reform:**

  Meeting expenditure pressures through tax increases alone would require the average tax rate on labour income to gradually increase from 21% in 2025 to 32% in 2065. Alternatively, goods and services tax (GST) would need to increase to 32% by 2065.

  While income tax and GST are the most important sources of government revenue, broadening the tax base is another option.

- **Infrastructure and the public balance sheet:**

  The quality of investment in infrastructure and other assets will be important. Fiscal sustainability depends on good decisions and management around the assets and liabilities that government holds on our behalf.

New Zealand must simultaneously lift long-term economic growth and return fiscal policy to a sustainable path. Changes to fiscal policy affect the economy, and economic conditions shape fiscal capacity. Well-designed policy choices that recognise implications for productivity and incomes, as well as improving the fiscal trajectory, are more likely to be successful.

New Zealand's fiscal challenges can be overcome if we respond proactively. There needs to be greater awareness about New Zealand's long-term fiscal challenges. The Treasury hopes that this Long-term Fiscal Statement will inform a deeper debate by helping New Zealanders to understand the choices in front of them.

This Statement complements the Treasury's recently released *Long-term Insights Briefing* (LTIB),[1] which explores the role of fiscal policy in buffering shocks and cycles, and the forthcoming ***Investment Statement***,[2] which will examine the stewardship of the Crown's assets and liabilities. Together, these three reports provide a comprehensive view of the Treasury's strategic advice on long-term fiscal policy.

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1 The Treasury (2025a).

2 The Treasury (forthcoming).

Whakarāpopototanga matua

E whakarato ana tēnei Tauākī i te tirohanga 40 tau ki te anamata moni tūmatanui o Aotearoa. Ka whakarite Te Tai Ōhanga i tēnei tirohanga whakamua i ia whā tau hei whakarato i te tirohanga wā roa ki te toitūtanga o te āhuatanga moni tūmatanui a te kāwanatanga nā ngā ia wā roa pērā i te kaumātuatanga haere o te taupori me te hurihanga āhuarangi. Koinei te putanga tuaono o *He Tirohanga Mokopuna – te Tauākī Moni Tūmatanui Paetawhiti (te Tauākī).*

Kāore i te toitū mō te wā roa ngā kaupapahere moni tūmatanui onāianei o Aotearoa. E matapae ana tā mātou whakatauira ka ahatia ki te kore e panonitia ngā kaupapahere mō te whakapaunga me te moniwhiwhi tae atu ki te tau 2065. Ina ōrite tonu ana te kaupapahere, hei te tau 2065 ka i te huarua te whakapau moni a te kāwanatanga mō tēnā tangata, mō tēnā tangata – mai i te $18,300 ināianei ki te $35,900 (ina whakaritea ki te pikinga utu tukipū). Ka tino pōturi haere te piki o te moniwhiwhi Kāwanatanga. Nā ngā ia nei, ka piki ake te nui o te noho nama a te kāwanatanga ki tōna 200 ōrau o te Tapeke Wāriu Hokonga (GDP).

Ehara tēnei i te matapae a Te Tai Ōhanga mō ngā kaupapahere onāianei. Ko te kawatau a Te Tai Ōhanga ka whāia ngā mahi kaupapahere hei whakamauru i ngā pēhanga moni tūmatanui. Ko te pātai tūturu, āhea ēnei panonitanga, ā, ka ahatia.

I roto i ngā rua tekau tau kua hipa, he ōrite ngā whakatūpatotanga i roto i ā mātou Tauākī mō te pēhanga e puta mai i te pikinga o te kaumātuatanga o te taupori ki te āhuatanga moni tūmatanui wā roa o Aotearoa.

Kāore i tino kaha te wero o ngā āhuatanga ā-taupori, ā-ohaoha i tēra i matapaehia i roto i ngā Tauākī o mua. He nui ake te hekenga mai more i tērā i matapaehia, nā reira he pōturi kē te kaumātuatanga o te taupori. He nui ake hoki te whai wāhi ki te rāngaimahi i tērā i whakaarohia. He mea ohorere te iti o te whakatipu māpua, engari nā te mea i nui ake ngā here hokohoko i ērā i matapaehia, i āwhinatia ngā paerewa oranga. Nā reira, he iti iho te tere o te pikinga o te utu o ētahi o ngā wāhanga whakapaunga, pērā i te Penihana Kaumātua o Aotearoa (NZS) i tērā i matapaehia i ngā Tauākī o mua. He iti iho ngā reiti huamoni i ō mātou matapae tōmua, me te aha, i whakamauru i ngā utu whakarato nama.

Engari, he teitei ake te noho nama a te kāwanatanga ināianei i te matapae o te nuinga o ngā Tauākī. Ko tētahi take i pērā, nā te mea, nāwai rā kua nui ake ngā urupare kāwanatanga ki ngā takunetanga kino, ko te 10 ōrau o te GDP te toharite i ia tekau tau. Kāore i rawaka te penapena pūtea i waenga i ngā takunetanga kia noho tonu te noho nama ki tōna taumata.

I roto i ngā 20 tau kua hipa, kāore ngā kōwhiringa kaupapahere moni tūmatanui i urupare ki ngā wero wā roa. Kua iti iho te moniwhiwhi tāke Karauna matua hei wāhanga o te GDP i tērā i matapaehia i roto i ngā Tauākī o mua, ā, kua piki te whakapaunga kāwanatanga hei wāhanga o te GDP i waho atu i te hauora me te penihana kaumātua. Nā runga anō i tēnei pahekotanga i nui ake ai te noho nama.

Ināianei e whakahaere ana a Aotearoa i te takarepatanga moni tūmatanui ā-anga, nā reira, hāunga ngā pēhanga e puta mai ana i te kaumātuatanga o te taupori, te hurihanga āhuarangi me ētahi atu āhuatanga wā roa, me panoni tonu kia hangarite te whakapaunga me te moniwhiwhi.

E kawatauhia ana te whakahohoro o ngā pēhanga moni hei ngā tekau tau e tū mai nei. Nā te pikinga o te kaumātuatanga o te taupori e piki ake ai te utu kia whakarato i te moni whiwhi tāoki. Ko te nuinga o ngā tāngata nō Aotearoa e 65 te pakeke, neke atu rānei, e whakawhiwhia ana ki te penihana e utua ana e te tāke whānui, e kīia ana ko te Penihana o Aotearoa (NZS). He tere ake te piki o te maha o ngā tāngata o Aotearoa e whakawhiwhia ana ki te NZS i tō ngā tāngata o Aotearoa kua eke ki ngā tau 15-65, te taumata pakeke e utu ana i te nuinga o te moniwhiwhi tāke. I ngā tau 1960 e whitu ngā tāngata o Aotearoa 15 tau te pakeke atu ki te tau 65 mō ia tangata neke atu i te tau 65 te pakeke. Ināianei e whā, ā, hei te tau 2065 e matapaetia ana e rua noa iho. Ka panoni haere ana te anga pakeke o te taupori, ka piki ake te utu kia pupuri i te NZS ki te āhua onāianei. Ko te NZS he 3.9 ōrau o te GDP i te tau 2006, he 5.1 ōrau ināianei, ā, e whakaarohia ana ka piki ki tōna 8 ōrau hei te tau 2065.

Ina whakatairitea ana ki te GDP e piki ana hoki ngā utu tiaki hauora. Ko te nuinga o te tiaki hauora mā ngā tāngata o Aotearoa e whakaratoa tūmatanuihia, e utua ana e te tāke whānui. Ka utu tātou i te nuinga o te tāke i te taipakeketanga o tō tātou ao, i te nuinga o te wā. Engari, ka whakamahi i te nuinga o te tiaki hauora i te kaumātuatanga. Nā reira, nā te panoni o te anga pakeke o tō tātou taupori, me te pikinga o te utu o te tiaki hauora, ka piki te whakapaunga hauora i te 7.1 ōrau o te GDP ināianei ki tōna 10 ōrau hei te tau 2065 ki te kore e panonihia ngā kaupapahere.

Ahakoa kāore i te tino mōhiotia, nāwai rā, ka pā mai pea ētahi atu pēhanga ki ngā ahumoni o te kāwanatanga. Mā te hurihanga āhuarangi e pā mai pea ngā pēhanga moni hou e hāngai ana ki ngā utu o te whakaheke i ngā tukunga me te urutau ki te taiao e panoni ana. E ai te whakaaro ka piki te utu waonga hei urupare ki ngā āwangawanga ā-ao e tipu haere ana, ā, mā te tipu haere o te taupori e piki ake ai ngā utu tūāhanga. Mā te ahu whakamua o te hangarau e āwhina pea kia whakamāmā i ētahi pēhanga, engari kāore e taea te whakawhirinaki ki aua mea hei whakawhāiti i te āputa moni tūmatanui i waenga i te moniwhiwhi me te whakapaunga.

He pāhekeheke ngā matapae, engari, ahakoa he putanga pai rawa atu, me panoni tonu. E pēnei ana tā mātou hua matua, arā, ki te kore e panoni te kaupapahere ka piki te noho nama ki tōna 200 ōrau o te GDP hei te tau 2065. He ōrite tēnei e whakamahi ana i ngā whakatauiratanga rerekē e rua. He rahirahi ngā hua ki ngā pūmāramarama, otirā ngā reiti huamoni me te hekenga mai o ngā tāngata. Heoi anō, ahakoa e pai ake ana ngā āhuatanga ā-ao, ā-ohaoha, ā-taupori anō hoki i tērā e whakaarohia ana i roto i te tātaritanga rahirahi me whakarerekē tonu a Aotearoa kia toitū te kaupapahere moni tūmatanui. Engari, ki te puta mai he āhuatanga kino ka hiahiatia he whakahounga tere ake, hōhonu ake i tērā kei ā mātou matapae matua.

Ka hiahiatia ngā kōwhiringa kaupapahere ahu whakamua kia haere te kaupapahere moni i runga i te ara toitū. He whīwhiwhi te wero ā-moni tūmatanui kei mua i te aroaro, engari ehara i te mea kāore e taea te karo. E wātea ana ngā kōwhiringa ki ngā Kāwanatanga.

Ina tōmua ana te tīmata ki te mahi, kaua e tōmuri, ka whakaiti i te utu katoa, ka whakaiti i te whakatōhenehene o te panoni, ā, ka nui ake ngā kōwhiringa. Hei tauira, e whāki ana tā mātou whakatauira ki te mahi ināianei ka nui ake ngā moni whiwhi o ia tangata mō ake tonu, ka iti iho hoki ngā pāpātanga tāke mō ake tonu, engari anō mēnā ka takaroa mō ngā tau 40. Ko te mahi hira tuatahi ko te hoki ki te hemihemi. Ki te tohu ngā panoni i mua ka āhei ngā tāngata te whakarerekē i ā rātou whakataunga penapena pūtea me te whakamahere mō te tāokitanga.

He nui te tūponotanga ka hiahiatia he kōpaki o ngā panonitanga me te raupapatanga o ngā urupare hei ngā tekau tau e tū mai nei. Tērā te huhua o ngā kōwhiringa rautaki e wātea ana ki te hunga e whakatau ana, ā, e whakahuatia ana ētahi i raro iho. Ki te whakawhirinaki ki te kauwhiti kotahi anake, ka hiahiatia pea ngā panoni nui, nā reira, ka pīrangitia kētia pea ngā panoni iti iho puta noa i te kōpaki o ngā tūmomo wāhi kaupapahere.

- **Te Whakahou i te Penihana Kaumātua o Aotearoa me te penapena pūtea**

  E ai ki te whakatauira a Te Tai Ōhanga ka noho tūwhena te utu o te NZS hei ōrau o te GDP mā te whakapiki i ngā pāpātanga utu e pā ana ki te pikinga utu tukipū, kaua ki ngā moni whiwhi mahi. Kia rite te whakatutukinga mā te āta whakapiki i te māraurau pakeketanga, me piki ki te 72 hei te tau 2065. Me tīmata te whakamātautau rawa i ngā taumata āhua iti o te moni whiwhi ehara i te NZS kia whakaputa i ngā taumatua ōrite o te penapena pūtea.

  Ki te whakahou i te penihana kaumātua ka whakaitia ngā āheinga onāianei, engari, nāwai rā, ka iti iho ngā tāke, ā, ka kaha ake te ohaoha i tērā ki te kore he whakahounga. I whakaatu tā mātou whakatauira mō te hunga moni whiwhi waenga, ka whai painga te hunga i whānau mai i muri iho i te tau 2037, engari, ka nui ake ngā utu mā te hunga i whānau mai i mua. O ngā whakatipuranga e heke mai nei, ka nui ake te painga mā ngā tāngata me ngā moni whiwhi tino teitei i te painga mā ngā tāngata me ngā moni whiwhi iti.

  Ka tautokohia pea ngā whakahounga ki te NZS mā te whakakaha i te penapena pūtea. Ka taea e ngā Kāwanatanga te whakapiki i te moni whiwhi, te whakaiti rānei i te whakapaunga, kia tāpae ki te Tahua Penihana Kaumātua o Aotearoa (NZSF). Ka taea hoki te tūhura i ngā kōwhiringa ki te whakapiki i ngā penapena pūtea tūmataiti ki te KiwiSaver.

- **Te tūpatotanga whakapaunga whānui:**

  Kia whakamauruhia katoatia ngā pikinga o te NZS mā te whakaiti i ētahi atu tūmomo whakapaunga toiora, me heke te whakapau moni toiora ehara i te NZS ki te 2.2 ōrau o te GDP hei te tau 2065, ina whakatauritea ana ki te toharite o te 5.7 ōrau i waenga i ngā tau 2006-2025.

  Te whakahaere i ngā utu hauora, mā te ārai ā-hauora, te whakapiki i te whāomo me ētahi pikinga mō te utu ā-kaiwhakamahi, e āwhina ki te whakapōturi i te tipunga o te whakapaunga kāwanatanga. E kore e rawaka ngā penapenatanga nō te hauora kia tutuki te moni pūmau whānui, engari ahakoa he iti te panoni ināianei, he tāpaenga hei ngā 40 tau e tū mai nei.

  Ka whakaiti pea ngā kāwanatanga i te whakapau moni ki ngā ratonga tūmatanui ehara i te ratonga hauora, pērā i te mātauranga, te ture me te āta noho. Heoi anō, kia whakamauru i te katoa o te pikinga o te utu NZS me te hauora, e whakaatu ana tā mātou whakatauira me heke te whakapau moni i te 13 ōrau o te GDP ki te 5 ōrau anake o te GDP hei te tau 2065 (me te heke haere tonu ā muri atu).

- **Te whakahounga tāke:**

  Ki te tutuki ngā pēhanga whakapaunga mā ngā pikinga tāke anake e hiahiatia ana te whakapiki ki te tāke toharite o te moni whiwhi mahi mai i te 21 ōrau i te tau 2025 ki te 32 ōrau hei te tau 2065. Me piki kē rānei te GST ki te 32 ōrau hei te tau 2065.

  Ahakoa he mātāpuna hira o ngā moniwhiwhi kāwanatanga te tāke moniwhiwhi mahi me te GST, he kōwhiringa anō te whakawhānui i te tūāpapa tāke.

- **Te Tūāhanga me te ripanga kaute tūmatanui:**

  He mea nui te kounga o te whakangao ki te tūāhanga me ētahi atu rawa hoki. E whakawhirinaki ana te toitūtanga moni tūmatanui ki ngā whakataunga pai me te whakahaerenga e pā ana ki ngā rawa me ngā taumahatanga e puritia ana e te kāwanatanga mā tātou.

Me hiki Aotearoa i te whanaketanga ohaoha wā roa me te whakahoki i te kaupapahere ki te ara toitū i te wā kotahi. E whakaaweawe ana ngā panoni ki te kaupapahere moni tūmatanui i te ohaoha, ā, ka tārai ngā āhuatanga ohaoha i te raukaha moni tūmatanui. He nui ake te tūponotanga e angitu ai ngā kōwhiringa kaupapahere i hoahoa paitia, e aro ana hoki ki ngā hīraunga mō te māpua me ngā moni whiwhi, ā, ka whakapai ake hoki i te ara whiu moni.

Ka taea te karo ngā wero moni tūmatanui o Aotearoa ina hihiri tā mātou urupare. Kia mōhiotia whānuitia ngā wero moni tūmatanui wā roa o Aotearoa. Ko te tūmanako o Te Tai Ōhanga ka tuku mōhiotanga te Tauākī Moni Tūmatanui Paetawhiti ki te taupatupatu hōhonu mā te āwhina i ngā tāngata o Aotearoa kia mārama ki ngā kōwhiringa kei mua i ō rātou aroaro.

Ka tautoko tēnei Tauākī i te *Puka Whakamārama i te Pae Tawhiti* nā Te Tai Ōhanga i whakaputaina inakuanei, e tūhura ana i te mahi o te kaupapahere moni hei pūreireri i ngā tumeke me ngā hurihanga, me te ***Tauākī Whakangao*** e puta mai ākuanei, ā, ka mātai i te tuari o ngā rawa me te noho nama a te Karauna. Hui katoa, e tuku ana ēnei pūrongo e toru te tirohanga whānui o te tohutohu rautaki a Te Tai Ōhanga ki te kaupapahere moni wā roa.

Chapter 1: Understanding the fiscal challenge

This chapter discusses what fiscal sustainability is, why it matters, and what the Treasury has been learning about New Zealand's long-term fiscal outlook.

- Fiscal sustainability is about ensuring the government can maintain current policies without leading to continued increases in debt or requiring large policy changes in the future, such as major tax increases or spending reductions.
- Twenty years of long-term fiscal reporting reveals that some demographic and economic factors have proved more favourable for the government's finances than anticipated. Net migration and workforce participation have been higher than anticipated, while interest rates have been lower. This has slowed the increase in costs associated with an ageing population.
- Even so, fiscal pressures have intensified – New Zealand has a structural deficit, and debt is higher than anticipated in past Long-term Fiscal Statements. This underscores the critical role of policy choices, especially in response to shocks and crises.
- The structural pressures on our fiscal system – an ageing population, climate change, geopolitical tensions, health costs, and technology change – are converging and intensifying. These forces will place increasing pressure on the government's finances over the next 40 years.

The Public Finance Act 1989 requires the Treasury to prepare a Statement on New Zealand's long-term fiscal position every four years. This is the sixth edition of *He Tirohanga Mokopuna – the Long-term Fiscal Statement* (the Statement). Since our first edition in 2006, these Statements have provided successive governments and the wider public with a 40-year view of the fiscal challenges facing New Zealand. The purpose is not to predict the future but to identify key trends and trade-offs to inform public discussion and help decision-makers assess whether current policy settings are sustainable over the long term. This Statement is part of a broader suite of stewardship documents the Treasury is releasing in 2025, which together provide the Treasury's strategic advice on long-term fiscal policy.[3]

[3] The other two reports are the Treasury's *2025 Long-term Insights Briefing* (The Treasury, 2025b) on sustainable and resilient fiscal policy through economic shocks and cycles, and the *2025 Investment Statement* (The Treasury, forthcoming), which will explore issues around the prudent investment and management of the Crown balance sheet.

What fiscal sustainability is and why it matters

Fiscal sustainability is about ensuring New Zealand can continue to fund the public services and investments that underpin our living standards without resorting to sudden spending cuts, excessive borrowing, or passing undue debt burdens onto future generations, such as higher taxes. It is about designing fiscal settings that can endure and absorb inevitable shocks, adapt to change, and support New Zealand's long-term goals. That means making deliberate choices, weighing trade-offs, building resilience and planning with uncertainty and future generations in mind.

Fiscal sustainability matters because it shapes the choices New Zealanders have. When government finances are well managed, it means we can keep funding things like healthcare, education, retirement income, and infrastructure, while also providing support during tough times.

The Long-term Fiscal Statements raise awareness of fiscal sustainability issues to inform public debate and to help decision-makers look beyond short-term pressures and understand the structural forces shaping our fiscal outlook. By surfacing these challenges early and transparently, they serve as a strategic tool – supporting credible well-informed choices, adaptive planning and public confidence in New Zealand's fiscal institutions.

Over the last 20 years, successive Statements have built a rich evidence base on how fiscal pressures unfold and how policy choices influence long-term outcomes. Reflecting on this history can help draw out key patterns and lessons that can support more deliberate, future-focused fiscal strategy. Since 2006, one of the most consistent messages across every Statement is the enduring fiscal challenge posed by population ageing. Each Statement has highlighted that without policy change the fiscal impacts of ageing will place increasing pressure on New Zealand's long-term fiscal position. While the projected timing and scale of these pressures have varied, the trajectory remains clear.

Lessons from two decades of long-term fiscal reporting

Two decades of long-term fiscal reporting reveal how New Zealand's fiscal outcomes have evolved in practice – often diverging from earlier projections in ways that offer important insights.[4] These lessons help explain how favourable conditions have offset some pressures, why debt has still risen, and where future fiscal strategy must grapple with enduring challenges and growing structural imbalances.

Favourable demographic and economic conditions

Over the past two decades, core economic variables have sometimes diverged significantly from that assumed in earlier Statement projections – shaped by a mix of external forces, market behaviour and policy choices. Some of these changes were responses to global conditions. Others reflected implicit or explicit policy choices and settings, such as migration policy. Either way, a key message is that we cannot rely on these favourable trends to continue in the future.

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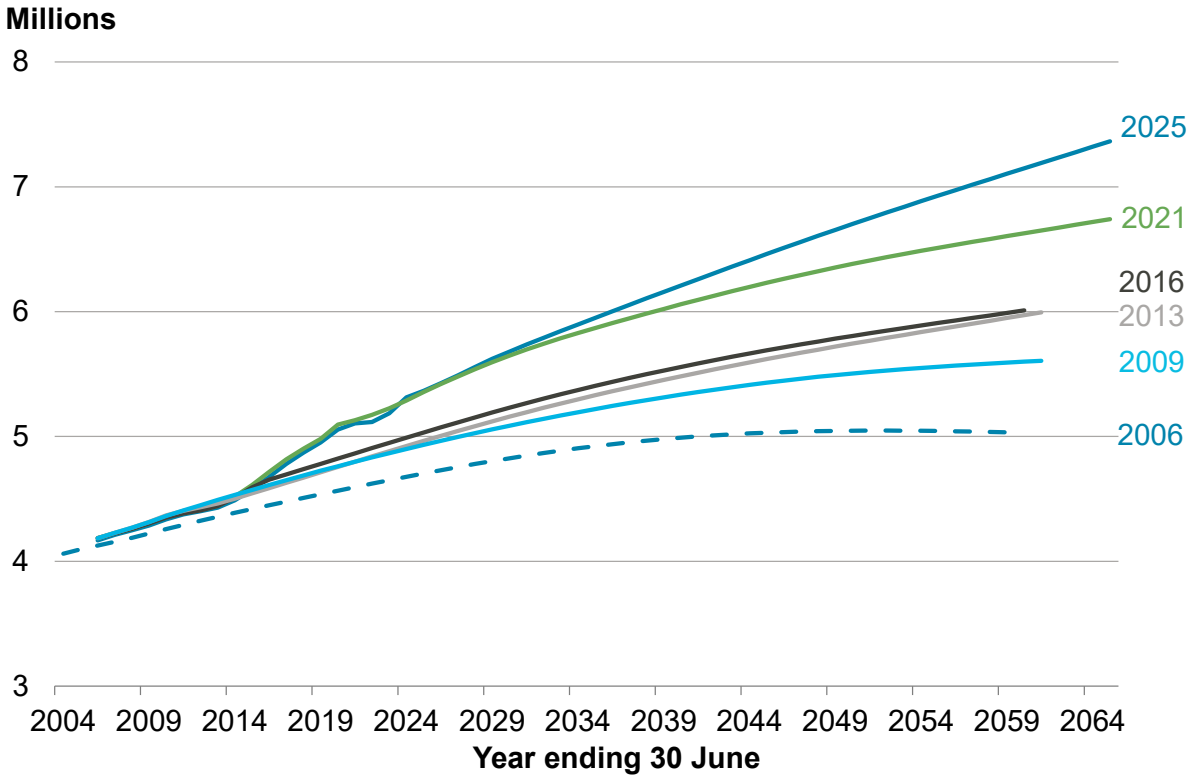
4 Louverdis & Smith (2025).

Migration has delayed ageing pressures

Demographic shifts are at the heart of the long-term fiscal challenge and have been a defining feature of all previous Statements. Yet some trends have unfolded differently than earlier projections suggested. Most notably, New Zealand's population has grown significantly faster than anticipated in 2006, largely due to higher-than-expected net migration (see Figure 1).

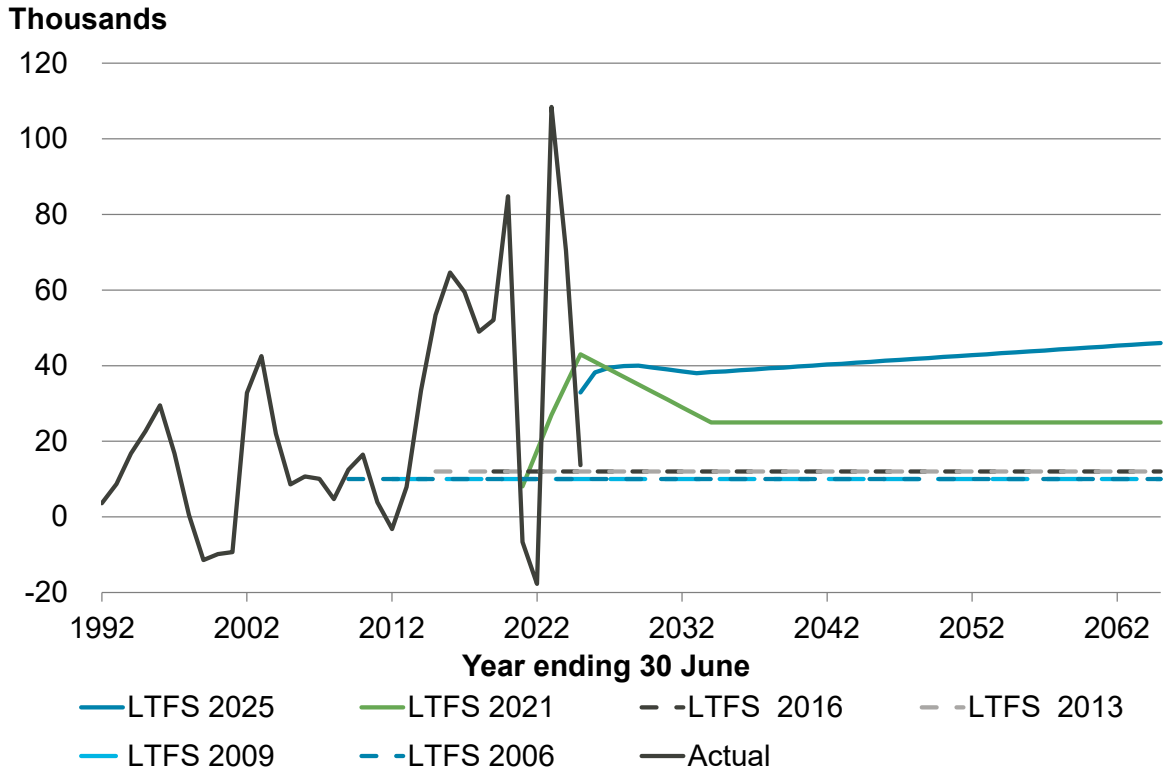
Migrants have typically been younger, which has helped moderate some of the effects of an ageing population. While earlier projections assumed annual net migration of around 10,000 people, recent years have seen figures 10 times higher, with 108,400 net arrivals in 2023 alone (see Figure 2). Net migration has since moderated from the exceptional highs of 2023 but the volatility in net migration makes it difficult to project. In their latest population projections, Statistics New Zealand (Stats NZ) median projection assumes net migration averages above 40,000 per annum.

Figure 1: Population projection by Long-term Fiscal Statement publication



Sources: The Treasury; Stats NZ

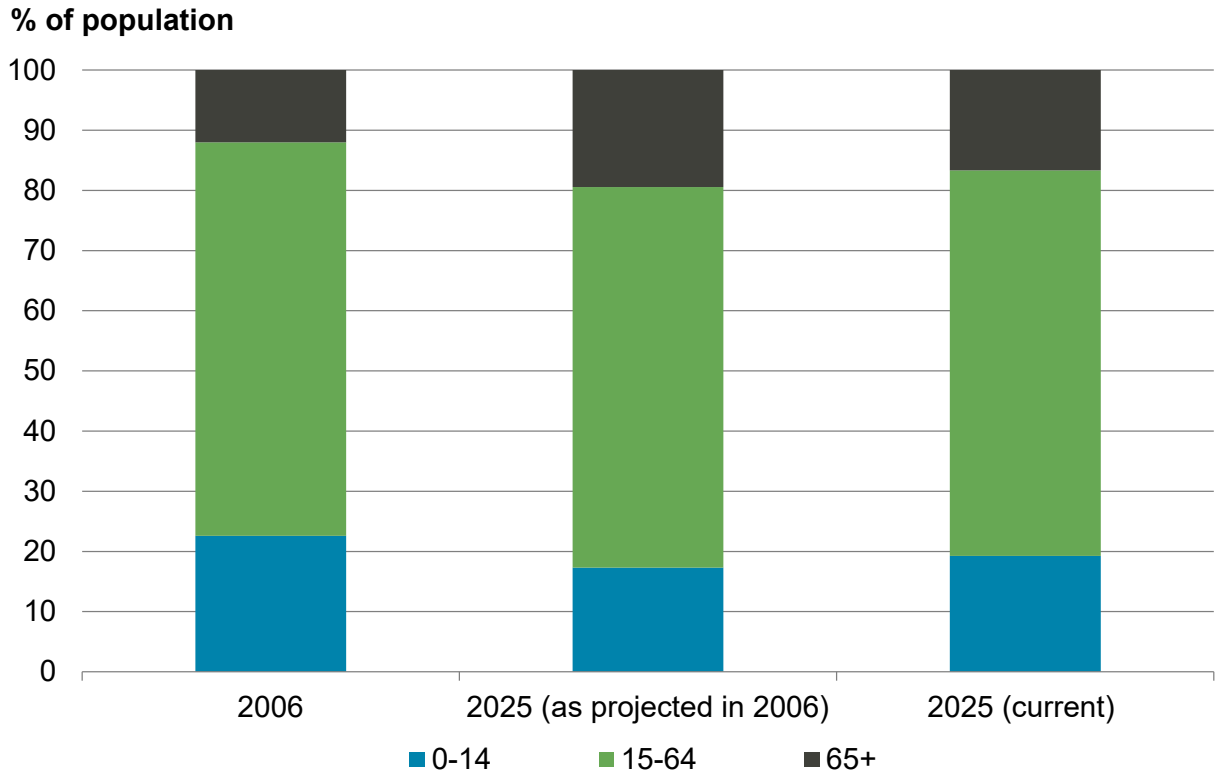
Figure 2: Annual net migration by Long-term Fiscal Statement publication



Sources: Long-term Fiscal Model (LTFM), The Treasury; Stats NZ

Stronger net migration since 2006 has also resulted in the composition of the New Zealand population being younger than what was anticipated (see Figure 3). In addition, net migration, both in the past and into the future, will continue to slow the ageing of New Zealand's population in coming decades (see Figures 15 and 16).

Figure 3: Population age structure in 2006 and 2025 (projected and current)



Sources: The Treasury; Stats NZ

As of March 2025, the estimated resident population was 5.33 million, exceeding earlier projections because of the strong net migration flows.[5] A larger population has eased some immediate fiscal pressures, as a broader tax base helps manage past debt accumulation. But this growth has also intensified infrastructure demands, particularly in housing, transport and essential services, contributing to infrastructure pressures that will require sustained investment. Analysis by the New Zealand Infrastructure Commission suggests that demand for infrastructure investment will increase from around $20 billion today to slightly more than $30 billion by the 2050s (in 2023 NZD terms). This equates to infrastructure investment of around 5.8% of GDP annually over the next 30 years to meet infrastructure demands driven by factors such as population growth.[6]

Increased labour force participation has provided an economic and fiscal boost

Previous Statements projected labour force participation to increase with longevity, as improved health enables people to work for longer. However, the increase has been much more significant than anticipated.

Labour market participation of 65−69-year-olds was around 10% in 1993. The Treasury projected it to increase to 38% by 2023 in the 2006 Statement, but instead around 49% of 65–69-year-olds are now participating in the labour market. For the 70–74 age group, the 2006 Statement projected labour market participation to increase from 4% in 1993 to 19% in 2023, but instead it increased to 27% (see Figure 4). This shift has helped offset declining workforce shares, bolstering the economy and the tax take as a result.

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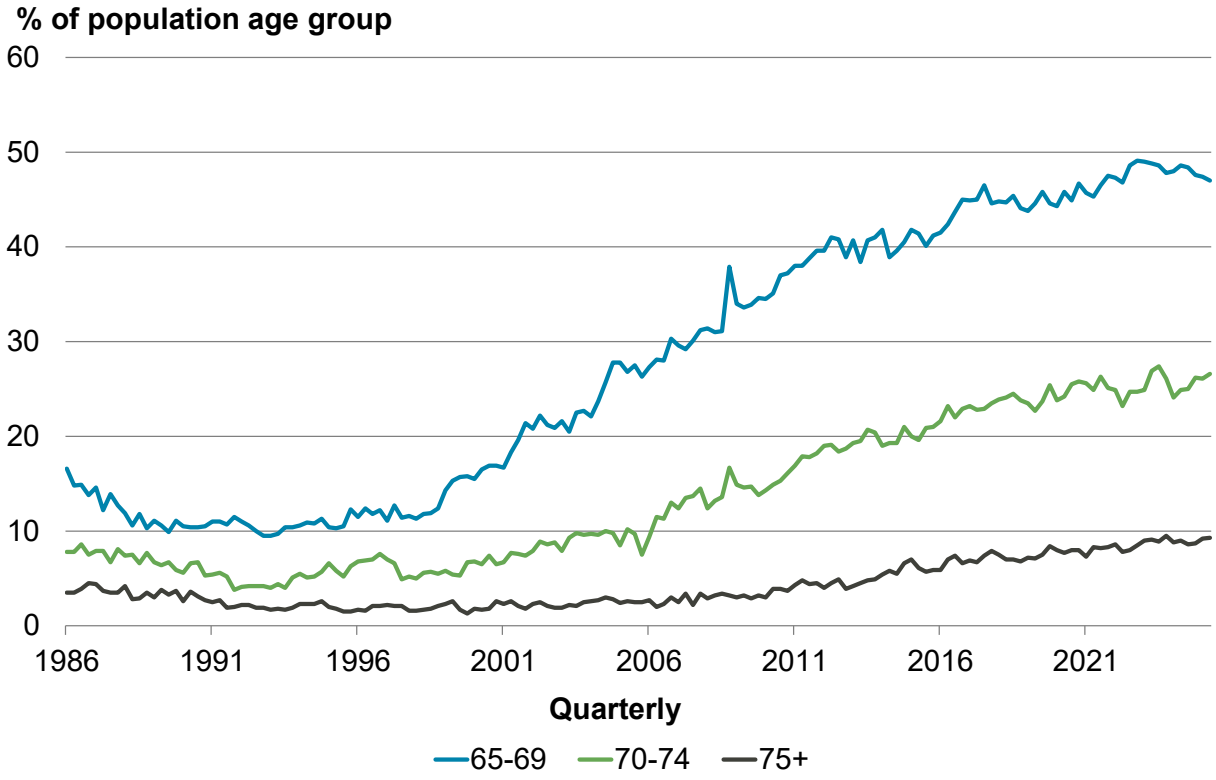
5 Stats NZ (2025).

6 New Zealand Infrastructure Commission (2025b); Sense Partners (2022).

Historically, New Zealand had one of the lowest labour force participation rates for over 65s in the Organisation for Economic Co-operation and Development (OECD), but today it ranks among the highest. In fact, compared to other OECD countries, New Zealand is now an outlier in the number of over 65s continuing to work. While some of the increase can likely be attributed to policy changes, the universal nature of New Zealand Superannuation (NZS) is likely to be an important factor.[7] The same rate is paid regardless of other earnings, meaning our over 65s face no additional abatement of their superannuation benefit beyond income taxes, and hence no disincentive from choosing to extend their working lives. The Treasury's Effective Marginal Tax Rate (EMTR) analysis confirms that most seniors face little to no disincentive to work more.[8] The analysis also shows that seniors are responsive to changes in tax rates, underscoring the importance of carefully calibrating policy settings.

While scope remains for further increases in labour force participation among older workers, there are inherent limits on how high participation can increase. Moreover, even though more older people are staying in work, older people tend to work fewer hours than younger people, which will temper some of the boost to tax revenue.[9]

Figure 4: New Zealand labour force participation rates for 65+ age groups



Source: Stats NZ

7 Policy changes that may have influenced workforce participation among older age groups include the gradual rise in the age of eligibility for superannuation from 60 to 65 between 1992 and 2001, and the 1999 legislative ban on compulsory retirement ages in employment contracts.

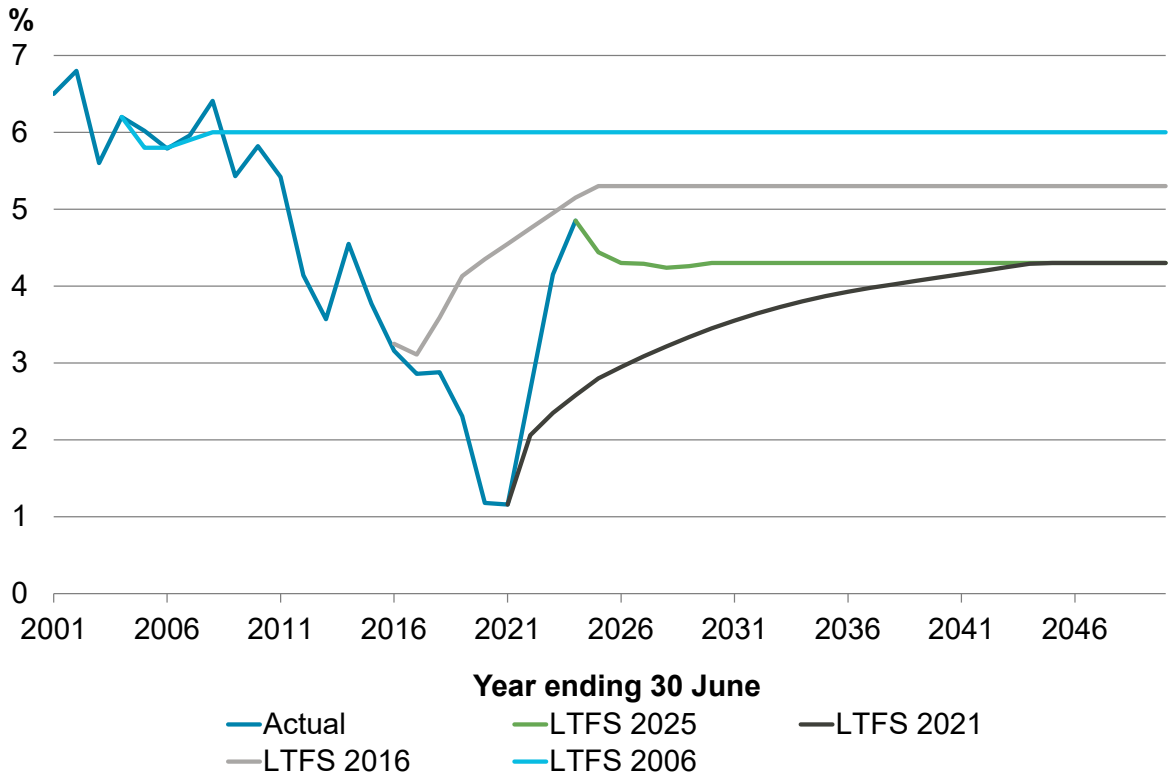
8 Stephens et al. (2025).

9 The Treasury analysis found that average weekly hours worked decline significantly with age. For example, workers aged 65–69 worked an average of 28.6 hours per week, compared to 37.7 hours for those aged 25–29. This pattern reflects a combination of factors, including preferences for part-time work, health limitations, and phased retirement arrangements.

Low interest rates have also helped

Over the past two decades, interest rates have played a critical role in shaping New Zealand's fiscal trajectory, influencing both debt servicing costs and the rate at which government debt compounds over time. The 2006 Statement assumed a long-run interest rate of 6% on 10-year government bonds, reflecting the prevailing conditions at the time. By the 2021 Statement, this assumption had been revised down to 4.3%, as global interest rates had declined significantly, easing fiscal pressures by reducing debt servicing costs (see Figure 5).

Figure 5: 10-year government bond rate by Long-term Fiscal Statement publication



Source: LTFM, The Treasury

Ten-year government bond rates troughed at 0.5% in October 2020, a year before the 2021 Statement, but have steadily climbed since then. Since January 2025, 10-year yields have averaged slightly more than 4.5%, indicative of much less benign financing conditions.

But New Zealand's productivity performance has lagged

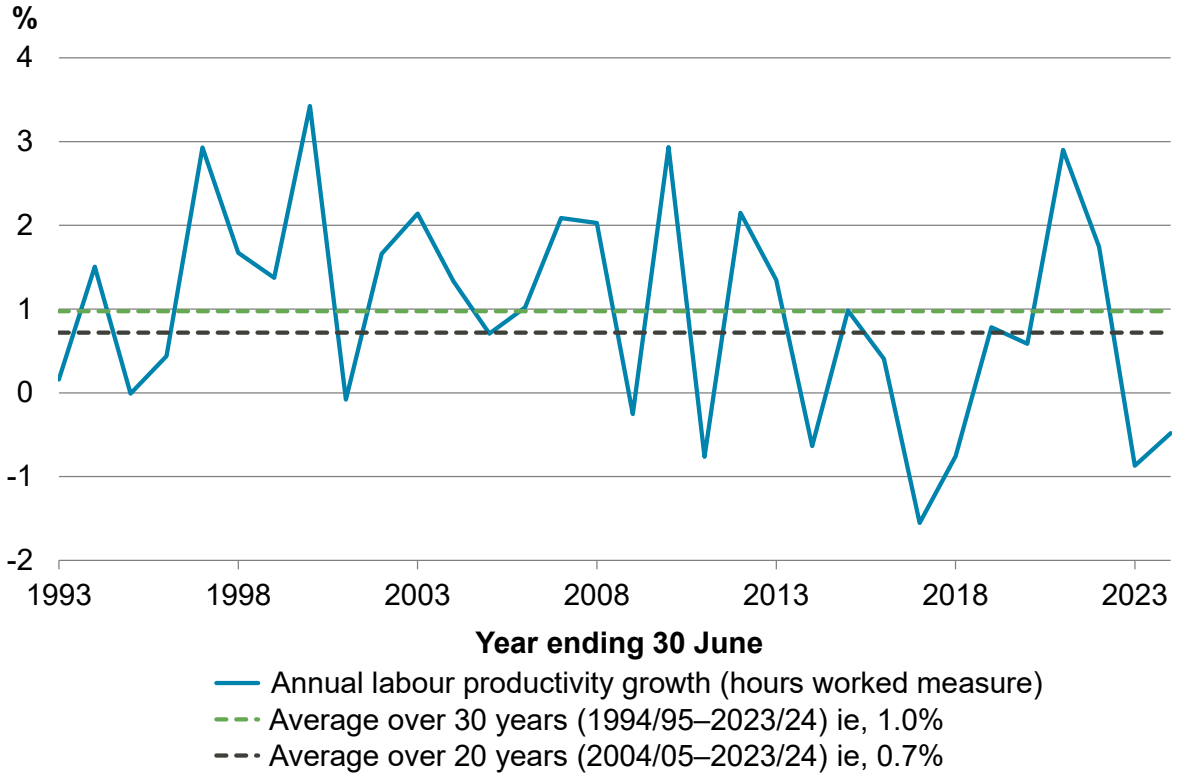
Recent productivity trends have diverged from past projections. While past Statements have generally assumed a gradual recovery in annual productivity growth toward long run trends, productivity growth over the past two decades has been weaker, averaging just 0.7% per year (see Figure 6).[10] A recent paper from the Treasury highlights that this slowdown reflects global and domestic factors, including diminishing returns from innovation, weak investment relative to employment growth, and reduced international connectedness.[11]

[10] Prior to the 2021 Statement, the Treasury assumed that annual labour productivity growth would rise to 1.5%.

[11] The Treasury (2024a).

It also aligns with global trends and recent research suggesting ageing populations are potentially contributing to the decline.[12] Based on an analysis of current trends, the Treasury paper also concluded that productivity growth could remain slow over the coming years.

Figure 6: New Zealand productivity growth



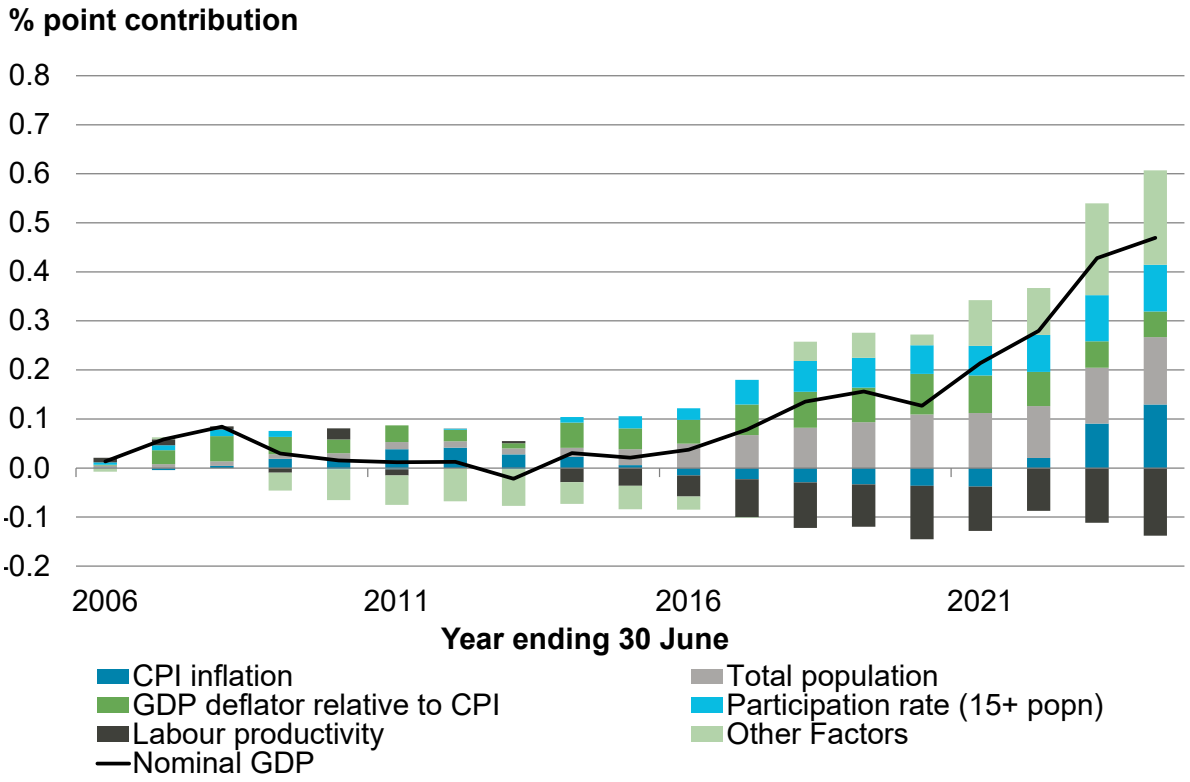
Sources: Stats NZ; LTFM, The Treasury

Other factors have cushioned productivity shortfalls

Despite weak productivity growth, income growth (as measured by nominal GDP) has tended to surprise on the upside. For example, in the year to June 2024 nominal GDP was 26% higher than projected in the 2006 Statement, even though labour productivity was 10% lower than projected. Figure 7 shows that the higher nominal GDP reflected a combination of higher-than-expected terms of trade, labour force participation, population growth and, more recently, inflation.

[12] OECD (2024a); International Monetary Fund (2025).

Figure 7: Contributions to nominal GDP growth since 2005



Note: The chart above breaks down nominal GDP (NGDP) growth into components using the relationship: NGDP = [Labour productivity]*[Total hours worked]*[GDP deflator] = [GDP per hour worked]*[(Hours worked per employee)*(working age Labour Force Participation Rate)*(1-unemployment rate))*(Working-age population/ Total population)*(Total population)]*[((GDP deflator/(Consumers Price Index))*(Consumers Price Index)]).

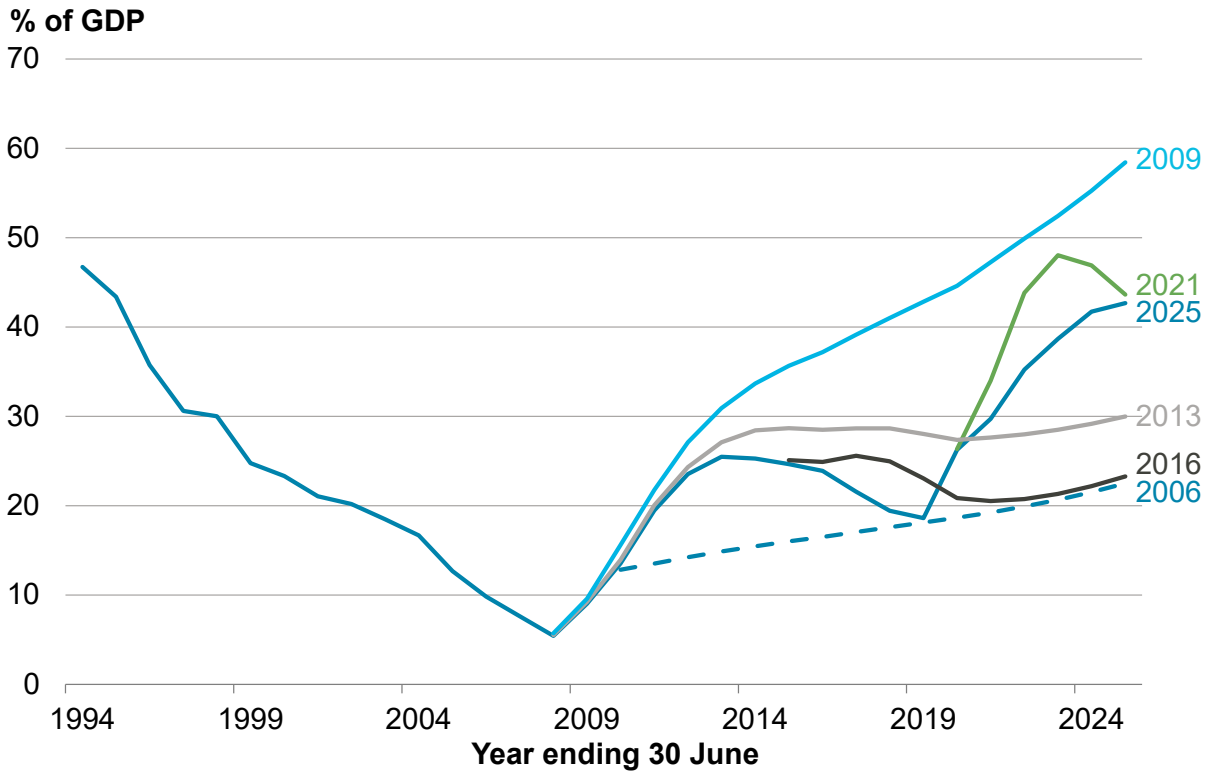
The series for "other factors" shown on the chart includes the impacts of the unemployment rate, hours worked per employee, and the working age share of the population, along with the effect of compounding between factors and other data residuals.

Sources: Stats NZ; The Treasury

Public debt remains elevated and higher than projected

Our public finance system is designed to achieve and maintain stable and prudent levels of public debt. Looking back over the past 20 years, and despite some more favourable economic conditions, net core Crown debt has generally exceeded the levels projected in successive Statements. Current debt (as represented by the solid 2025 Statement line in Figure 8) remains below the levels projected at the time of the Global Financial Crisis (2009) and the COVID-19 pandemic (2021), but it exceeds those from 2006, 2013 and 2016. Two key factors help explain this divergence – fiscal responses to shocks and crises and fiscal policy choices.

Figure 8: Net core Crown debt by Long-term Fiscal Statement publication



Source: LTFM, The Treasury

Responses to shocks and crises

As highlighted in the Treasury's 2025 Long-term Insights Briefing (LTIB),[13] major shocks have become progressively larger and more frequent over the past two decades. Events such as the Global Financial Crisis, the Canterbury earthquakes, the COVID-19 pandemic, and the 2023 North Island Weather Events (NIWE) have tested the scale and adaptability of fiscal policy.[14] In each case, the government chose to play a central role in cushioning economic and social disruption.

The LTIB noted that more recent responses have seen governments implement sizeable fiscal packages aimed at supporting households, businesses, and public infrastructure, in part because conventional monetary policy support was constrained by the lower bound on interest rates. The public responses to the COVID-19 pandemic and the NIWE were significant in both scale and scope, extending beyond traditional stabilisation toward maintaining wellbeing, community cohesion, and system resilience. Although the response measures were intended to be time limited, their effects have persisted, with some expenditures remaining elevated, and debt levels rose materially. The LTIB notes that the frequency and severity of future shocks may increase, with events linked to climate change, natural hazards, or geopolitical instability potentially becoming more common.

[13] The Treasury (2025b).

[14] The Treasury (2023).

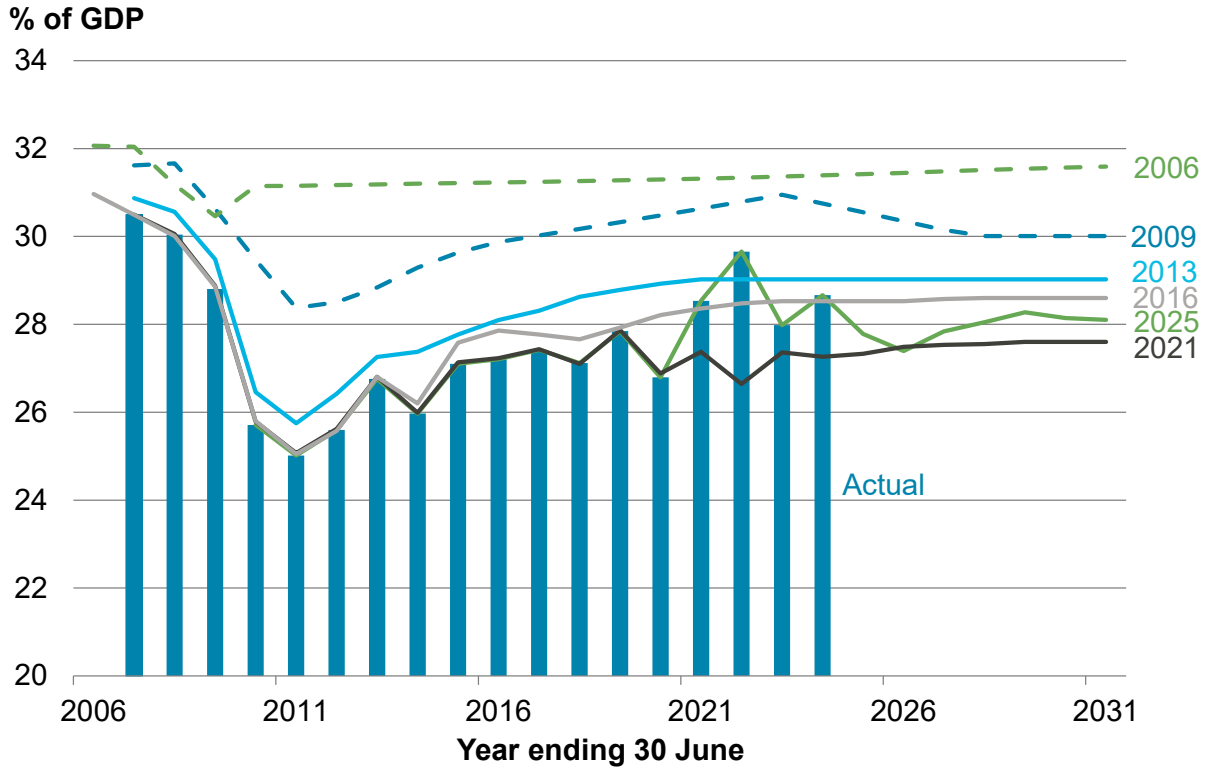
The prevalence of shocks raises questions about how to design fiscal frameworks and tools that can better manage risk and uncertainty. The LTIB suggests exploring options such as contingency funds, pre-agreed emergency appropriations, or adaptive operating rules to maintain responsiveness while preserving long-term sustainability.

Policy choices and fiscal consequences

A lesson emerging from our past Statements is that long-term fiscal outcomes reflect not just demographic or economic trends, but the cumulative impact of policy over time. These choices can lead to revenue and expenditure outcomes that diverge from earlier projections (see Figures 9 and 10).[15]

Over the past two decades, core Crown tax revenue as a share of GDP has often fallen short of earlier projections, oscillating between 25%-30% of GDP, and is lower now than in 2007. Several factors help explain the divergence, including stronger than expected GDP and changes to tax policy, such as shifts in corporate and personal income tax rates and GST.

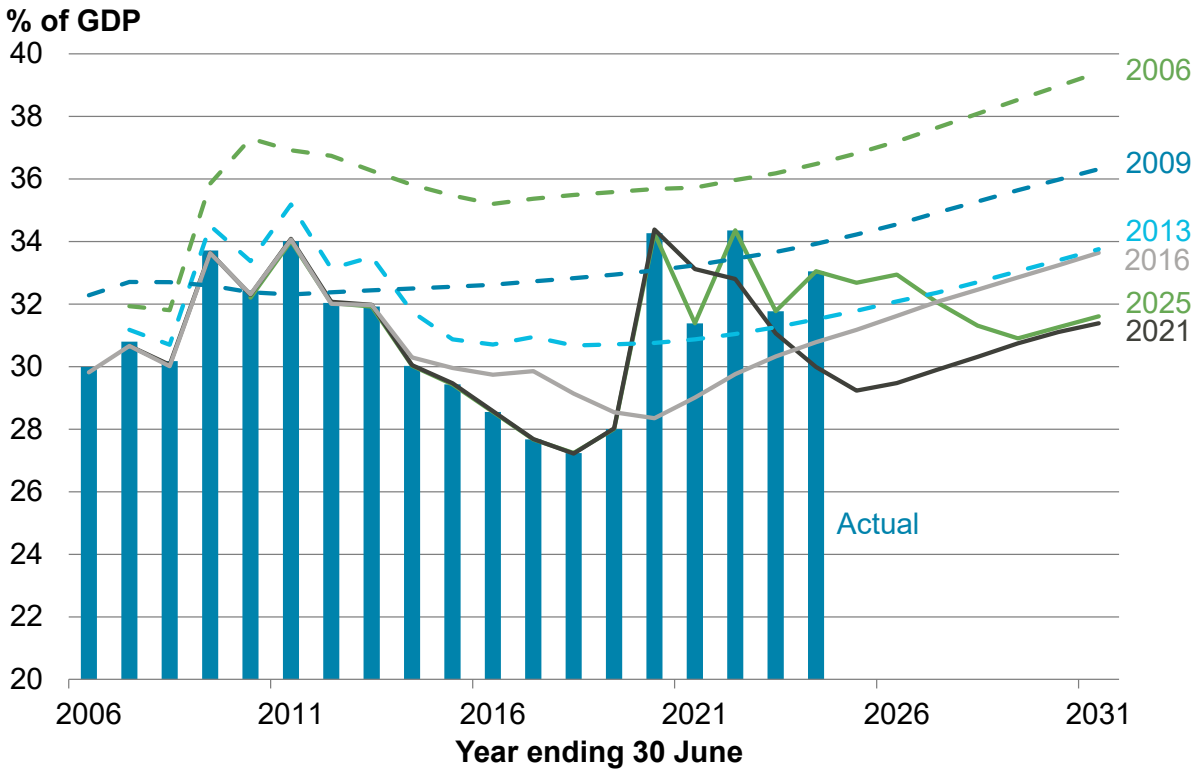
Figure 9: Core Crown revenue, actual vs Statement projections



Source: LTFM, The Treasury

[15] Hughes (2025b).

Figure 10: Core Crown expenditure, actual vs Statement projections



Source: LTFM, The Treasury

Digging into the detail on the expenditure side, actual health spending has been lower as a share of GDP than the 2006 and 2009 projections, largely due to higher-than-expected GDP growth and, like other countries, relatively low health funding growth following the Global Financial Crisis. In contrast, actual health funding exceeded 2016 and 2021 projections, partly reflecting service and treatment expansions, and pay equity adjustments.

Spending on retirement income in dollar terms has grown steadily over the last 20 years (see Figure 11). The dollar values of NZS expenditure, which grow with wages and population, has been fairly predictable, albeit a little stronger than expected in recent years. However, faster-than-expected population and GDP growth have helped moderate NZS as a percent of GDP (Figure 12).

Figure 11: Spend on NZS, actual vs Statement projections

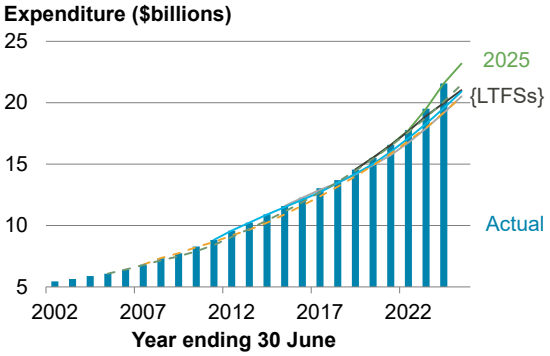
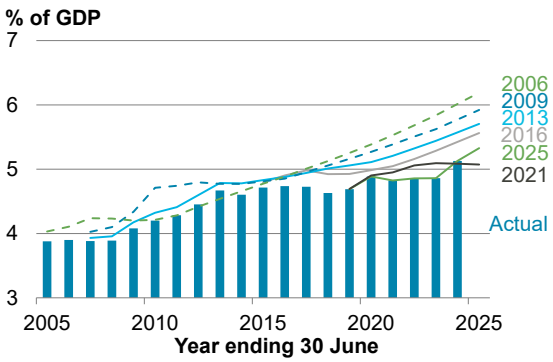


Figure 12: Spend on NZS, actual vs Statement projections



Source: LTFM, The Treasury

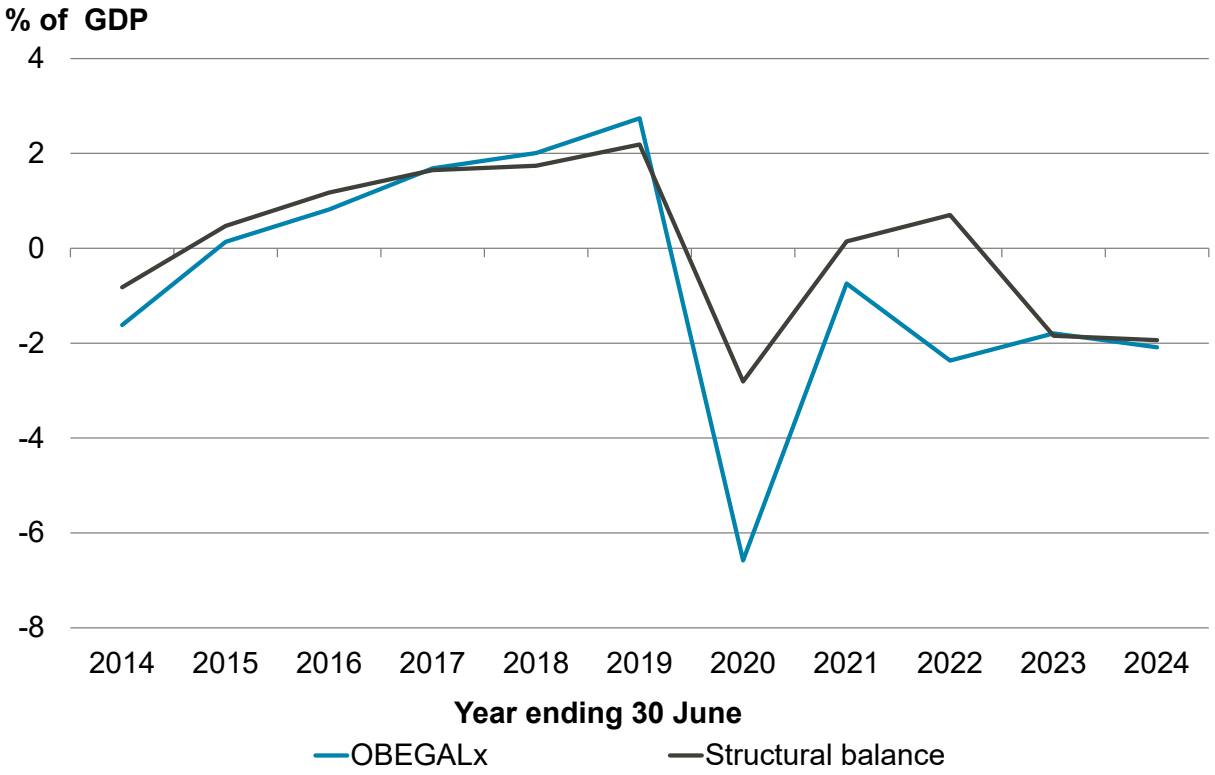
This section has highlighted that projections of expenditures and revenues can vary widely over time. Because of this, the option to wait before changing policy often appears the prudent choice, especially when the costs can be immediate, and the long-term benefits can be uncertain. However, as discussed in Chapter 3, waiting increases the risk that larger and more disruptive changes are required later.

A growing imbalance

New Zealand's fiscal position is already under pressure. The operating balance before gains and losses excluding ACC (OBEGALx) recorded an $8.8 billion deficit in 2023/24 and the 2025 Budget Economic and Fiscal Update (Budget Update) expects it to widen further in 2024/25 and 2025/26 before narrowing and returning to surplus in 2028/29.[16]

The operating balance (the difference between government spending and tax receipts) naturally fluctuates with the economic cycle due to tax receipts and benefit spending varying with economic conditions, so the recent recession will be contributing to some of the operating deficit. However, the current deficit reflects more than cyclical weakness. The Treasury estimates that the structural component of the deficit will average 1.3% of GDP over 2024/25 and 2025/26, down from 1.9% over the previous two years. From 2028/29, a return to structural surpluses is forecast.

Figure 13: Operating balance before gains and losses excluding ACC (OBEGALx) and the structural balance



Source: The Treasury

[16] The Treasury (2025c).

Combine this with the debt accumulated during crisis responses, and net core Crown debt (excluding the NZSF and advances) is estimated to have reached 42.7% of GDP in 2024/25, almost double the 22.5% projected in the 2006 Statement for this point in time.

Broader fiscal indicators reinforce the underlying challenge. Gross debt (core Crown), which captures Crown borrowings, has increased from 27.2% of GDP in 2018/19 to an estimated 48.3% in 2024/25, and is forecast to reach 50 to 55% in 2028/29. At the same time, the Crown's net worth has declined. After peaking at $191.5 billion (47.7% of GDP) in 2023, it is estimated to have fallen to $183.1 billion in 2024/25 (42.1% of GDP) and is forecast to fall further to $171.9 billion (32.8%) by 2028/29, reflecting the increase in liabilities.

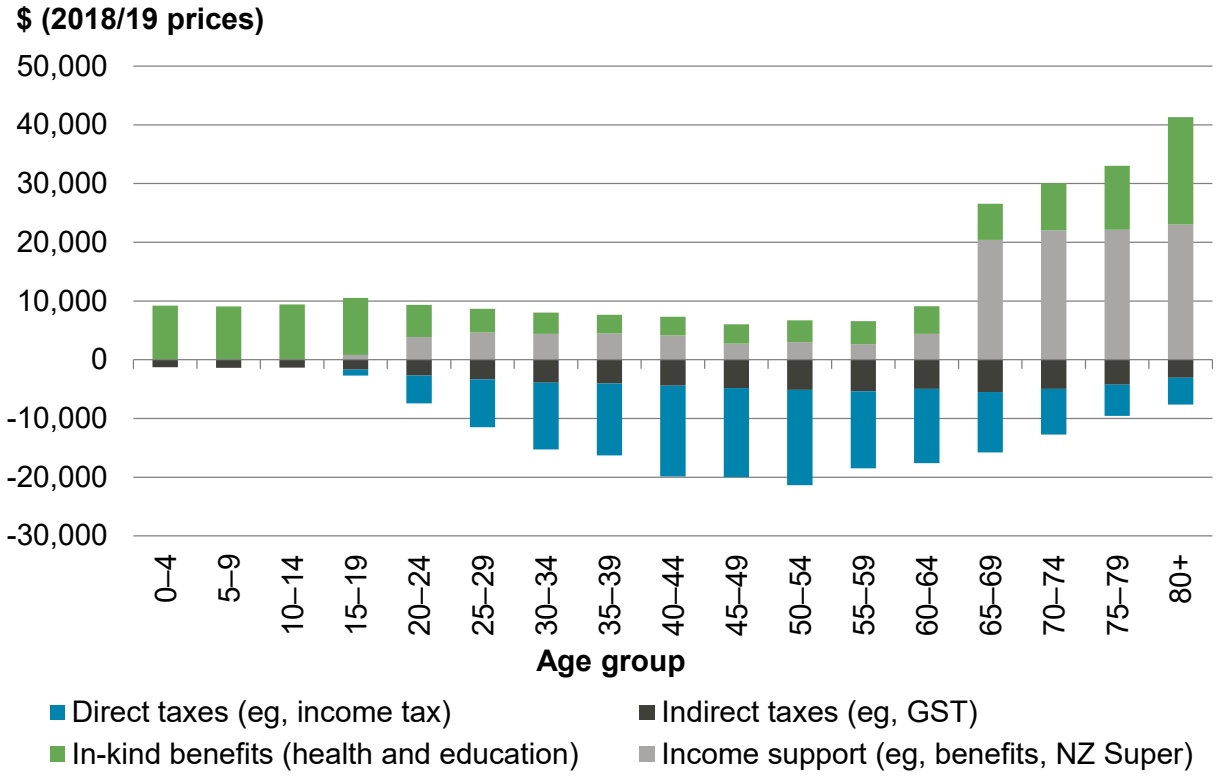
Looking ahead, the pressures on New Zealand's fiscal system are set to intensify. Without policy change, the gap between what governments are projected to spend and what the economy can sustainably fund is set to widen further – not because of any single event, but because of the cumulative impact of long-term structural forces.

These forces are not new, but they are accelerating. They reflect shifts in our population, our health system, our climate, our technologies and our place in the world. While many other forces are also at play, these five will be particularly consequential for fiscal strategy over the coming decades. Their scale and trajectory underpin the need for timely, deliberate choices, before fiscal pressures become harder to manage and options more constrained.

Demographic changes are at the core

Absent policy change, the gap between expenditure and revenue will grow. This is because, as more New Zealanders reach age 65 and beyond, the proportion of people drawing on public services and transfers increases, while the share of those contributing to tax revenue declines. Figure 14 shows the balance of expenditure and revenue for people of different ages (with negative bars indicating revenue and positive bars expenditure). It shows the government spends considerably more on over 65s than it gathers in tax revenue from this group. Therefore, as they become a larger share of the population, the public purse will be stretched further and further.

Figure 14: Average tax paid and benefits received by age group, year ending March 2019[17]



Source: The Treasury

Stats NZ's latest population projections reveal that our population is not only growing (estimates suggest our population will increase from 5.33 million today to 7.29 million in 2065), it is also getting older.[18] In the 1960s there were around seven New Zealanders aged 15–64 for every person aged 65 or older. Today there are four, and by 2065, the ratio is projected to fall to two (Figure 15).

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[17] Wright & Nguyen (2024), based on Household Economic Survey data from Stats NZ. Note that the income supports in Figure 14 are gross of personal income tax and the revenue includes the tax deducted from income support, such as from NZS payments.

[18] Stats NZ (2025).

Figure 15: Ratio of 15–64 years to 65+ years

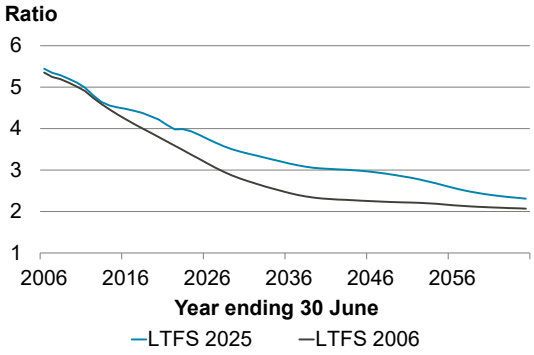
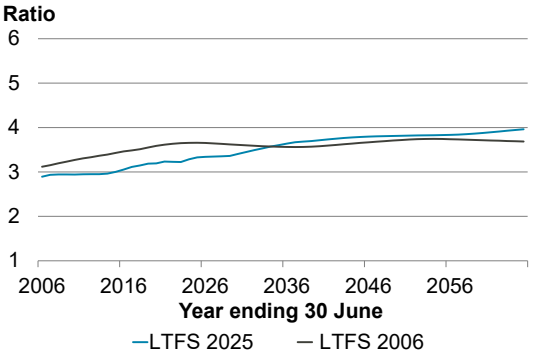


Figure 16: Ratio of 15–64 years to 0–14 years



Source: Stats NZ

These shifts are driven by both longer life expectancy and declining fertility. Since the 1950s, life expectancy at birth has increased by around 12 years in New Zealand. Stats NZ projects it will continue to increase gradually, reaching 89.2 for females and 86.7 for males by 2065.[19] Meanwhile, our fertility rate has fallen to around 1.6 births per woman and is projected to remain well below the replacement level of 2.12 through to 2065.[20] As Figure 16 shows, declining fertility rates increase the ratio of the 15–64-year-old group relative to the 0-14-year-old group over the next forty years. This demographic shift will help reduce spending on education, child healthcare, and benefits as a share of GDP.

While population ageing is not unique to New Zealand, it creates significant structural pressure given New Zealand's distinctive policy settings for public pensions, universal health entitlements, and tax system design. These choices shape how government expenditure and the tax base evolve over time and highlight the importance of other policies that support sustained labour force participation, and productivity growth to support the tax revenue base.

19 Stats NZ (2025).

20 Stats NZ (2025).

Other pressures are becoming more prominent too

As these demographic pressures emerge, other pressures are gaining momentum, posing increasingly complex risks to fiscal sustainability and demanding more adaptive, forward-looking responses.

Climate change, particularly adaptation and severe weather events, is placing new demands on the Crown's balance sheet. Climate change continues to accelerate, and New Zealanders are increasingly experiencing its impacts. Temperatures are rising, glaciers are melting, sea levels are increasing, and recent extreme weather and flooding show how climate change is increasingly affecting New Zealand. How New Zealand responds to climate-related risks and opportunities has material economic and fiscal consequences. These impacts are expected to persist now and into the future. Governments must decide how to prepare for the impacts of physical climate change (adaptation), while also setting policies to reduce emissions to support global efforts to limit further climate change (mitigation).

Increasingly complex global and geopolitical tensions are seeing defence and security spending rise in many countries. Global fragmentation and rising strategic risk are prompting renewed calls for investment in defence and resilience. New Zealand has committed to increasing defence spending to 2% of GDP by 2032, more than doubling current levels. Countries closer to conflict have set even more ambitious intentions. The *2025 Defence Capability Plan* outlines $12 billion in funding over the next four years, including $9 billion of new spending, with investments in long-range strike capability, maritime surveillance and cyber resilience.[21] This commitment reflects broader security goals, but also adds to fiscal pressure.

Technological change is an emerging driver of fiscal outcomes, with advances in artificial intelligence, automation, and digital systems offering opportunities to boost productivity, support economic growth, and improve public service delivery. But it may also exacerbate fiscal risks – including labour market disruption, rising inequality and increased demand for social support. Over time, technology shifts may weaken traditional revenue sources and alter the balance of the tax and transfer systems. It may also require additional investment in skills and infrastructure. Navigating the fiscal impacts of rapidly changing technology will require adaptive policy.

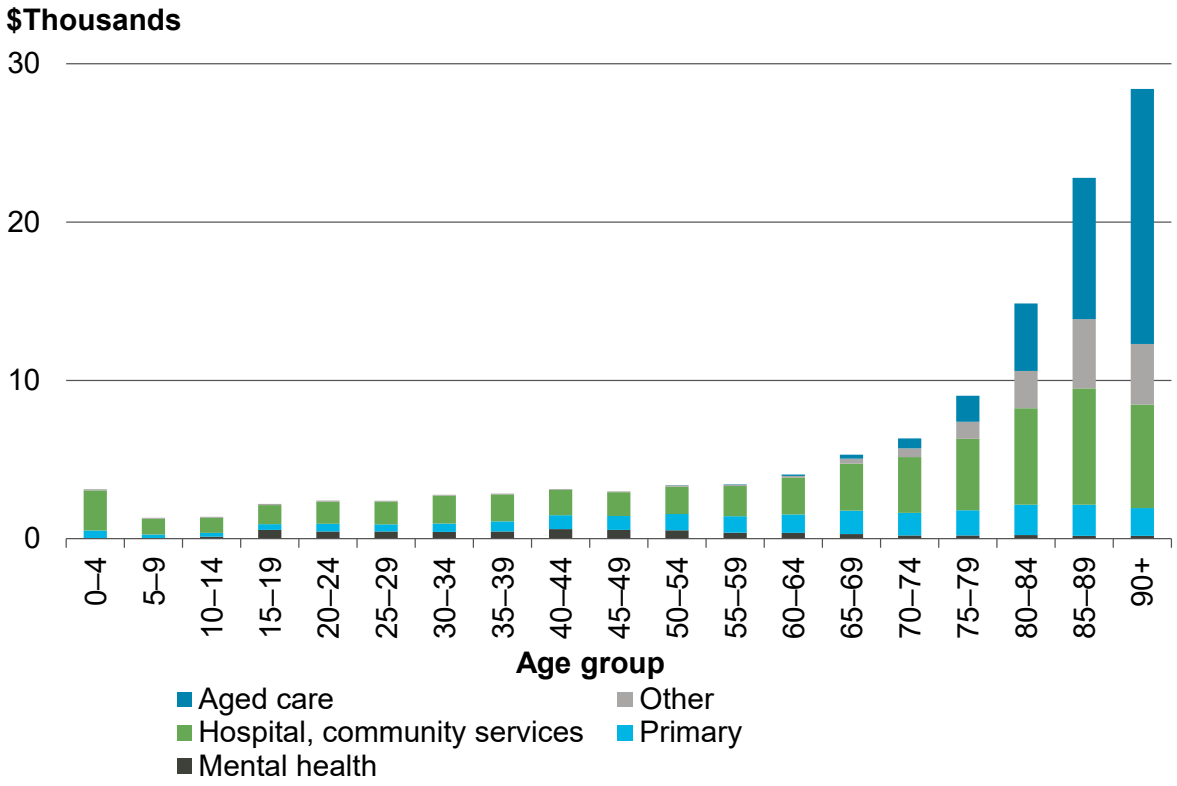
Health and disability costs are projected to rise significantly over coming decades, with the ageing population being a key driver. People are living longer, but they are also spending more years in ill health. Older New Zealanders account for a growing share of health costs, with those aged 85 and over costing more than five times as much as someone aged 60–64. Importantly, it is not just that the population is ageing – the proportion of people aged 85 and over is also increasing. As Figure 17 shows, this shift in the age structure means that a larger share of the population will be in the highest-cost age brackets, placing additional pressure on the health system. Moreover, the average cost of care in the last year of life is particularly high regardless of age, and this also has important implications for future expenditure as the population ages. For example, our analysis suggests on current policies and in inflation-adjusted terms, health costs could rise from $4,000 on average per person currently, to around $8,000 per person by 2065 (see Table 1 in Chapter 2).[22]

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21 Ministry of Defence (2025).

22 In 2009/10 dollars.

Figure 17: Health expenditure by age group



Source: The Treasury

However, the increase in costs is not solely because of demographic change. It also reflects a range of non-demographic cost drivers. These include:

- Technological expansion, which raises both costs and expectations as new treatments, diagnostics, and pharmaceuticals become available.
- Workforce costs rising faster than inflation on average. Healthcare is labour intensive and does not benefit from labour-displacing technological advancements as much as other sectors, but pay growth tends to rise in line with economy-wide wages to retain staff.
- Increased complexity of care, including chronic conditions, multi-morbidity, and rising demand for mental health services.

As a consequence of these factors, health, disability, and aged-care costs are expected to grow faster than the overall economy.

Global implications of structural trends

These structural trends are not unique to New Zealand. Globally, many countries are struggling with the same pressures. The global nature of these could place upward pressure on global bond yields if many countries experience increased levels of public debt, with spillover effects for New Zealand's finance costs.

In recent history, falling global interest rates have been partly driven by high global savings, as many countries (such as China) maintained large working-age populations. However, as global ageing intensifies and older individuals begin to draw down their savings, demographic shifts may exert upward pressure on long-term interest rates.[23] This suggests interest rates may not sustainably revisit the lows experienced in the late 2010s, reinforcing the challenges facing fiscal policy.

The International Monetary Fund (IMF) has been increasingly cautioning that the emerging demographic shift could reshape the global financial landscape. In its World Economic Outlook 2025, the IMF highlighted that ageing would likely erode fiscal buffers, raise dependency ratios, and increase pressure on pension and healthcare systems – factors that could drive up sovereign borrowing costs and alter capital flows.[24] Similarly, the IMF warns that declining labour force growth and shifting savings–investment dynamics may lift equilibrium interest rates, with spillover effects across borders and asset classes.[25]

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[23] Goodhart & Pradhan (2017).

[24] International Monetary Fund (2025).

[25] International Monetary Fund (2019).

Chapter 2: Fiscal pathways to 2065

This chapter explores the long-term fiscal outlook using two analytical approaches. It also looks at how sensitive the outlook is to shifts in key assumptions.

- If no policy action is taken, the fiscal position would become increasingly unsustainable and net core Crown debt would rise to around 200% of gross domestic product (GDP) by 2065.
- This outcome is consistent across both approaches – the Long-term Fiscal Model (LTFM): a simple approach that extends revenue and spending trends over time without any behavioural or economic responses; and the Overlapping Generations (OLG) model: a more complex approach that simulates how people and the economy respond to economic and policy changes over time.
- The projections are sensitive to the assumptions we make – especially for interest rates and migration.
- Even in a more favourable economic scenario, our analysis shows some policy adjustment will be required.
- In a more unfavourable economic scenario, much larger adjustments would be required to restore sustainability.

Our approach to projecting public finances

Modelling helps us understand future outcomes

To explore the long-term outlook, we present two fiscal projections to 2065. These projections are developed using complementary analysis.

The first projection is obtained from the LTFM, which has been used in all previous Statements. These projections extend historic spending and revenue trends under stable policy assumptions, and with no macroeconomic or behavioural feedback.

The second projection is from a newly developed OLG model. The projection depicted in this chapter also assumes no policy change over the 40-year projection horizon, but it incorporates behavioural responses from people in response to the increased borrowing undertaken by the government.[26] In this model, fiscal policy choices directly affect macroeconomic outcomes and can also be used to quantify some of the intergenerational effects of alternative policies. As such, the OLG model enables deeper insight into who is affected by alternative policies, and when.

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[26] Projections from the OLG model discussed in the next chapter automatically adjust tax or expenditure policies to ensure that debt is stabilised at target levels.

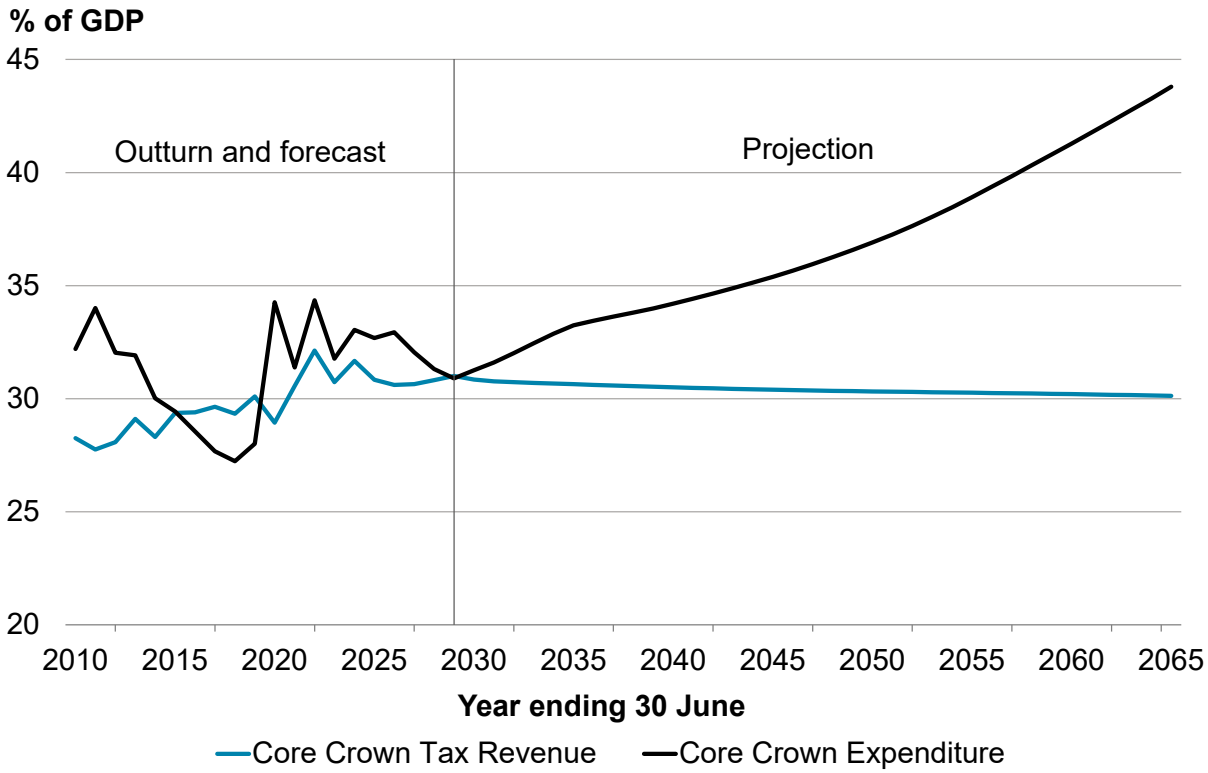
A summary of the assumptions underpinning both models is included in Annex 1, while a more detailed overview of both modelling approaches is included in Annex 2. The models provide complementary insights: the LTFM highlights how core fiscal aggregates respond to shifts in key assumptions, while the OLG model shows how deeper structural trends shape living standards and behaviour for different people over time.

These projections are not forecasts. Rather, they are depictions of possible futures. They both outline what would happen if government expenditure and revenue policies remained broadly unchanged until 2065. They depict the Treasury's assessment of the consequence of New Zealand not addressing long-term fiscal pressures. In practice, the Treasury does expect that policy actions will be taken to alleviate fiscal pressures. Some of the policy options and projections of the associated implications are provided in Chapter 3.

Debt reaches untenable levels

The LTFM projection illustrates how demographic and economic trends place growing pressure on the Crown's finances under stable policy settings.[27] Core Crown revenue as a share of GDP gradually declines, reflecting the assumption that income tax thresholds are adjusted with wage growth, while core Crown expenditure rises steadily (see Figure 18). Much of this increase in expenditure is driven by demographic ageing and rising health costs, with New Zealand Superannuation (NZS) and health services together accounting for an expanding portion of total spending.

Figure 18: Projections of core Crown revenue and expenditure assuming no change to fiscal policy

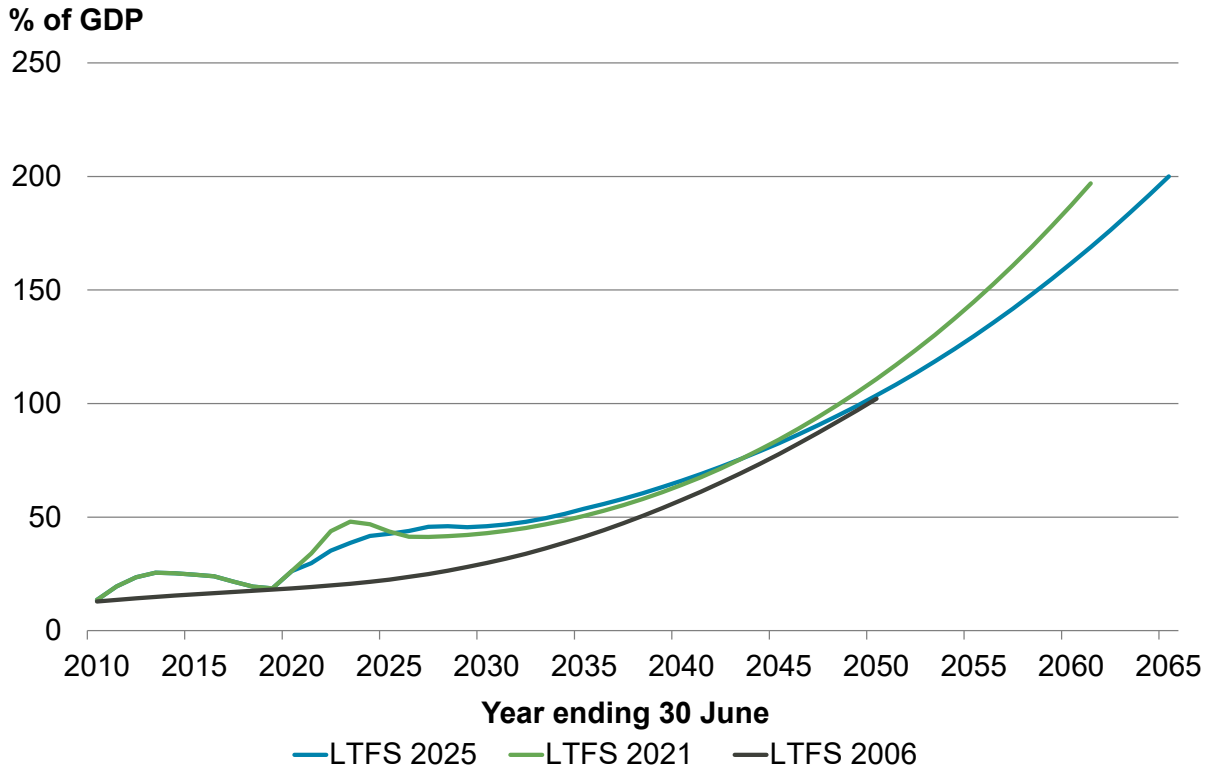


Source: LTFM, The Treasury

[27] As outlined in Bell (2025) and Annexes 1 and 2, the LTFM relies on macroeconomic assumptions, including population growth, labour force participation, productivity trends, and government spending patterns. The model incorporates official macroeconomic forecasts from the 2025 Budget Update for the first five years and then extends the projections using historical trends and demographic data.

These trends result in a persistent and widening fiscal gap. Net core Crown debt (excluding the New Zealand Superannuation Fund (NZSF) and advances) rises significantly over the projection period, reaching 104% of GDP by 2050 and 200% of GDP by 2065 in the LTFM model (see Figure 19 and Table 1). For comparison, the 2006 Statement projected net debt to reach 102.1% of GDP by 2050, while the 2021 Statement projected 111% in 2050 and 197% by 2061.

Figure 19: Projection of net core Crown debt assuming no change to fiscal policy



Note: This measure of net core Crown debt excludes NZSF and advances.

Source: LTFM, The Treasury

This projection is not a prediction. It is an extrapolation of what would happen if fiscal policy was left unchanged, and assuming no feedback from fiscal policy to the economy. In reality, such a debt trajectory would cause higher interest rates and higher debt-servicing costs, compounding the increase in debt. However, the Treasury expects that governments will make adjustments to fiscal policy that will flatten the debt trajectory.

What the projection would mean for every New Zealander

Assuming no change in policy, the projections suggest that by 2064/65 the Crown would be spending in real terms nearly twice as much per person as it does today. Some of this change reflects rising demand for services, particularly from an ageing population. Some reflects the growing cost of servicing debt, and some the evolving role of government in a more complex, interconnected world (see Table 1 and Box A).

Table 1: Real government spending per capita, 2025 versus 2065 projection assuming no change to fiscal policy

Category	2024/25 $/person (Estimated actual)	2064/65 $/person (Projected)
New Zealand Superannuation (NZS)	2,980	6,412
Social security and welfare (ex NZS)	3,079	3,707
Health	3,977	8,128
Education	2,690	3,537
Defence	427	1,640
Other operating expenditure (ex-interest)	3,993	5,240
Interest costs	1,136	7,253
Total core Crown operating expenses	**18,281**	**35,916**

Note: 2009/10 dollars

Box A: Real spending per person – what the 'no change in policy' projections imply

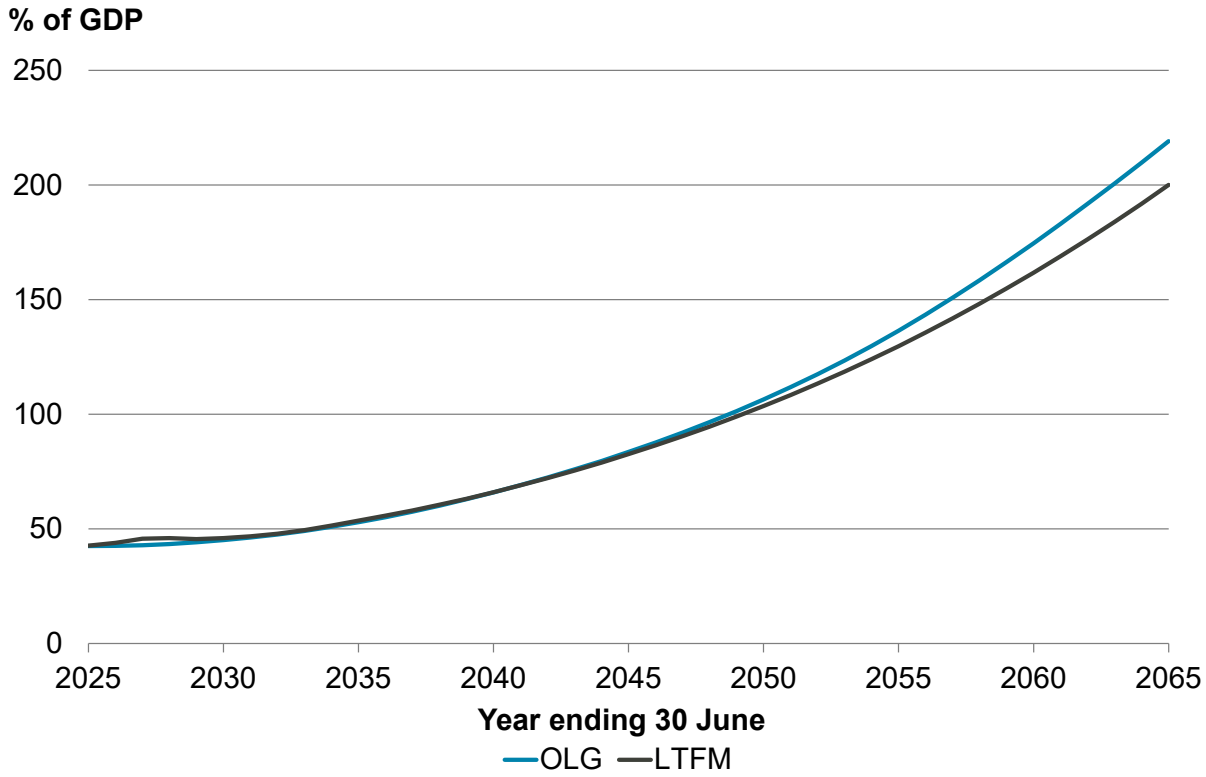
Translating the LTFM projections into real spending per person tells a story of shifting priorities and rising pressures:

- **Health and superannuation spending per person would more than double**, reflecting demographic change and the growing cost of care and income support for older New Zealanders.
- **Interest costs would rise more than sixfold per person**, becoming one of the largest areas of government spending. This reflects the compounding impact of higher debt levels over time.
- **Spending on education and social security would grow more modestly**, suggesting that without policy change, a smaller share of public resources may be available for younger generations and working-age support.
- **Defence spending per person would quadruple**, reflecting a more uncertain global environment and the need to invest in national resilience.

Projected debt trajectory is similar across two different models

To explore how fiscal pressures interact with the broader economy and how different generations are affected, we use the OLG model to project an alternative fiscal pathway. We present an OLG scenario in which increasing expenditure is funded through additional borrowing, which suppresses investment and GDP growth and results in a relatively faster increase in net debt compared to the LTFM scenario. Although the models are based on different approaches, they arrive at broadly similar conclusions: net debt reaches about 200% of GDP by 2065 (see Figure 20).

Figure 20: Net core Crown debt projections assuming no change to fiscal policy



Source: The Treasury

Fiscal deterioration persists across a range of scenarios

Key economic drivers can shift in unexpected ways. Moreover, small shifts can have compounding effects over time, significantly altering the fiscal outlook relative to projections.

In this section, we explore how those outcomes might change if different economic and demographic assumptions are made. Altering the assumptions allows us to illustrate the uncertainties associated with these long-term projections.

The key insight from this sensitivity analysis is that not all variables have equal influence on the fiscal projections. In particular, assumptions about interest rates have a large impact on the debt trajectory. By contrast, while productivity growth remains a critical driver of economic performance, its effect on fiscal outcomes is more muted.

We present a range of alternative scenarios across both analytical frameworks. The LTFM is used to assess fiscal responsiveness to changes in interest rates, defence and non-defence capital spending, while the OLG model explores the implications of alternative assumptions to changes in demographics and productivity.[28] Different models are used for these scenarios, reflecting the underlying design of the models and the ease with which different assumptions can be changed. Table 2 and Table 3 provide a summary of the key assumptions for each scenario.

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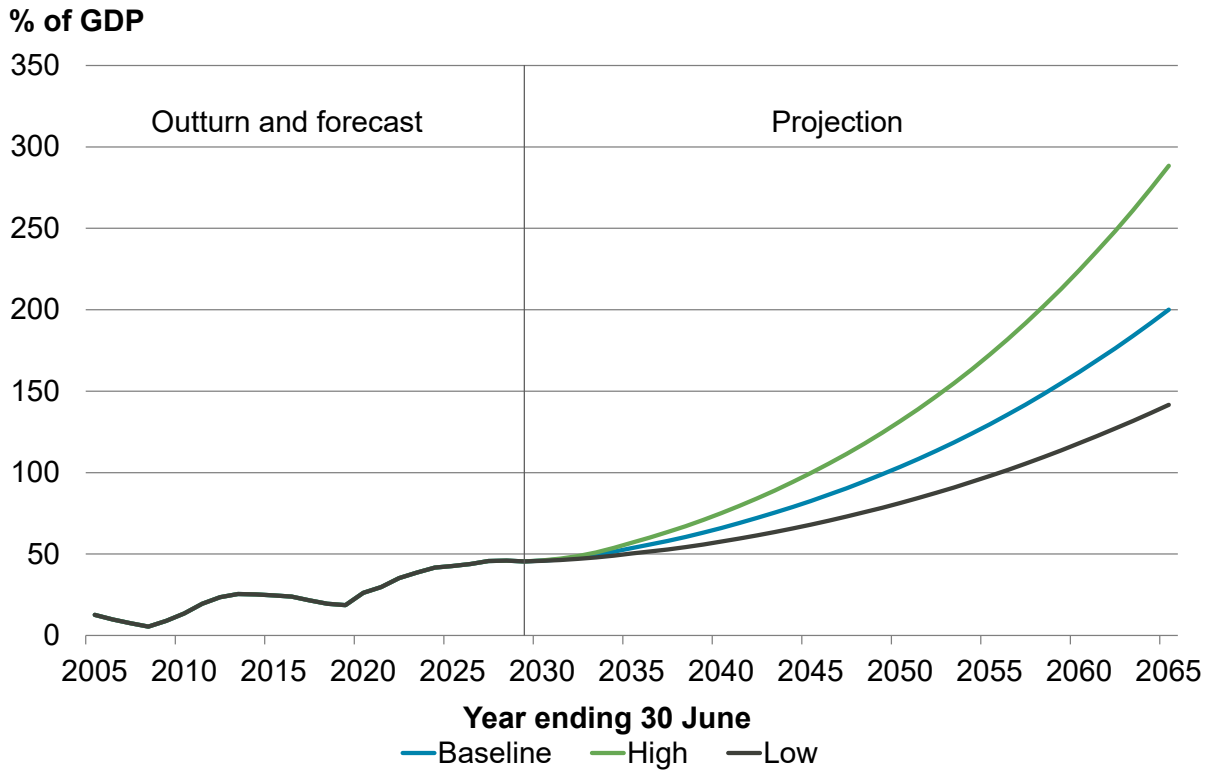
[28] We also use the LTFM to test sensitivity to changes in capital spending because of its importance in responding to climate change and geopolitical tensions. See the Treasury (2021b) for the economic impacts of an ageing population.

Interest rate scenarios

Our LTFM projection assumes nominal interest rates remain below nominal GDP growth until the 2030s, stabilising around 4.3%. To explore the implications of uncertainty, we consider two alternative scenarios: one where interest rates fall to 3%, and another where they rise to 6%.

While the overall trajectory of debt remains upward across all scenarios, the LTFM shows that the level of debt, and the cost of servicing it, diverge significantly depending on the interest rate path (see Figure 21).

Figure 21: Net debt under alternative interest rate assumptions



Source: LTFM, The Treasury

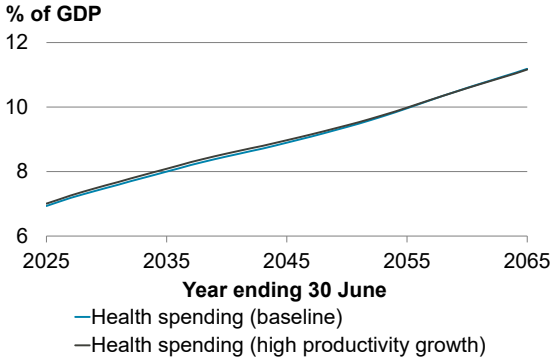
These results highlight that relatively modest changes in interest rates can have outsized effects on long-term debt levels and fiscal costs. For example, a 170-basis point increase in the interest rate adds nearly 100 percentage points of GDP to net debt by 2065.

Higher interest rates increase the cost of financing deficits and refinancing existing obligations, leading to a material rise in core Crown expenses. Conversely, lower interest rates provide fiscal breathing room – reducing debt-servicing costs and easing short-term pressures. These dynamics underscore the importance of interest rate assumptions in long-term fiscal projections.

Alternative productivity scenarios

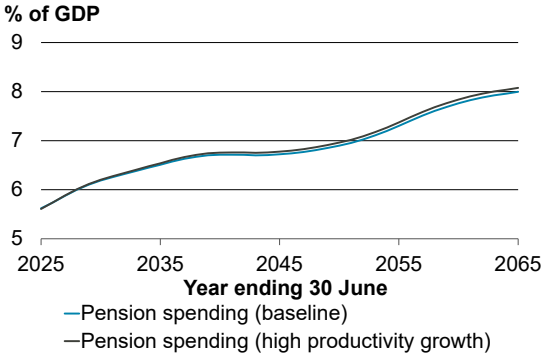
As noted earlier, productivity growth is an important driver of wellbeing, expanding the options future generations will be able to choose from. Public sector productivity will also be important, particularly in areas such as health where improvements can help reduce the cost of service delivery over time. However, the indexation of superannuation to wages means improvements in productivity growth will not resolve the fiscal pressures faced by governments (see Figure 22 and Figure 23). Some additional fiscal adjustment will be required to ensure public debt is stabilised to protect the welfare of future generations.

Figure 22: Health expenditure under higher Total Factor Productivity (TFP) growth assumption



Source: OLG model, The Treasury

Figure 23: Superannuation expenditure under higher TFP growth assumption



Source: OLG model, The Treasury

Spending and investment scenarios

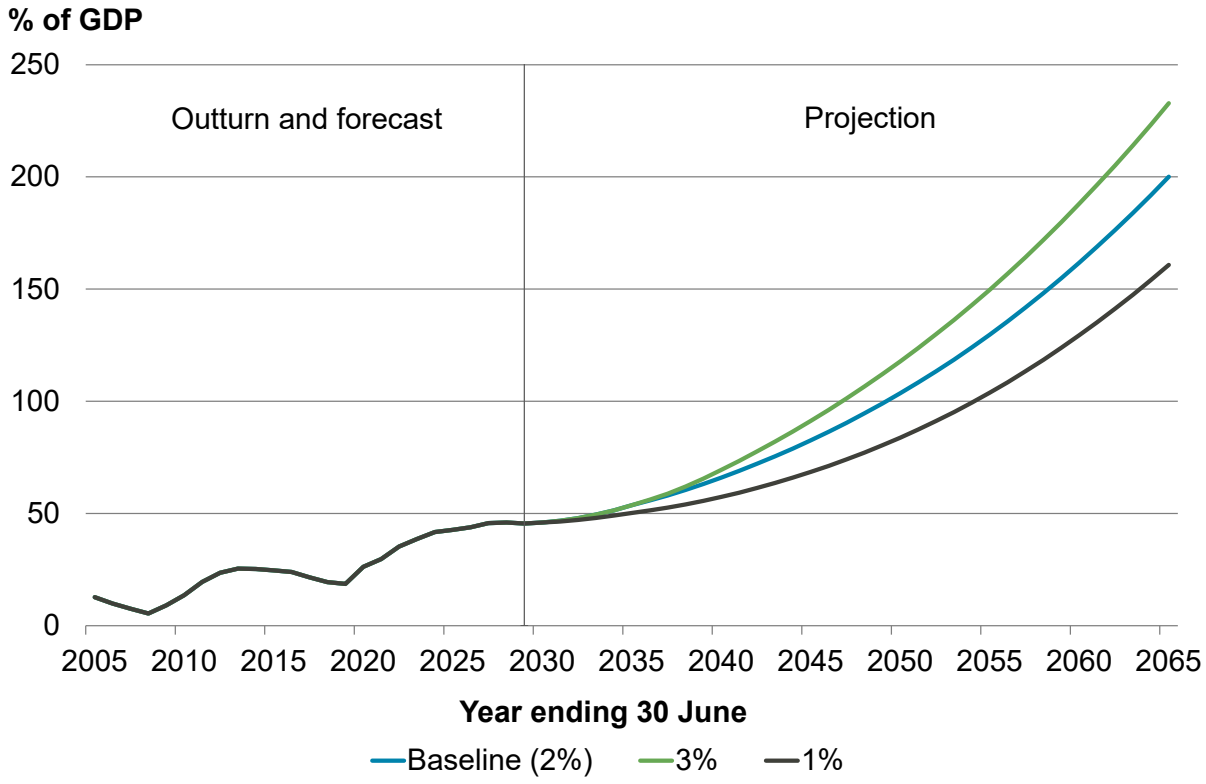
To explore the fiscal implications of different spending and investment paths, we produce four alternative scenarios that vary assumptions about defence and non-defence investment (Table 2 summarises the assumptions underpinning these scenarios). The scenarios show that:

- If defence spending (likely to be a combination of capital and operating expenditure) stabilises at 1% of GDP over the projection period, net core Crown debt would rise to 160.8% of GDP. This compares with a rise to 232.8% of GDP if defence spending stabilises at 3% of GDP (see Figure 24).

- If capital investment increases faster than in the baseline (measured by core Crown capital allowance funded assets reaching 50% of GDP by 2065 versus 42% in the baseline) net core Crown debt rises to 225.1% of GDP. If capital investment increases by less than in the baseline, with core Crown capital allowance funded assets reaching just 30% of GDP by 2065, net core Crown debt reaches 183.3% (see Figure 25).

These scenarios illustrate the fiscal trade-offs associated with different investment strategies.[29] Higher capital investment builds the public asset base, which may support productivity and service delivery, but also results in higher debt. Lower capital investment will reduce fiscal pressure, but it may constrain the Crown's ability to meet future infrastructure needs or respond to future risks. While investment decisions are a critical component of broader fiscal strategy, a key insight from these scenarios is that the fiscal projections are not particularly sensitive to different rates of capital investment.

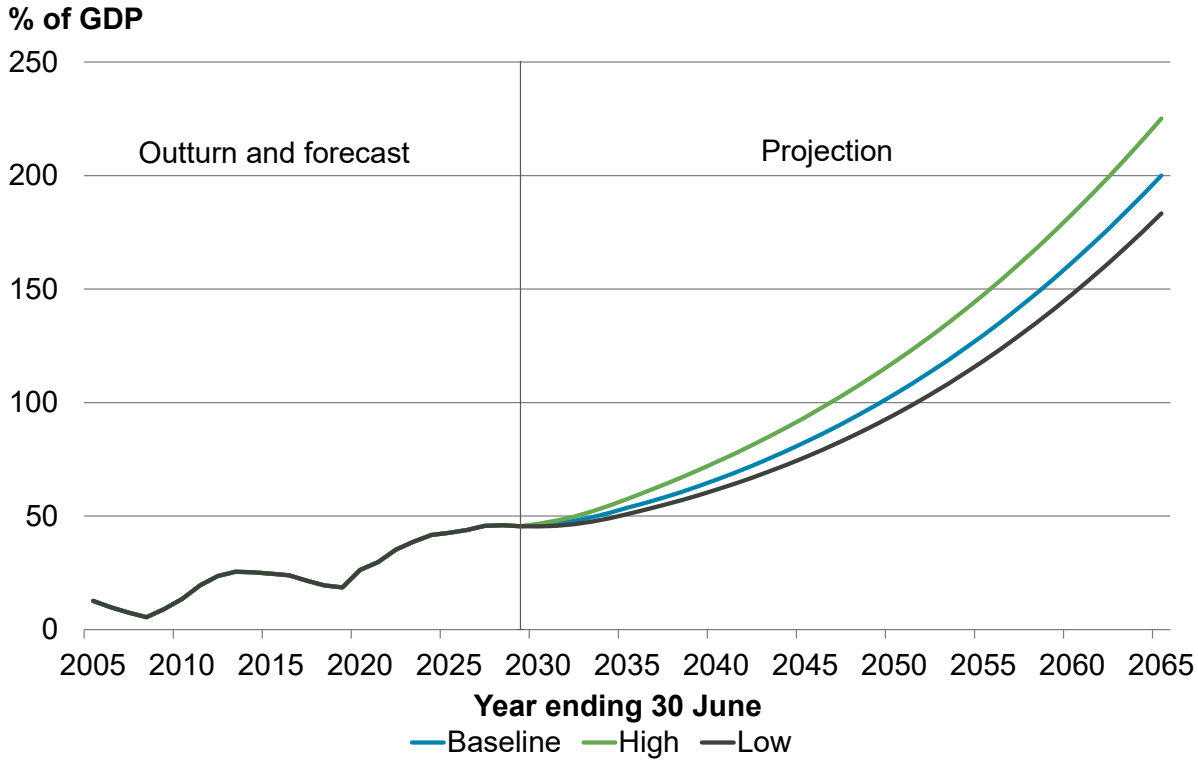
Figure 24: Net core Crown debt (excluding NZS fund and advances) under different defence expenditure assumptions



Source: LTFM, The Treasury

[29] The LTFM and OLG model do not include feedback loops between capital investment and productivity. As a result, these scenarios may understate the long-term benefits that could arise from increased public investment.

Figure 25: Net core Crown debt (excluding NZSF and advances) under different capital investment assumptions



Source: LTFM, The Treasury

Alternative demographic scenarios

This section includes two alternative demographic assumptions that reflect different long-term possibilities. We focus on more 'optimistic' assumptions (that is, where fertility and the skill levels of migrants exceed the baseline OLG assumptions) to illustrate how stronger population fundamentals could ease fiscal pressure. In that sense, they provide something of an optimistic lower bound for the scale of adjustment likely required to stabilise debt. The scenarios are:

- higher birth rates (high fertility)
- a more skilled migrant intake (high-skilled migration).

Each scenario modifies one or more core population settings. For example, in the high fertility case the total fertility rate is 2.3 births per woman; and in the high-skilled migration case a greater proportion of migrants are from higher skilled categories.[30]

Despite their differences, both scenarios point to a common conclusion: fiscal pressures persist across a range of futures (see Figure 26):

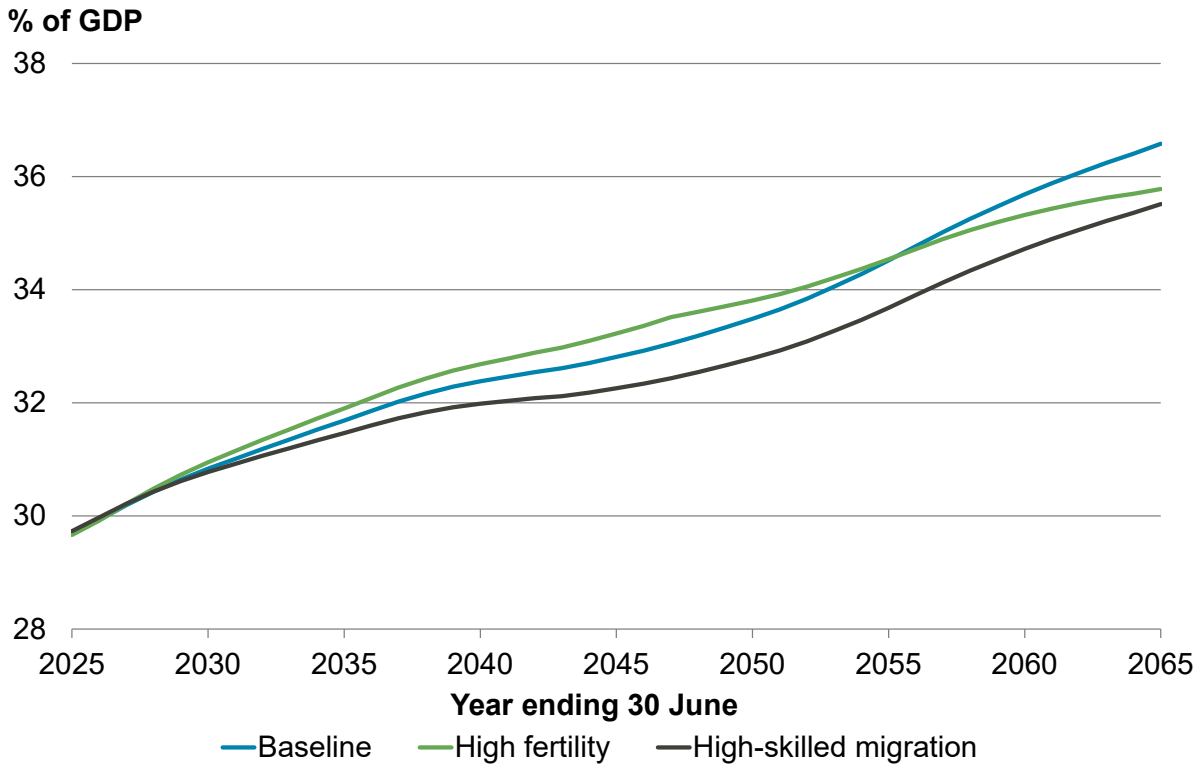
- The high-fertility scenario increases public spending on childhood services in the early decades but modestly reduces fiscal pressure after a two-decade delay, as a younger population increases the working-age population paying taxes to fund NZS, health and other government expenditure.

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[30] In the high-skilled migration scenario the in-flow of migrants is primarily drawn from the high-productivity types represented in the OLG model. In this high-skilled migration scenario, 95% of migrants are drawn from the three highest-skilled types; in the baseline these highest-skilled types account for just 40% of migrants, in line with the proportions of the resident population.

- The high-skilled migration scenario (which has the baseline number of migrants but assumes migrants are more productive) also reduces fiscal pressures as a high proportion enter the workforce, but this only delays adjustment given migrants also age.

Figure 26: Total government expenditure under alternative demographic scenarios – OLG



Source: OLG model, The Treasury

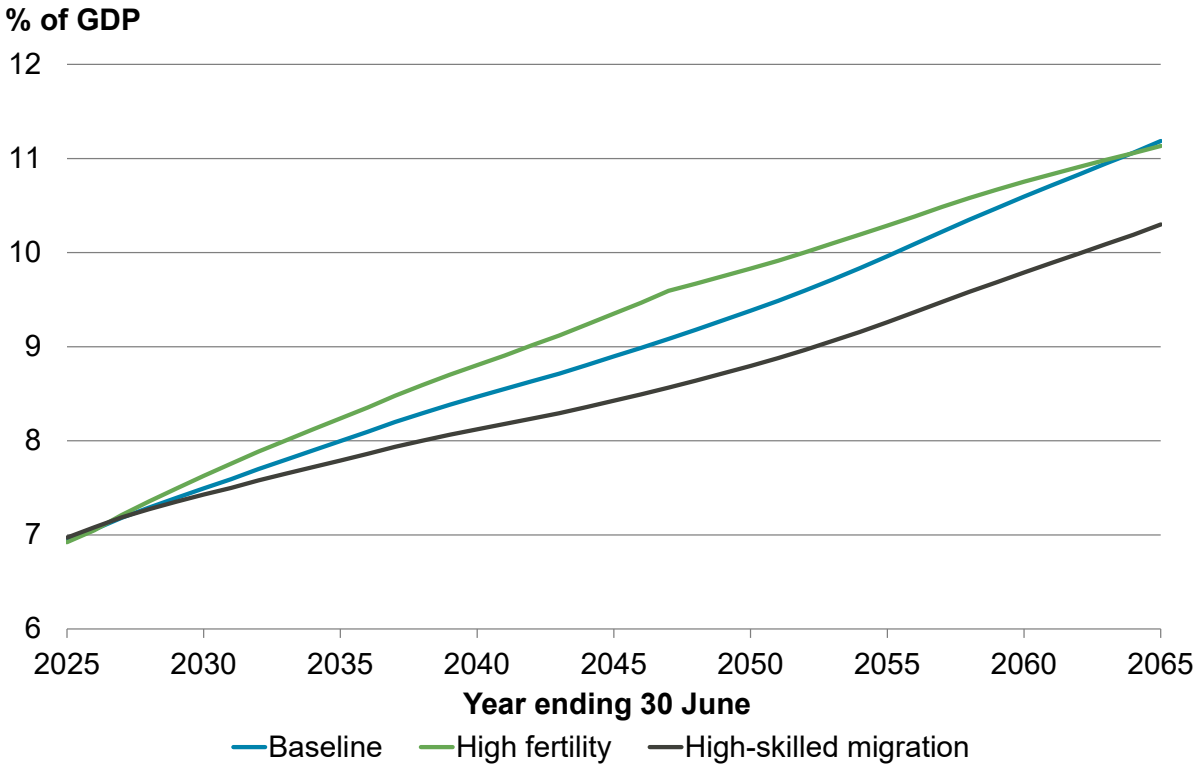
Health spending: when demographics meet rising costs

Health spending is the second-largest area of government expenditure, and one of the most difficult to project. As people age, they tend to use more health services, but ageing is not the only factor that matters. Healthcare is labour intensive and does not benefit from labour-displacing technological advancements as much as other sectors. And as countries get richer, demand for healthcare tends to increase reflecting new treatments, pharmaceuticals and diagnostics. These factors may improve the quality and quantity of health services, but they can also be more costly.

Our modelling shows that health spending responds to changes in population structure:

- Higher fertility increases costs early, when children's healthcare needs rise, but dampens cost growth later as the working-age share improves (see Figure 27).
- Holding longevity flat (not depicted) reduces long-term health costs modestly, as fewer people live into the most expensive age brackets for care.

Figure 27: Health expenditure under alternative demographic assumptions



Source: OLG model, The Treasury

Tables 2 and 3 below summarise the key results of the LTFM and OLG scenarios, respectively.

Table 2: Key results from the LTFM scenarios

Scenario	Description	Core Crown debt 2065
Baseline LTFM	Policy largely unchanged	200.0%
High interest rate	10-year New Zealand government bond rates stabilise at 6%	288.4%
Low interest rate	10-year New Zealand government bond rates stabilise at 2.5%	141.6%
High defence spending	Defence operating expenditure stabilises at 3% of GDP	232.8%
Low defence spending	Defence operating expenditure stabilises at 1% of GDP	160.8%
High core Crown capital expenditure	Core Crown capital allowance funded assets reach 60% of GDP by 2064/65	225.1%
Low core Crown capital expenditure	Core Crown capital allowance funded assets reach 40% of GDP by 2064/65	183.3%

Note: Core Crown debt excludes NZSF and advances.
LTFM = Long-term Fiscal Model.

Table 3: Key results from the OLG model scenarios

Scenario	Description	Average labour taxes 2065	Health spending/ GDP 2065
Baseline OLG	Labour income taxes adjust to stabilise public debt.	32.2%	11.2%
Replacement fertility	Total fertility rate of 2.1 births per woman; annual net migration reaches 46,000 in 2065.	31.2%	11.2%
High skilled migration	The 'productivity' or migrants is skewed towards the three most productive types.	30.7%	10.3%
High total factor productivity 1.5%	Total factor productivity grows at 1.5% per year.	31.6%	11.2%

Note: OLG = Overlapping Generations model.
TFP = Total factor productivity.

A combination of factors will accentuate the variance

Although individual sensitivities are useful for isolating the possible effect of separate factors, in reality New Zealand is likely to face a combination of different factors that influence the fiscal trajectory. This section presents two alternative scenarios to illustrate how fiscal outcomes shift when several plausible stressors converge.

This section includes two scenarios, one favourable and one unfavourable, characterised by markedly different global and domestic situations. Each scenario has far-reaching consequences for the New Zealand economy in terms of interest rates, workforce participation, productivity growth and migration. Table 4 outlines the key assumptions for each scenario, while Table 5 summarises the key fiscal projections.

These results show that even in the event of a confluence of extremely favourable demographic and economic conditions, some adjustment would still be required to ensure fiscal policy is sustainable over the long run (see Figure 28).

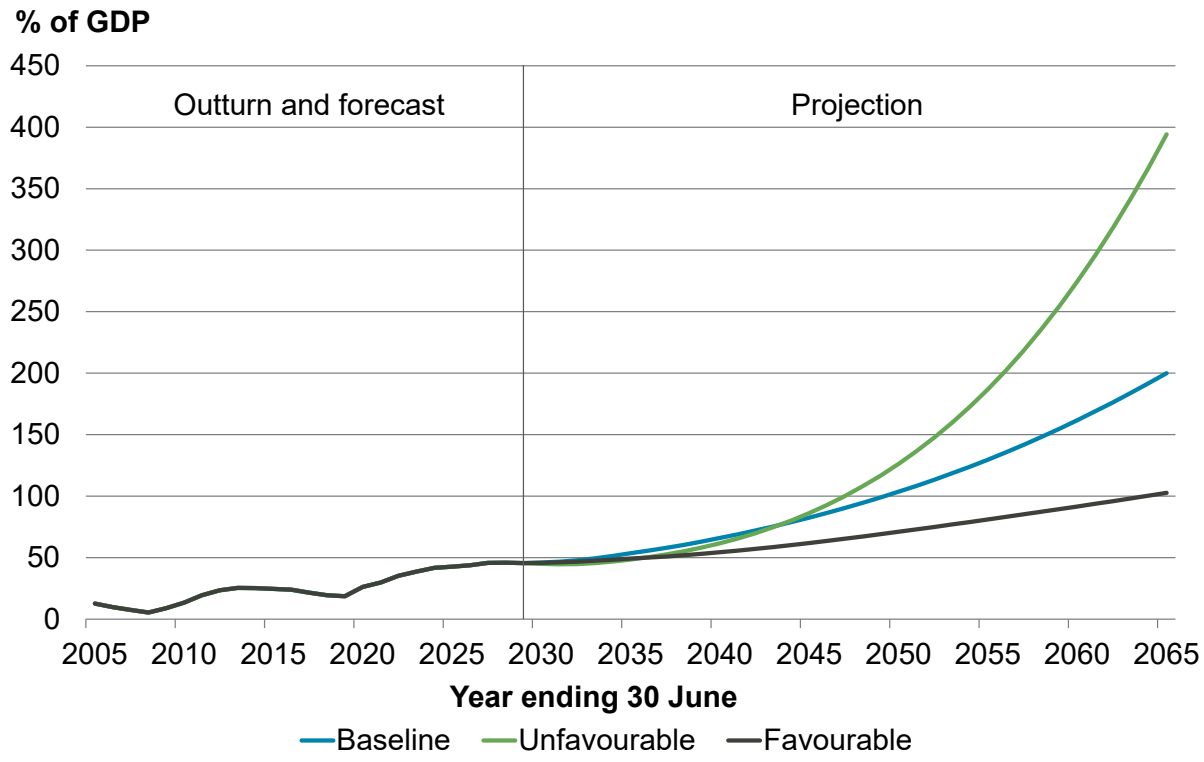
Table 4: Key assumptions underpinning fiscally favourable and fiscally unfavourable scenarios

	Favourable	LTFM baseline	Unfavourable
Nominal interest rate (10-year bond %)	2.5%	4.3%	6.0%
Labour force participation rate	Follows a trajectory based on annual changes in the baseline but adjusted so that it moves over the projected years to 5 percentage points higher than in the baseline scenario (73.3% by 2064/65)	Reduces from 71.9% in the final forecast year of 2029/30 to 68.3% by 2064/65 (ie, averaging a 0.1 percentage point per annum)	Follows a trajectory based on annual changes in the baseline but adjusted so it moves over the projected years to an aggregate 5 percentage points lower than in the baseline scenario (63.3% by 2064/65)
Annual net migration	100,000 (high migration)	Gradually increases over the projected years by 250 more each year to reach 46,000 by 2064/65	Stats NZ zero migration projection
Annual productivity growth	1.2%	0.9%	0.6%

Table 5: Key fiscal projections in the fiscally favourable and unfavourable scenarios

		Favourable			Unfavourable		
	2024	2035	2050	2065	2035	2050	2065
Core Crown expenses	33.0	31.7	33.1	34.8	32.9	42.1	64.9
Net core Crown debt	41.7	49.3	71.0	102.6	48.5	126.2	394.1

Figure 28: Core Crown net debt paths under fiscal favourable and unfavourable scenarios



Source: LTFM, The Treasury

Box B: Climate impacts and other fiscal pressures

Climate change is another factor affecting New Zealand's long-term fiscal position. While not directly modelled in the LTFM or OLG analysis, we have continued to progress qualitative analysis to explore the channels through which climate change can impact the fiscal position. For previous work see, for example, the 2021 Statement[31] and the 2023 Climate Economic and Fiscal Assessment (CEFA).[32] While these reports considered physical climate change and adaptation actions, there was relatively greater focus on actions to drive the low-emissions transition and achieve climate targets.

[31] The Treasury (2021a).

[32] The Treasury and Ministry for the Environment (2023).

Our latest analysis (see Table 6 and Table 7) builds on prior analysis with a particular focus on how physical climate change and decisions to respond and adapt to its impacts might drive fiscal impacts over time. A key lesson over time has been how the economic and fiscal impacts associated with climate change depend heavily on the choices of governments, households and firms, including any adaptation choices. The decisions of households and firms can be as important as public policy choices for outcomes.

Table 6: Examples of how specific physical climate impacts could impact the economy and long-term fiscal position

Physical impacts	→	Examples of potential economic impacts	→	Examples of potential impacts on the long-term fiscal position
More frequent and severe weather events	→	Capital destruction. Loss of production. Social disruption. Inflationary effects. Impacts on financial markets.	→	↓ **Operating revenue** – due to impacts on the tax base. ↑ **Operating and capital expenditure** – due to increased costs from government responses to weather events and higher insurance premiums for exposed Crown assets.
Higher average temperatures	→	Impacts on productivity, particularly in primary industries and tourism. Impacts on New Zealand firms' international competitors. Shifts in industry composition. Adverse impacts on natural resources.	→	↓↑ **Operating revenue** – due to impacts on the tax base.
Sea-level rise	→	Damage and loss to coastal properties and infrastructure assets over time, with potential impacts to key supply routes. Loss of productive land and saltwater intrusion. Impacts on financial markets.	→	↓ **Operating revenue** – due to impacts on the tax base. ↑ **Operating expenditure** – due to higher premiums for insured Crown assets. ↑ **Capital expenditure** – due to increased costs of managing exposed Crown assets.

Table 7: Examples of how different adaptation actions could impact the economy and long-term fiscal position

Type of action		Examples of potential economic impacts		Examples of potential impacts on the long-term fiscal position
Avoid – Actions to eliminate risks due to physical climate change. Eg, planning rules that prevent development in high-risk locations or managed retreat.	→	Uncertain impact on productivity. May result in some loss of economic activity. Balanced by avoided damage. Relocation costs where actions involve moving people and/or assets.	→	↓↑ **Operating revenue** – due to impacts on the tax base. ↓ **Operating and capital expenditure** – due to reduced costs from future responses to severe weather events. ↑ **Capital expenditure** – if the Crown chooses to relocate its own assets from high-risk areas.
Control – Actions to reduce risks due to physical climate change. Eg, building flood-prone infrastructure to a more resilient standard.	→	Upfront costs for asset owners balanced by reduced risk of capital destruction.	→	↑ **Operating revenue** – due to impacts on the tax base. ↓ **Operating and capital expenditure** – due to reduced costs from future responses to severe weather events. ↑ **Operating and/or capital expenditure** – the Crown upgrades the resilience of its assets and services.
Transfer – Actions to share the financial costs of adverse events with another party. Eg, acquiring insurance.	→	Upfront costs for asset owners balanced by reduced costs when risk is realised. Impacts from weather events may be less significant.	→	↓ **Operating expenditure** – if asset owners continue to access insurance, this could reduce the extent of need for Government responses after severe weather events. ↑ **Operating expenditure** – if the Crown chooses to retain and/or expand insurance for its exposed assets.
Accept – Actions to improve capacity to deal with and respond to adverse impacts. Eg, improving emergency response capability.	→	Potential to limit the economic and social costs from physical climate impacts.	→	↑ **Operating expenditure** – if the Crown chooses to invest in 'accept' actions (eg, enhancing emergency response capability).

Climate change as a driver of structural change

Physical climate change, such as shifts in underlying weather patterns, chronic temperature increases, increasingly frequent storms, flooding events and sea-level rise, will have substantive and ongoing implications for different sectors and economic actors more broadly.

In addition, choices made by individuals, households, businesses, local and central governments around how to prepare for, adapt and respond to these physical impacts will have implications for how our economy functions, including key drivers of growth such as productivity.

These structural changes will have implications for the operating balance, capital expenditure and the Government's debt buffer, highlighting the complexity and importance of climate change for fiscal management. Some of these choices also have implications or intersect with management of the Crown's balance sheet. The forthcoming Investment Statement will go into more detail on these interactions, particularly with respect to asset management.

As highlighted in the 2025 LTIB, choices on how to respond to more severe and frequent major acute events (eg, large weather-event shocks) has important implications for how governments sustain and use debt buffers.[33] Pressures on operating revenue and expenditure due to ongoing chronic and acute impacts will also have important impacts on how buffers can be created or maintained over time. In the short term, as reflected in the CEFA, costs associated with achieving New Zealand's commitments under the Paris Agreement are one of the most material fiscal risks. In the longer term there is significantly more uncertainty as the plans and strategies governments intend to use to achieve emissions budgets beyond 2030 have yet to be published.

[33] The Treasury (2025a).

Chapter 3: Looking to the future

This chapter explores a range of policy choices successive governments will face to put fiscal policy on a sustainable footing. By doing so, it helps New Zealanders understand these choices and the fiscal legacy we want to leave to future generations. The key messages are:

- There is a strong case for starting sooner rather than later, even when the future is uncertain. Starting sooner will reduce the overall cost of change, avoid the need for reactive or disruptive changes and allow for more gradual change to share transition costs across generations. It is important to preannounce changes to superannuation policy to give people time to save or work more to meet their retirement aspirations.
- Successive governments will need to make a portfolio of changes across a range of revenue and expenditure policies. Making changes in only one area of tax or expenditure would require large and disruptive changes. Different choices have complex economic and distributional impacts, both within and between generations of New Zealanders.
- Our fiscal challenges are intertwined with the challenge to lift New Zealand's economic performance. Early action to address fiscal sustainability will support higher economic growth, while reforms that raise productivity growth would ease fiscal adjustment and support better public services.

New Zealand will need to change its revenue and expenditure policies to put fiscal policy on a more sustainable path. The choice is not whether to change, but how to change and when. The sections below provide insights to support the case for governments to be proactive in managing through uncertainty by starting sooner rather than later, make changes across a range of revenue and expenditure policies, and make fiscal policy changes that support economic performance and living standards.

Start sooner rather than later

There is a strong case for acting sooner rather than later, even when the future is uncertain. Our economy in 2065 could look very different from today. Chapter 1 highlighted that the future fiscal situation depends on a range of factors that could unfold in different ways, such as migration and population growth, labour market participation or the impact of new technologies on New Zealand's economic performance. When faced with uncertainty, the option to wait to make significant policy changes can appear prudent. However, Chapter 2 also illustrated that even under optimistic versions of the future, change is needed.

Starting sooner will reduce the overall cost of change and does not mean making radical changes all at once. An important first step is to create fiscal space for future shocks and choices by returning to surplus and bringing debt down to more prudent levels (see Box C). However, responding to longer term pressures will require a series of responses over the next couple of decades as part of a planned and durable strategy. Making all the changes now would squeeze current generations, who would bear a 'double burden' as they pay for current retirees as well as pre-funding their own retirement.

Box C: Keeping debt at prudent levels makes New Zealand more resilient

Chapter 1 highlighted that public debt in New Zealand has already increased in recent decades. As noted in our 2025 Long-term Insights Briefing, the increase in public debt is partly because public responses to adverse shocks, such as the COVID-19 pandemic and the 2023 North Island Weather Events (NIWE), have not been matched by saving between shocks. Since the late 1980s, the cost of government responses to economic shocks has averaged about 10% of GDP per decade.[34]

New Zealand faces ongoing risks from natural hazards, pandemics, and biosecurity risks. A recent study by Earth Sciences New Zealand, for example, suggests there is a 75% chance the Alpine Fault in the South Island will rupture in the next 50 years.[35] Weather-related risks are rising due to climate change, and geopolitical tensions are growing.

Maintaining the financial capacity to respond to such shocks is an important component of prudent fiscal policy. In 2022, the Treasury assessed that the maximum 'prudent' level of debt in normal times was around 50% of GDP.[36]

Maintaining net debt below 50% of GDP would enable future governments to respond to a shock of 10% of GDP, which is likely over a decade. In the extreme scenario of a shock of 40% of GDP, the Treasury assessed the government would be able to stabilise debt at 90% of GDP. In such cases, net debt should be reduced over time to below 50%. However, this would depend on governments paying off debt to rebuild fiscal buffers between shocks and economic recessions. New Zealand would also remain vulnerable to further adverse shocks while debt remains at high levels.

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34 For more on the role of fiscal policy to buffer society from shocks and cycles, and how to do so in a sustainable way, see The Treasury (2025b).

35 Earth Sciences New Zealand (2025).

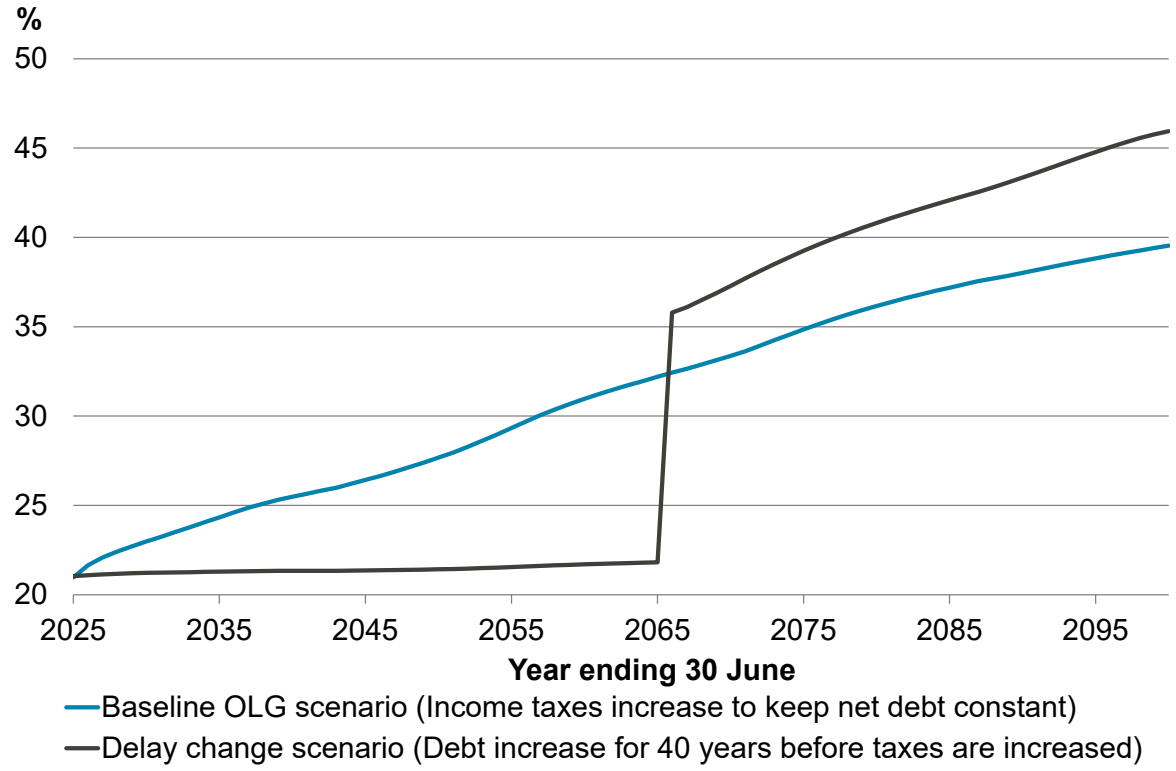
36 The Treasury (2022b).

However, if New Zealand continues to delay change, we will instead be squeezing people born in future decades. The longer we wait, the greater the transition cost will become. To illustrate this point, the Treasury modelled an extreme scenario where debt builds for 40 years before actions are taken to change revenue or expenditure policy settings. Under this scenario:

- *Taxes would be higher.* Income tax rates would increase from 21% to 36% of GDP in 2066, compared to 32% if taxes were gradually increased from now (see Figure 29). This would mean on average an additional $2,000 tax paid per person in the year 2066, and taxes would be permanently higher.

- *Incomes would be lower.* The higher taxes would discourage work and investment. Higher interest rates, as foreign lenders increasingly demand a premium to service our increasing debt levels, would also deter investment.[37] These factors would pull down economic growth (see Figure 30). The delay means that each New Zealander's annual income, on average, would be $6,800 lower by 2066, and the gap would be even larger in later years.[38]

Figure 29: Average labour tax rate to balance the budget: increasing taxes now versus delaying tax increases for 40 years

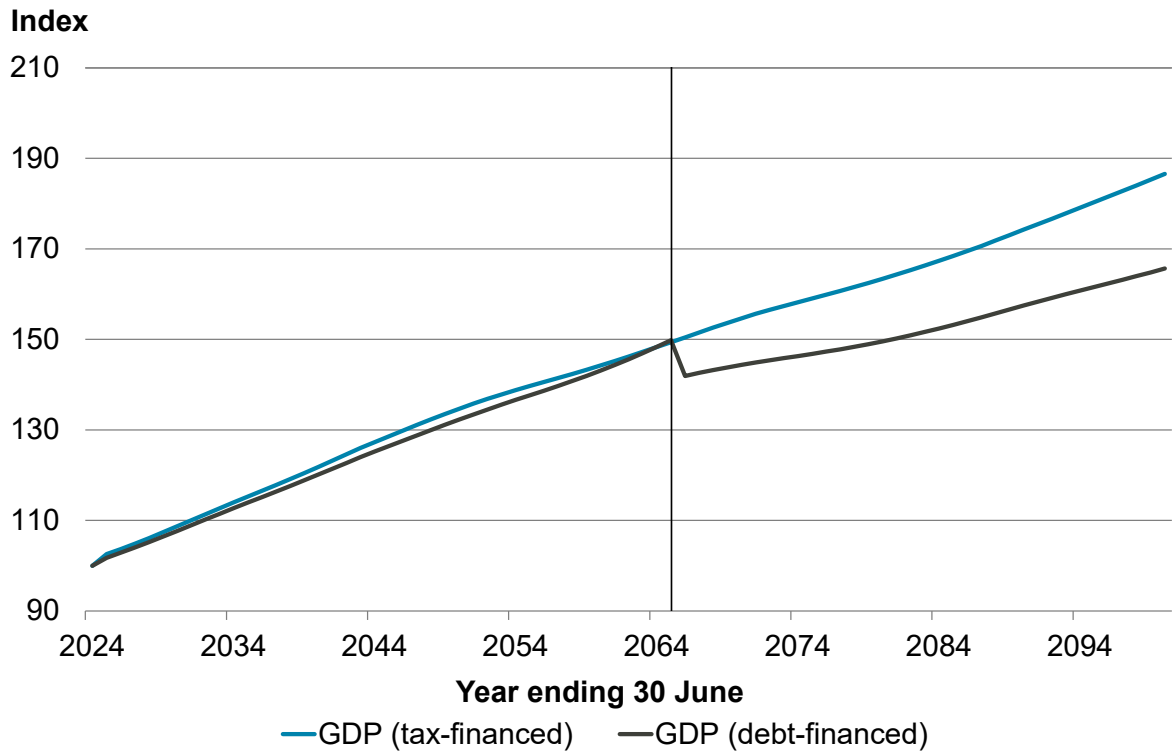


Source: Overlapping Generations (OLG) model, The Treasury

[37] Small open economies like New Zealand can borrow marginally larger amounts without affecting global interest rates. However, extensive borrowing is likely to increase risk premiums as lenders become increasingly concerned about the risk of default. Eaton and Gersovitz (1981) initiated an extensive literature on the outcomes that can arise if countries can default on their sovereign debt.

[38] This is in 2025 dollars.

Figure 30: Economic impacts: increasing taxes now versus delaying tax increases for 40 years[39]

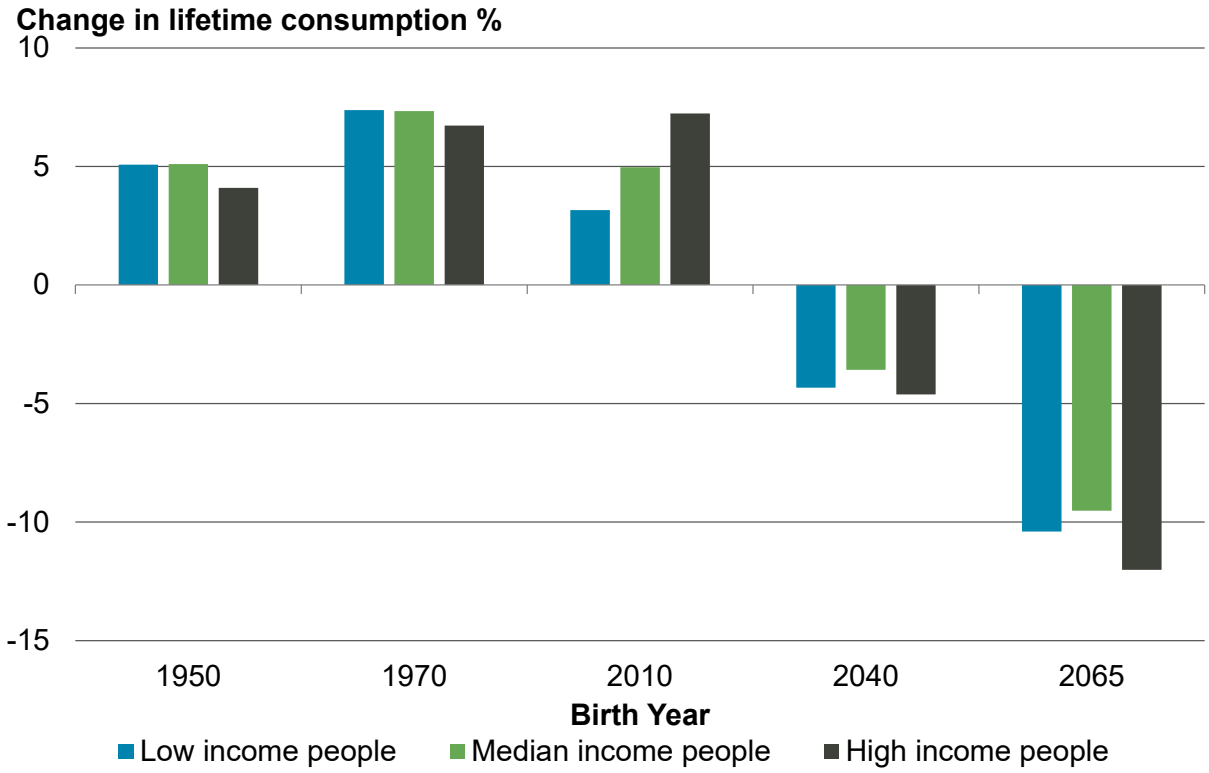


Source: OLG model, The Treasury

The timing of policy changes impacts not only the cost of change, but who bears the cost. Our OLG modelling suggests if we delay tax increases to 2066, everyone born before 2030 is better off, but people born afterwards end up paying significantly higher tax over their lifetimes and have lower after-tax pensions, which would lower their lifetime consumption (see Figure 31).

[39] There are some different economic impacts on labour and capital supply in the delay scenario vs the baseline scenario, which lead to similar levels of GDP up to 2065. The delay scenario initially encourages more labour supply as taxes are lower until the step change in taxes in 2065. However, the capital stock is lower than in the baseline, with growing public debt crowding out private capital accumulation. A larger increase in taxes is required in 2066, and thereafter in the delay scenario. Therefore, from 2066 GDP is significantly lower under the delay scenario. See Binning et al (forthcoming-b).

Figure 31: Distributional implications of letting debt build for 40 years relative to baseline



Note: This chart illustrates the distributional effects for people born in different years and with different income levels. Debt accumulation benefits current generations who pay lower taxes but adversely affects later generations who face higher taxes to meet the interest costs incurred.

Source: OLG model, The Treasury

There is no simple answer to how transition costs should be shared across generations. However, starting earlier provides more opportunities to share those costs, rather than leaving larger and more disruptive change to future generations. Taking early action to share the transition costs may bolster the willingness of future generations to continue participating in our pay-as-you-go pension system. It is also important to encourage our best workers to stay in New Zealand, and will help us attract the most skilled migrants, boosting productivity and prosperity.

Preannouncing a planned and incremental approach also enables people to change their plans around how much they work and save, reducing the impact of reduced entitlements on their lifetime incomes and consumption. Similarly, early signalling of future changes in tax rates helps firms make good investment decisions through time.

Knowing where to start can be challenging. One option is to focus on areas where there is a reasonable degree of certainty about the future pressures and a good understanding of the choices, such as retirement income policy. This would enable time to develop better information on the drivers of other potential changes in expenditure, making more incremental changes to test and manage the impact on economic performance and wider living standards. The success of this strategy would benefit from a continued focus on better understanding and improving public sector performance. For example, the Investment Statement, which will be published later this year, will explore the management of the Government's balance sheet.

Expenditure and revenue measures for fiscal sustainability

Governments have a range of choices about the expenditure and revenue changes they make to put finances on a sustainable footing. This section explores the fiscal, economic and distributional implications of alternative options to moderate expenditure growth or increase revenue, using the Treasury's new OLG model where possible (see Box D). The analysis of these options illustrates our second strategic direction, that governments will need to pursue a combination of policy options to manage ageing and other expenditure pressures.[40]

Moderating expenditure growth

Governments will need to proactively manage growth across all areas of spending, making prudent decisions around new spending and improving the value for money of ongoing expenditure. Constraining expenditure growth will be important to limit the extent to which taxes need to rise.

As outlined in Chapter 1, the most significant long-term spending pressures come from a combination of healthcare and New Zealand Superannuation (NZS). This section explores the options to constrain growth in these expenditure areas using the OLG model, as well as options in other areas of expenditure using the Treasury's Long-term Fiscal Model (LTFM).

Box D: OLG modelling of policy scenarios

As outlined in Chapter 2, the Treasury has developed a new OLG model. This chapter uses the OLG model to run a series of policy scenarios exploring the intergenerational implications of achieving fiscal sustainability in different ways.

In the OLG baseline scenario in this chapter, labour taxes automatically adjust to stabilise debt through time.[41] For simplicity, our baseline scenario assumes that the tax rates for all tax brackets increase by the same amount. All OLG policy scenarios in this chapter are considered relative to this baseline.

The model presents the impacts of policy changes on the lifetime consumption of individuals born in different years. To understand the implications of different policy choices for people with different levels of lifetime income, the model also has five different types of people (or households) representing people with low, median or high incomes.

Each household type has an 'inverted U' profile, with incomes gradually increasing through the first few decades of working life before flattening off; later in life the income profiles decline as people retire from work. As lifetime income profiles change with age, the age composition of the population matters for average and total income. The highest income people represented in the model have peak income levels roughly three times the average income. The lowest-income people tend to earn the minimum wage, about 60% of the average wage, and have flat lifetime profiles.

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[40] Binning et al (forthcoming-c) explore combination policies that adjust expenditure and taxes simultaneously.

[41] See Binning et al (2025c).

In the model, the five different types of people respond to changes in tax and public expenditures by changing how much they choose to work, consume and save, and firms choose how much to invest in capital in response to changes in the economy. The model provides insight into how these decisions impact the economy over time.

The implications of policy choices for these five different types of people are assessed using lifetime consumption and leisure as a measure of wellbeing or living standards. The distributional analysis in this chapter shows how much extra consumption (expressed as a percentage) a person of a certain age and income level would need under the baseline to feel equally well off compared to the alternative policy. A positive value means the alternative is better for them; a negative value means the baseline is preferred. Results are shown for individuals born in specific years and income groups.

The model findings need to be considered alongside wider evidence, recognising that no one model can include all the factors that influence future economic performance. There is also uncertainty around the economic and fiscal relationships assumed in the model. For example, there is significant uncertainty around the extent to which increases in taxes will depress labour supply.

Reducing the fiscal costs of pensions

This section explores options for reducing pension expenditure. It considers some illustrative options for constraining growth in NZS expenditure and looks briefly at alternative ways of funding pensions.

Moderating the costs of New Zealand Superannuation (NZS)

NZS has already increased from 3.9% of GDP in 2006 to 5.1% now, and without policy changes would grow to 8% by 2065 in our OLG model (or 7.8% in the LTFM).[42] As NZS is available to most residents from age 65, it automatically grows with our older population.[43] NZS also grows with the economy, as it is increased every year to account for increases in inflation and wages.

This Statement includes scenarios of three broad options to moderate the growing cost of NZS – a reduction in the payment rate over time relative to wages (consumers price index (CPI) indexation), raising the age of eligibility to 68 by 2040 and means testing. Table 8 summarises the fiscal, economic and distributional implications of the three scenarios. The three options are not mutually exclusive. Governments could consider a combination of these approaches and have choices around the timing and pace of change.

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42 As highlighted in Chapter 2, the Treasury has used two models to look at the fiscal impacts of population ageing, our LTFM and our new OLG model, which allows for changes in fiscal variables to impact the economy (feedback loops). We use the OLG model in this section to provide new insights into the intergenerational impacts of changes in superannuation policies.

43 NZS is available from age 65 to residents who have lived in New Zealand for 10 years since age 20, with five of those years after age 50.

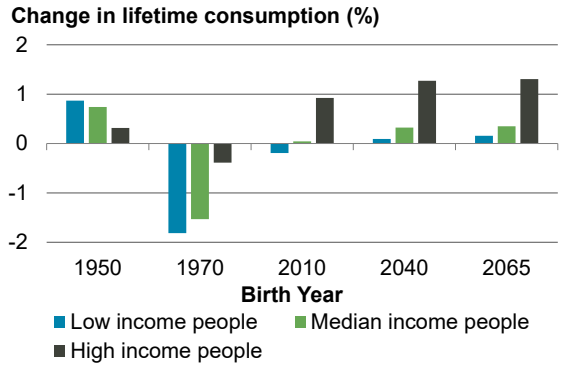
The scale of the fiscal and economic benefits will depend on the design choices, so no one approach can be identified as providing the highest economic and fiscal impacts based on the examples modelled in this Statement. However, the modelling suggests the cost of NZS could be kept stable as a percentage of GDP by increasing payment rates in line with inflation rather than wages, or through steadily increasing the age of eligibility to 72 by 2065. Means testing would need to kick in at relatively low levels of non-NZS income to generate similar levels of savings.

Figures 32 and 33 show the scenario impacts of increasing the age of eligibility and CPI indexation across different generations and income bands. The three scenarios all reduce the lifetime consumption of (some) earlier generations but make future generations better off, with lower future taxes and the cumulative impact of higher economic growth on incomes.

An interesting difference between the two NZS reform scenarios is that the CPI indexation scenario has a negative impact for most people already born, while raising the age of eligibility boosts consumption for those people already receiving NZS, such as those born in 1950. This is because NZS remains linked to after-tax wages in this scenario, which means existing NZS recipients benefit from the lower taxes feeding through to higher after-tax wages and higher NZS payments. However, people closer to retirement, such as those born in the 1970s, would face lower lifetime consumption if the age of eligibility was to increase. Those age groups would receive NZS for fewer years and get limited benefit from lower income taxes given they are approaching retirement.

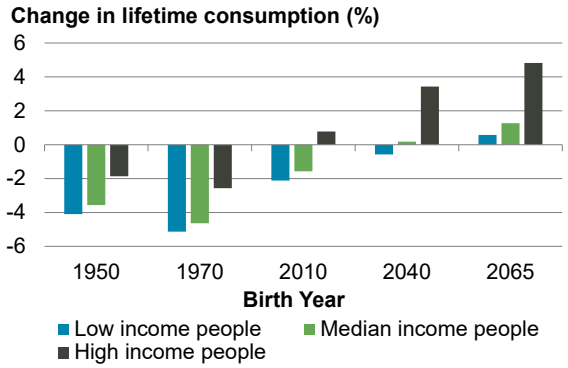
People in the higher income bands of the earlier generations experience a smaller percent decline in their lifetime consumption under both scenarios, as they are less reliant on NZS as a source of income. In contrast, higher income people born later benefit most from the lower taxes and higher economic growth. However, the results also suggest people born in 2065 are better off, irrespective of their income level.

Figure 32: Distributional impacts of increasing the age of eligibility to 68 by 2040



Source: OLG model, The Treasury

Figure 33: Distributional impacts of indexing NZS to CPI



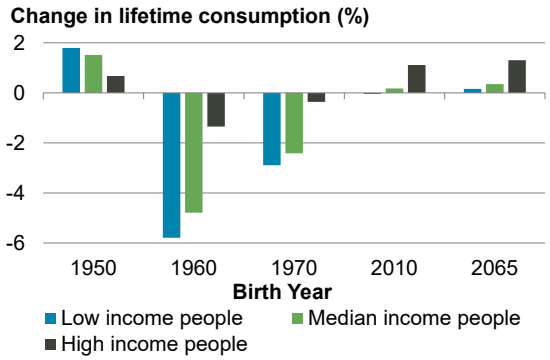
Source: OLG model, The Treasury

The three NZS reform options would also have differential impacts on different groups or types of New Zealanders, which are not illuminated by our OLG model. For example, CPI indexation would mean the incomes of pensioners mostly reliant on NZS would gradually fall below those of wider society. Means testing, in contrast, would provide greater protection to those mostly reliant on NZS in retirement. Some of the distributional issues are highlighted in Table 8.

Options to mitigate or share the costs of reforming NZS

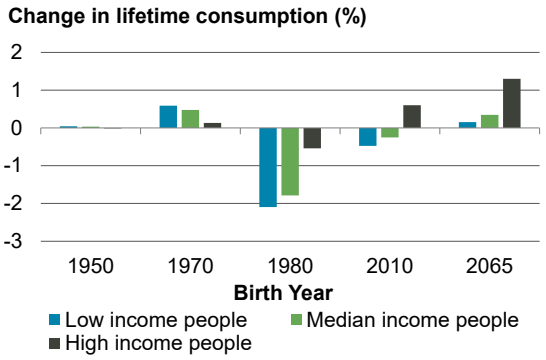
The age of eligibility scenario is also useful to explore the impacts of policy preannouncements. An OLG scenario where an increase in the NZS eligibility age to 68 was signalled 20 years in advance significantly reduces the negative impact (see Figure 34 and Figure 35). The delay in increasing the age of eligibility means that people born in 1970 are no longer impacted, but even people born later and impacted by the change would still be better off. This is because they have more time to change their work and saving patterns before retirement.

Figure 34: Increase in age of eligibility with no preannouncement



Source: OLG model, The Treasury

Figure 35: Increase in age of eligibility with 20-year preannouncement



Source: OLG model, The Treasury

These options to decrease NZS entitlements would benefit New Zealanders in the future, but would involve a cost for current generations, particularly those close to retirement. As part of a comprehensive package of reform, there could be a case for easing the transition costs for existing generations. For example, a one-off contribution to KiwiSaver balances could partially offset the impact of changes in NZS entitlements on people close to retirement. If government contributions to KiwiSaver are funded by debt, this would push some of the cost of the change in the superannuation policy to future generations. Approaches like this could be used to share the costs of change across generations.[44]

[44] To fully compensate 'transition generations', the amount of debt required would be quite large, equivalent to the implicit debt associated with current superannuation obligations, effectively shifting all the cost of change to future generations.

Table 8: Impacts of NZS reform options

	CPI indexation	Age of eligibility	Means testing
Description of option	NZS increases only in line with inflation (CPI).	Increase the age of eligibility to 68 years of age by 2040, raising the age by 1 year in 2030, 2035 and 2040.	The Treasury's microsimulation model (TAWA) explores a narrow and broad scenario where NZS was abated by 40 cents per dollar earned over $60,000 or $10,000 respectively.
Fiscal impacts	NZS's share of GDP is broadly flat. Expenditure on NZS would grow more slowly than the economy, offsetting the impact of an increasing number of recipients.	Increasing the age of eligibility to 68 would not be enough to keep NZS costs constant as a proportion of GDP. Under this scenario, NZS costs are projected to increase from 5.6% of GDP in 2025 to 7% in 2065. Even progressive increases to keep the number of years of NZS eligibility constant, which would require the age of eligibility to rise to 69 by the year 2065, would not stabilise NZS as a percent of GDP. That would require a bigger increase in the age of eligibility to 72 by 2065 and for the age to keep climbing thereafter. OLG modelling does not capture possible offsetting increases to expenditure on other benefits for those New Zealanders who are unable to continue to work until the higher retirement age.	Means testing would need to be applied even to people earning modest levels of non-pension income if it was to generate similar levels of saving to the other two scenarios over time.
Economic impacts	All three reform options provide long-term economic benefits by reducing expenditure growth and, therefore, the need to increase taxes over time. For example, GDP per capita would be about $4,900 higher under the CPI indexation scenario and $1,100 more under the age of eligibility scenario by 2065. The exact magnitudes of the economic and fiscal benefits would depend on the timing and magnitude of the reforms. Reducing benefit rates and increasing the age of eligibility increases incentive to work and save, boosting New Zealand's labour supply and capital stock.		Means testing could discourage people from saving or extending their working lives if this means their NZS would be abated.

	CPI indexation	Age of eligibility	Means testing
Impacts across age groups and income bands	Older New Zealanders will be worse off, particularly people currently close to or in retirement. However, everyone born after 2050 would be better off as the benefits from economic growth outweigh the lower pensions they receive in retirement. People in the higher income bands benefit more from the higher economic growth, and people born after 2001 in the higher-income band are better-off under this scenario compared the baseline. For median-income earners, those born after 2037 would benefit overall, while those born before would bear more costs than benefits.	People close to retirement are disadvantaged as they will get lower income from NZS over their lifetimes. Everyone born after 2022 benefits from higher economic growth, across the entire income distribution. People already receiving NZS get higher payments as NZS is linked to after-tax wages, which increase due to the reduction in income taxes. People in the higher income bands benefit the most from the higher economic growth. People born after 1984 in the highest-income bands are better-off. For median-income earners, those born after 2008 would benefit overall.	We were not able to run this scenario in the OLG model, so do not have intergenerational impacts. However, future New Zealanders are also likely to benefit relative to current generations.
Impacts across other groups	Lower superannuation benefits would increase disparities across different population groups. CPI indexation would protect the purchasing power of NZS. However, the incomes of pensioners mostly reliant on NZS would gradually fall below those of wider society.[45]	Negatively impacts those with limited opportunities to work in later stages of their lives, especially those in physically demanding jobs.[46] However, the impacts on those not able to work could be mitigated by allowing them early access to NZS or raising the payment rate of Supported Living Payment (SLP) to match the rate of NZS.[47]	Means testing would maintain the role of NZS in preventing poverty among older New Zealanders and would support people unable to work or accrue assets over their lives.

[45] Analysis using the Treasury's TAWA microsimulation model suggests that if CPI indexation without a wage floor had been introduced in 2010, 26% of people aged over 65 would be living on less than 50% of median incomes compared to 6% now.

[46] The implications of a change in the age of eligibility for people with different lifespans are complex. People with shorter lifespans will receive pensions for shorter periods when the age of eligibility increases, but they will also face lower taxes to fund pensions for people with longer lifespans. Since the NZS does not terminate at any age, all people receive income support if they unexpectedly live to old age. For more discussion of CPI indexation and changes in the age of eligibility see Binning et al (2025d).

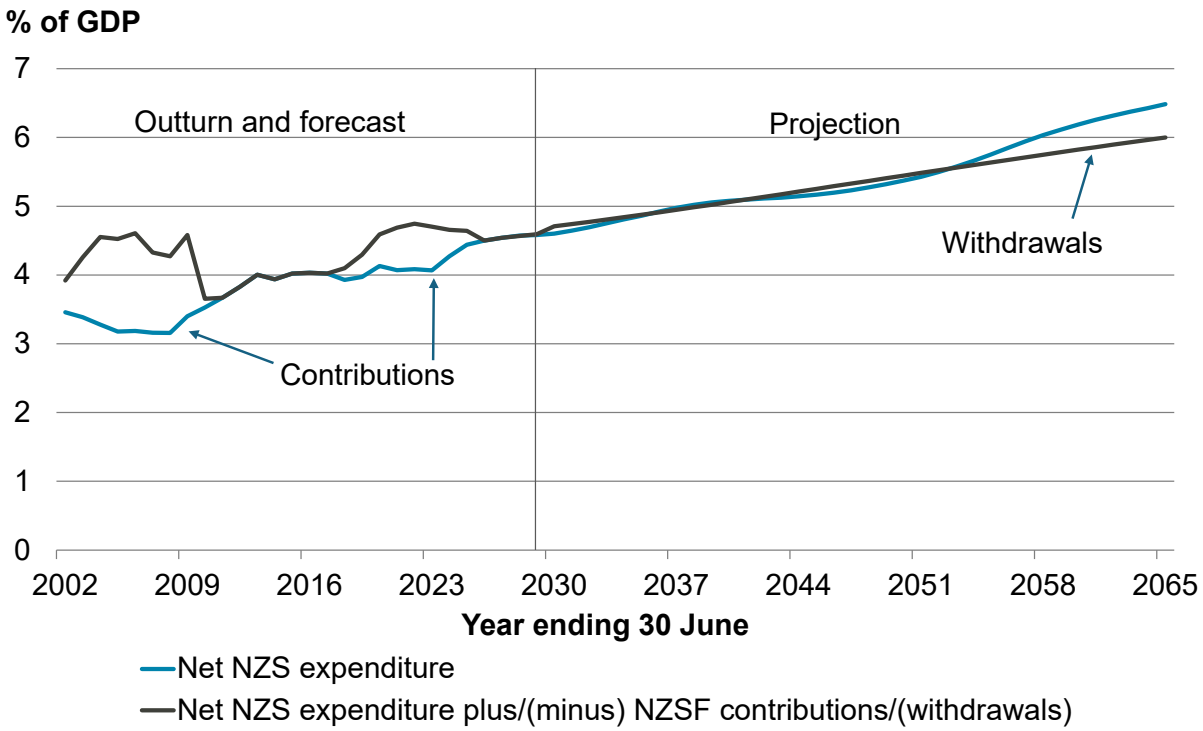
[47] Our modelling suggests the degree by which this 'SLP offset' reduced fiscal savings would depend on both its coverage and the SLP payment raised used. If, for example, the SLP benefits was increased for all SLP recipients and 10% of affected superannuitants went on to SLP, this would offset the NZS savings by nearly one quarter.

Exploring alternative approaches to pensions and retirement savings

An alternative to paying pensions out of current taxation is for each generation to save for its own retirement. In some countries government saves in a collective fund, and other countries rely more on mandatory and individually funded savings accounts. We have some elements of both approaches in New Zealand, in the form of the New Zealand Superannuation Fund (NZSF) and KiwiSaver respectively. However, these would need to be significantly expanded in line with reforms to NZS to make much of a dent in the future fiscal cost of pensions.

The NZSF was established in 2001 to pre-fund some of the projected increase in superannuation costs. Accumulated contributions and net gains are now approaching 20% of GDP and are expected to peak at about 36% of GDP under the current withdrawal formula. However, withdrawals from the NZSF will be a very small offset to increasing NZS costs. Figure 36 compares NZS expenditure (blue line) with NZS expenditure adjusted for contributions from, and withdrawals to, the NZSF (black line). Under the current withdrawal formula, governments would continue to contribute to NZSF until around 2055. Withdrawals from the NZSF will partially offset NZS costs after 2055, as shown in Figure 36 when the blue line is above the black line. However, the offset is small, with the NZSF withdrawals only shaving about half a percentage point of GDP off NZS expenditure.[48]

Figure 36: NZS expenditure including and excluding net NZSF contributions/withdrawals



Note: The path of contributions and withdrawals in this figure differs from the original 2001 NZSF projections. The 2001 projections displayed a clear differentiation between a period of substantial contributions (through to the mid-2020s) and a period of substantial withdrawals. The historical and current projected path in this figure reflects some of the changes to GDP outlined earlier in this Statement, the suspension of contributions between 2009 and 2017, and higher actual returns than assumed in the 2001 NZSF projections.[49]

Source: The Treasury

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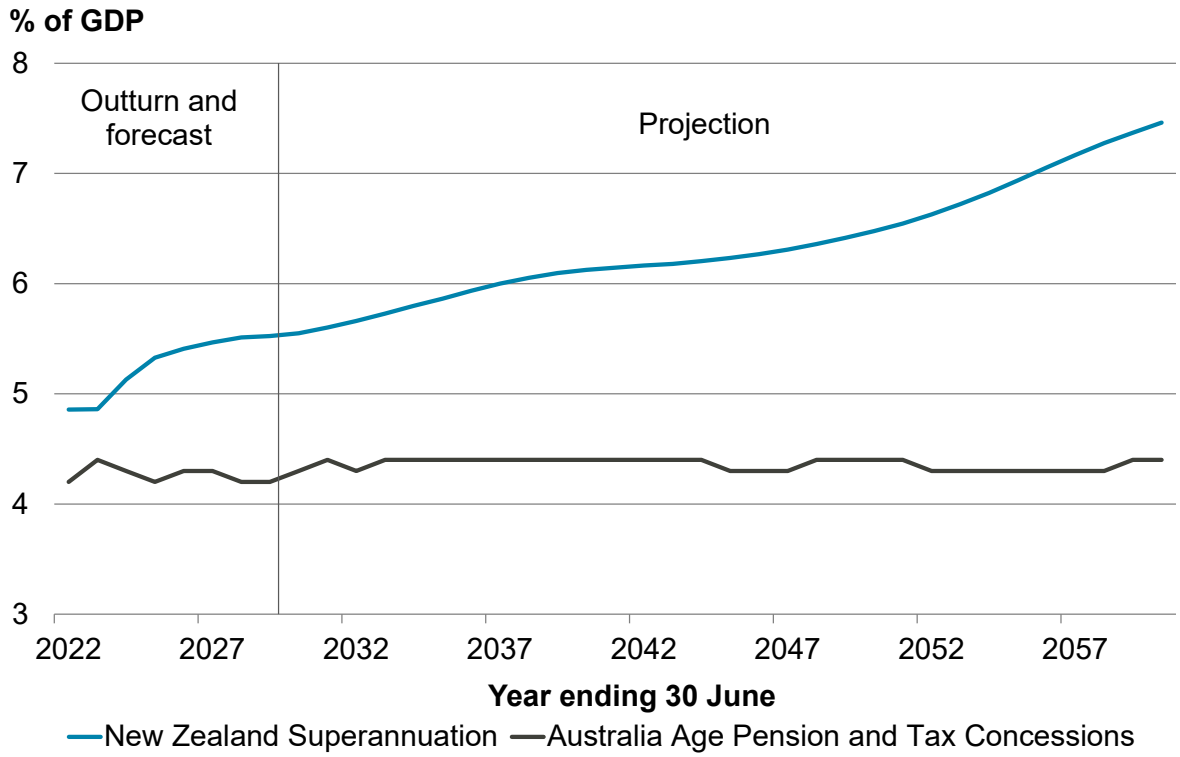
[48] Withdrawals from the NZSF are projected to be around 6% of gross (before tax) NZS payments by 2065 (or 7.5% of the net or after-tax costs of NZS). If the tax NZSF pays is added to the withdrawals from the fund, the NZSF's contributions to the budget would be around 14% of the costs of gross NZS in 2065 (or around 17% of net NZS costs).

[49] For more details see Bell (2021).

Increasing the contribution NZSF can make to future pension costs would require governments to increase the contributions to the fund. Creating the capacity to increase NZSF contributions would require successive governments to deliver operating surpluses on average over time. This would depend on either taxing current generations more or reducing their public services and transfers, with similar intergenerational implications to reducing debt.

Another approach is compulsory savings where savings are kept in individual accounts rather than being held collectively. Australia introduced its compulsory savings system (Superannuation Guarantee) in 1992. Australia's system is fiscally costly since it provides significant tax incentives for savings. However, the combined cost of pensions and tax concessions is projected to grow only in line with GDP in Australia, in comparison to NZS's increasing share of GDP in New Zealand (see Figure 37).[50]

Figure 37: Pension expenditure in Australia and New Zealand



Note: This chart uses NZS projections from the Treasury's LTFM, which is more comparable than our OLG model with the Australia projections included in this chart.

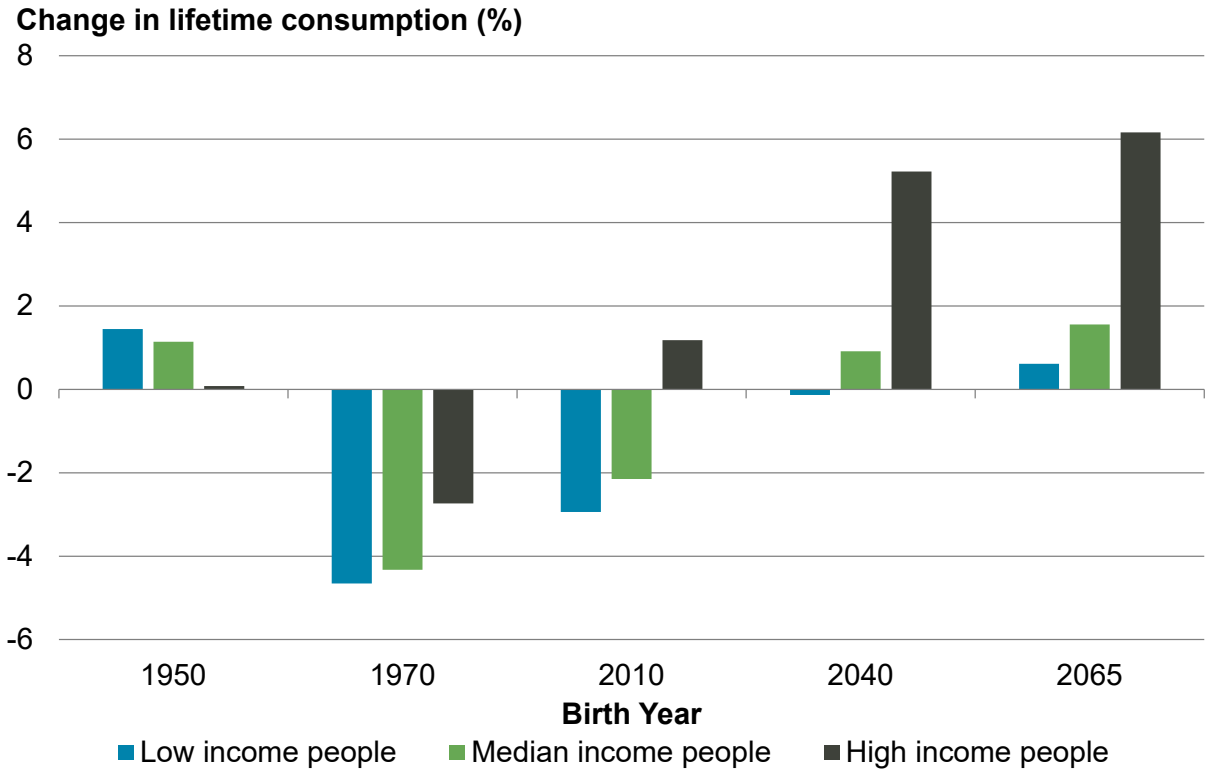
Sources: LTFM, The Treasury; Australian Government[51]

[50] There are various challenges and trade-offs with the Australian system that would need to be carefully considered. For example, see NZIER (2024).

[51] Australian Government (2023).

The Treasury has modelled an OLG scenario to approximate a move towards a more private savings-based approach to funding pensions. The scenario steadily reduces NZS rates to half of current levels, which simultaneously reduces fiscal costs and prompts greater savings by households. This is very similar to CPI indexation, but with the rate of NZS declining more rapidly. Figure 38 shows most individuals born after 1960 are disadvantaged; having paid for previous generations' superannuation, they now need to save more for their own retirement and have limited time to do so. However, as with the scenarios to reform NZS, lower tax rates and higher economic growth make people born in later years increasingly better off, particularly those on higher incomes.[52] The burden on a 'twice-paying' generation could be managed though a slow and steady transition, perhaps with gradual phasing out of the existing system.

Figure 38: Distributional impact of partial phase-out of NZS



Source: OLG model, The Treasury

There could be wider benefits from moving to a compulsory savings approach. Given savings are linked to the saver, a compulsory savings scheme would have lower work disincentives than taxation[53] and its greater portability between countries could also strengthen incentives to spend working years in New Zealand.[54] There are many ways such a savings scheme could be introduced in New Zealand, with different roles for private and public savings systems.[55]

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52 See Binning et al (forthcoming).

53 Feldstein (2005).

54 A tax-funded intergenerational system offers little incentive for working-aged people to pay high taxes or contribute to collective savings unless they expect to stay in the country for the rest of their lives. Given New Zealand's very high levels of inward and outward migration, this is a salient consideration.

55 One example was developed by the Financial Services Council (2012), another sketched by Cullen (2013), and a more recent example MacCulloch (2019).

However, some groups face persistent barriers to saving, including people on lower incomes and people who face breaks in employment over their lifetimes. There are also gender and ethnic disparities. Men have average KiwiSaver balances about 25% higher than women, and Māori and Pacific peoples contribute around 50% less than Pākehā.[56] A compulsory saving system might need to be supplemented with additional support for some people.

Reducing fiscal pressures by managing health expenditure

Health is central to the long-term fiscal challenge because it is a large and growing part of total government spending.

There are opportunities to moderate health cost growth over coming decades. For example:

- *A more active approach to reducing demand for health services by improving population health and managing risk factors, including regulatory and public health measures*. Several international studies suggest investing in improving the health of population groups with high health risk factors, such as obesity, might support a moderate reduction in health-cost growth and improve quality of life.[57] Preventative measures are more likely to save money when they improve health for those suffering from chronic diseases, such as those with mental or behavioural conditions.[58]

- *Improving the way health services are organised and funded.* This includes providing care in the most effective way, such as concentrating specialist services in fewer hospitals, enabling nurses or pharmacists to take on some tasks currently done by doctors, and making smart use of digital tools.

Another possibility is to increase the private contribution to health costs. New Zealand's current system is mostly funded through taxes. Moving towards higher private contributions could have impacts on people on low incomes or those with chronic health conditions, and reduced access to primary healthcare can shift costs to more expensive parts of the health system. Evidence also suggests systems more reliant on private funding or insurance do not improve health outcomes or control overall health costs more effectively.[59] Changes towards private funding would need to balance these risks.

There is uncertainty around how big a difference these strategies would make to health costs, and what the trade-offs could be for health outcomes. There is also general uncertainty around the magnitude of the cost drivers underpinning the long-term health projections.[60] Despite this uncertainty, the Treasury expects health spending to grow faster than the overall economy. In the OLG baseline scenario, health spend grows from 7% of GDP to around 11% of GDP by 2065 – growing more than NZS. However, it is possible health costs will grow faster or slower than this baseline assumption:

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56 Melville Jessop Weaver (2023).

57 OECD (2023); OECD (2024b).

58 Grootjans-van Kampen et al. (2014).

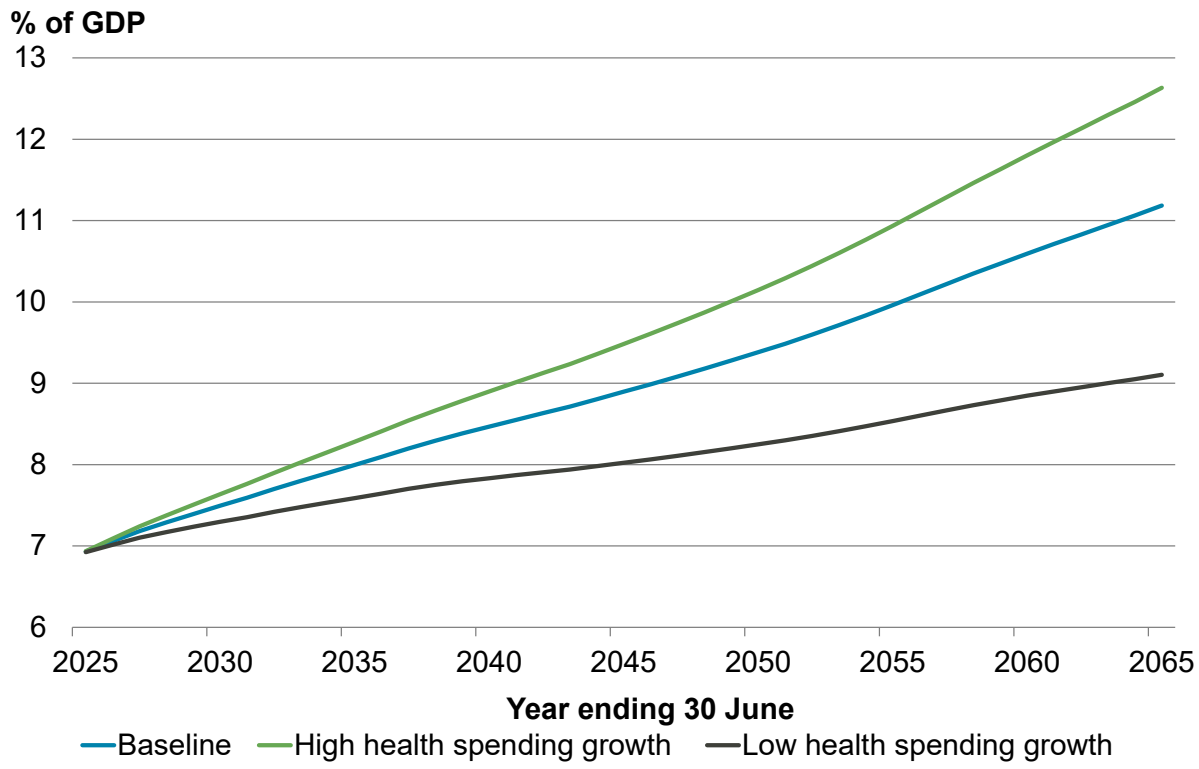
59 A greater reliance on private insurance can also increase health costs (total and sometimes public) by increasing use of services and making cost control harder through competition for workers and the existence of multiple payers. See, for example, OECD (2004).

60 Our understanding of the role of income and technology in driving costs has changed over time. For example, more recent studies have found lower income elasticities for healthcare (OECD, 2024c) and potentially a lower impact of technological change on health cost growth (Smith et al., 2022).

- *Risks of higher cost growth*: the central projections in this Statement are lower than those of some other international institutions, reflecting our more conservative assumptions for health-cost growth.[61] An OLG scenario assuming cost growth of 0.5% per annum higher than the baseline scenario suggests health expenditure increasing to about 13% of GDP by 2065.
- *Opportunities for controlling health costs*: work by the Organisation for Economic Co-operation and Development (OECD) suggests a cost-control scenario focused on realising efficiency improvements might reduce annual health cost growth by 0.1% each year.[62] A broader approach across health prevention, efficiency and productivity, and some increases to user pays, could have a larger impact, with fiscal and health impacts dependent on the effectiveness of the mix of changes. An OLG scenario assuming 0.5% per annum less cost growth than the baseline scenario would limit health expenditure to 9% of GDP in 2065.

These two illustrative scenarios are shown in Figure 39. They highlight that relatively small differences in annual cost growth can make a large cumulative difference to the share of GDP New Zealand spends on healthcare by 2065.

Figure 39: Health expenditure under alternative cost assumptions



Source: OLG model, The Treasury

61 OECD (2024c); Office for Budget Responsibility (2024).

62 OECD (2024b).

Managing fiscal pressures through other expenditure

Governments can also offset rising NZS and health costs by moderating growth in other types of expenditure. This section explores some of the risks and trade-offs in reducing other expenditures, using the Treasury's LTFM, as the OLG model groups all non-pension and health expenditure into a general 'government consumption' bucket.

Non-pension welfare payments

One option is to reduce non-pension welfare payments. To fully offset just the projected increases in NZS in 2065, non-NZS welfare spending would need to fall to 2.2% of GDP by 2065. This compares to an average of 5.7% of GDP between 2006 and 2025.

There is, however, limited scope to generate fiscal savings though the three ways welfare payments could be reduced:

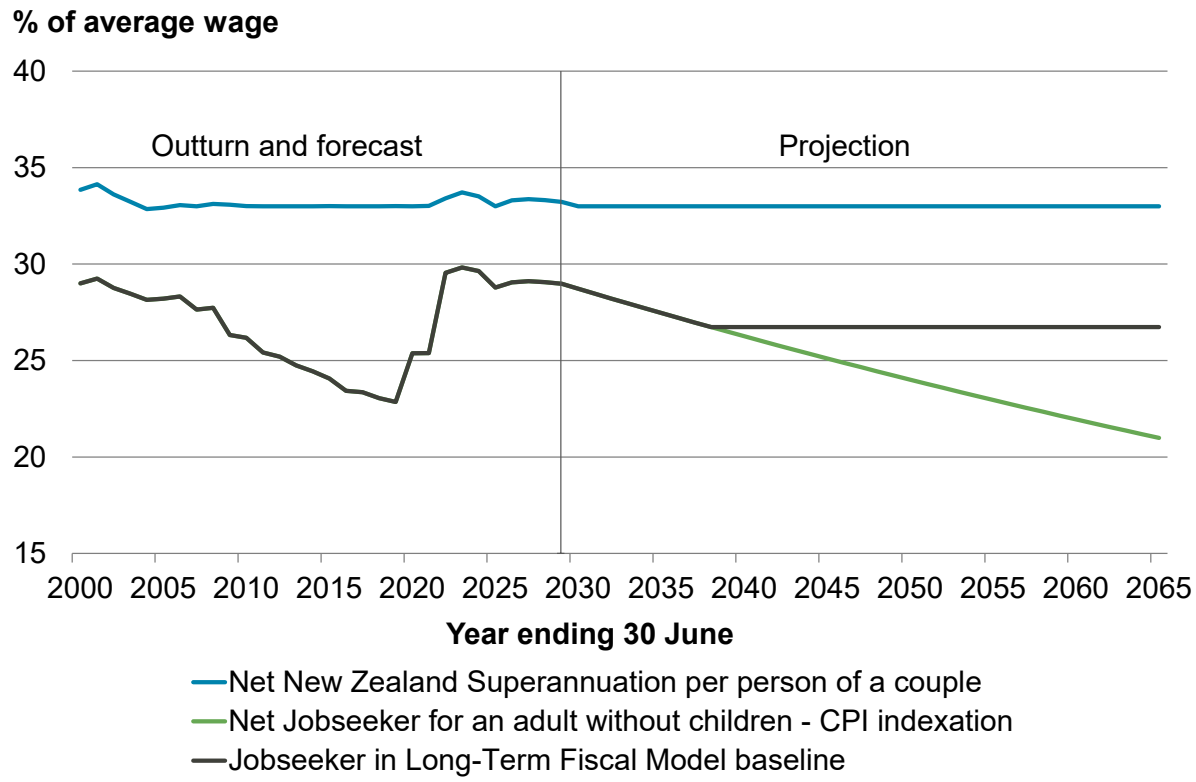
- *Enabling people to move off benefits and into work*. There is no silver bullet to achieving this objective.[63] To fully offset projected growth in NZS, the proportion of people receiving main benefits would need to fall well below that achieved at any point in the past 20 years. This would be particularly challenging given New Zealand already has high rates of labour-force participation and employment compared to other OECD countries.

- *Reducing payment levels.* Working-age benefits are already indexed to CPI rather than wages. Our modelling assumes that CPI indexation continues for non-superannuation benefits for 10 years and is indexed to wages thereafter. Under this scenario, for example, Figure 40 shows that the Jobseeker allowance falls steadily relative to average wages for the first 10 years and would fall from 29% to 21% of the average wage by 2065. Reductions in main benefits may also flow through to increased demand for supplementary assistance or additional supports, which would offset the fiscal savings. If eligibility for supplementary assistance is also tightened, this would primarily impact groups such as young and low-income families, those with disabilities or severe health conditions, and over 65s in need.

- *Tighter means testing or abating of benefits*. The challenge of this strategy is that working-age benefits are highly targeted compared to NZS. Many beneficiaries already face very high effective marginal tax rates, especially sole parents, which discourages labour-force participation and raises equity questions.

[63] Policies to support reduced need for welfare include creating a stable macroeconomy, investing in education and skills, supporting positive family functioning, improving population health, enabling housing close to jobs and designing welfare instruments to limit negative impacts on work incentives.

Figure 40: Main benefit rates relative to wages over time



Source: LTFM, The Treasury

Managing fiscal costs through non-health public services

Governments could seek to at least partially offset the increasing pressures on NZS and health spending by reducing other expenditure on non-health public services, like education and law and order. To fully offset these costs, the OLG modelling shows other expenditure would need to fall from about 13% of GDP to only 5% by 2065 and keep declining thereafter. Any changes would need to consider intergenerational implications (see Box E).

An ageing population generates modest savings on education spend over time, from 4.7% of GDP today to 4.2% in 2065. This decline is because the number of children is projected to fall relative to the overall population. Achieving significant additional cost reductions would likely require a significant rethink of system settings (such as class sizes), given wage costs are the most significant share of education spending. However, growth in education spend could be further constrained by reducing the level of public support provided by the taxpayer. As illustrative examples only, this could include reducing the level of public subsidy for early childhood education or increasing fees for tertiary education. However, as a substantial amount of student fees are covered by the Student Loan Scheme, there would be flow-on impacts to loan borrowing and repayments, as well as risks of strengthening students' incentives to emigrate to avoid repayment of higher loans.[64]

[64] See Hughes, (2025a) and Hughes & Crichton (2025). Between 25% and 30% of everyone born in New Zealand is living overseas by age 30, and emigration rates are even higher among those with tertiary qualifications. Student loan holders living overseas commonly cease repayments, and these loans are sometimes written off as a result. Ministry of Education (2023).

Box E: Investing in younger New Zealanders

Longevity is about older people, but it is younger New Zealanders who matter most for fiscal sustainability. We need a population of working people willing and able to support those who are past working age.

New Zealand is fortunate that, on average, our current working-age population is highly skilled and hard working. Our adult skill levels and labour participation levels are among the highest in the OECD. *Te Tai Waiora*, the Treasury's first Wellbeing Report, published in 2022, noted life in New Zealand has been improving in many ways. However, it highlighted some reasons to be concerned for our younger generations.[65]

Average scores in reading, maths and science have been declining for the past 20 years, and the proportion of children reaching age 15 without basic skills is climbing. Mental health problems are increasing among young people, with 21% of 15–24 year olds experiencing high or very high levels of psychological distress, up from 7% just 10 years previously. Lower skills and mental health problems contribute to lower labour force participation rates. Although the overall labour-force participation of New Zealand's 15–64 year olds is very high by OECD standards, the proportion of our 15–29 year olds who are not in employment, education or training is close to the OECD average.

Te Tai Waiora pointed to growing intergenerational gaps in a range of areas, including wealth. People typically accumulate more wealth as they age, but the wealth gap between the over 65s and under 35s has increased significantly since the turn of this century. Rising house prices have been an important driver. Younger people are facing increasing challenges in getting into the housing market and are much less likely to own their own home today than they were in the 1980s. This could create more hardship among today's younger generations as they reach retirement.

These trends highlight the importance of continuing to invest in our younger generations. In making expenditure and revenue changes, governments need to be cognisant of the impacts across generations. We want our younger people to be healthy, skilled, and productive, for their own sake, but also because we will need them to support the increasing number of older people.

Reducing other areas of expenditure would require a significant reversal of recent trends. Funding higher health costs through reprioritisation from other public spending areas, in roughly equal reductions to their current shares of funding, would require for example law and order spending to fall to 1.2% of GDP. This is below its funding as a share of GDP in any of the past 20 years. This would likely require policy reform in areas such as sentencing and bail and parole to manage more offenders in the community, with associated risks to public safety.

[65] The Treasury (2022a).

Capital expenditure and the balance sheet

While this Statement has been mostly focused on the Government's operating expenditure, there is also increasing demand for capital expenditures. An increasing need for defence expenditure will have implications for capital expenditure, for example. New Zealand also faces rising costs to build and maintain infrastructure, along with increasing expectations to provide better infrastructure that supports economic growth, is more resilient to climate shocks, and supports efforts to decarbonise the economy.[66]

Investment spending is different from operating expenditure. While a government needs to balance its revenue and operating expenditure over time, there can be a case for borrowing to finance long-lived infrastructure. Borrowing to fund investment is appropriate if expected population growth is high, to help avoid productivity blockages, and as a means for future New Zealanders to contribute to the costs of infrastructure that benefits them. High-quality investments that generate economic growth will deliver future tax or other revenues that offset their costs. However, there is significant uncertainty around future population growth (see Chapter 1). Borrowing to meet a demand that does not eventuate creates a burden for future generations, while failing to invest in capacity can result in various problems, such as congestion in highways, environmental problems in sewage systems, and delayed or inequitable access to health services.

Good investment decisions and asset management are important to ensure the government has the right mix of assets, and liabilities, to deliver public services over time. Poor investment decisions can cumulate over time into a large implicit weight on the current fiscal balance, as assets require ongoing maintenance. There is scope for improvement. For example, according to the New Zealand Infrastructure Commission, between 2010 and 2019 New Zealand spent more per capita than any other OECD country on infrastructure but has among the lowest infrastructure spending 'bang for buck' in the OECD.[67] The Treasury's Investment Statement, to be published later this year, will explore the government's investment and balance sheet management practices.

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66 New Zealand Infrastructure Commission (2025a).

67 New Zealand Infrastructure Commission (2025a).

Box F: Managing the cost of climate change

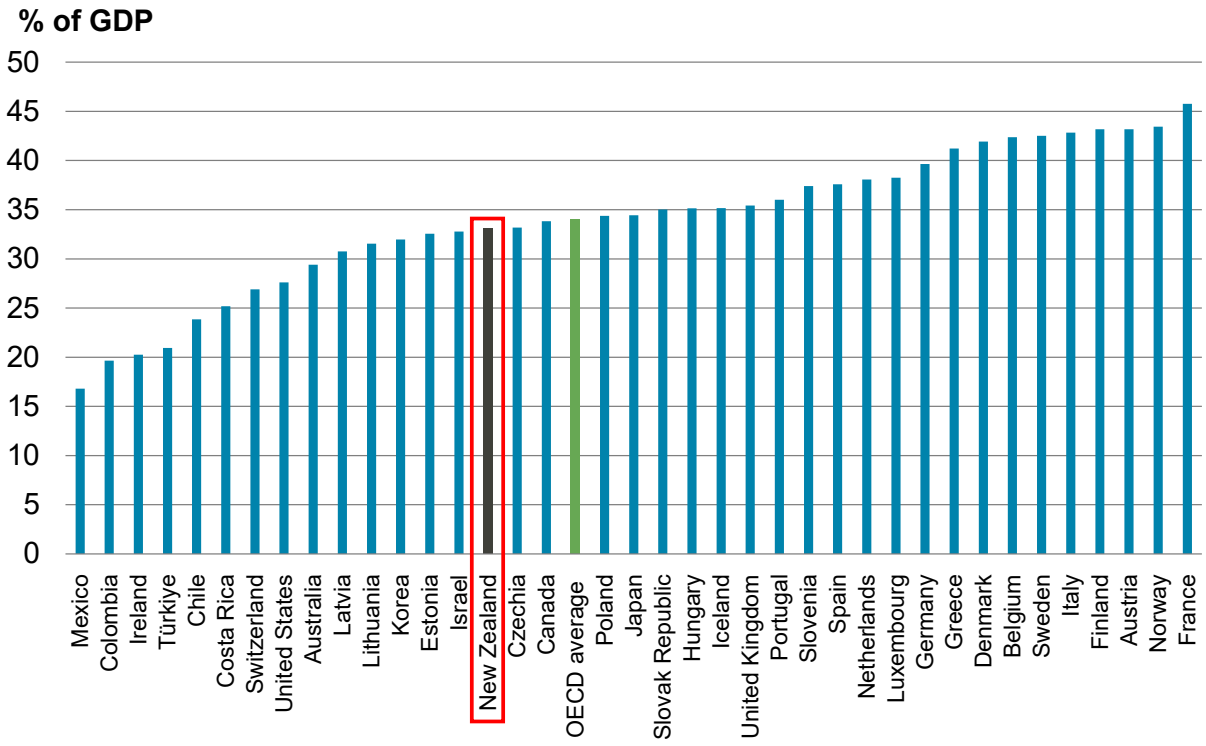
As reflected in Chapter 2, the fiscal costs of climate change will depend heavily on choices made by central and local government, communities, businesses and individuals. With respect to policy choices, the Treasury considers the following decisions taken by central government to be particularly influential:

- How the Crown manages risk to its own assets and services, including considerations around enhancing resilience.
- The Crown's role in supporting others to manage their own risks. This could include choices of whether and how to provide any direct financial support, alongside other policies.
- The Crown's role in assisting others to deal with impacts when risk is realised. This includes choices about the Crown's role in responding to major weather events or addressing disruptions in markets.
- How the Crown funds increased expenditure associated with physical climate risk. Choices for this include through general taxation, debt, or new revenue mechanisms, such as considering pre-funding costs for responding to certain elements of severe and frequent weather events.
- Choices on setting the ambition for climate targets, including future domestic emissions budgets and Nationally Determined Contributions (NDCs).
- Choice of policy interventions to support emissions reductions, including how to balance pricing and other market-based mechanisms with broader regulatory tools, and more direct funding levers and choices around timing.
- Choices around whether and how to support those directly impacted by the transition to a low-emissions economy. These include various options around redistributing costs across households, firms, sectors, regions and generations, with tax and welfare system settings playing a key role.

Options to increase tax revenue

Even with efforts to control expenditure, New Zealanders will likely need to pay higher taxes over time. Our current tax-to-GDP ratio is slightly below the OECD average (see Figure 41). Raising revenue has economic costs, as it affects decisions to work, save, and invest. However, different ways of raising revenue have different economic impacts and the costs are borne by different people.

Figure 41: General government tax revenue, 2022



Source: OECD

Based on the assumptions in the Treasury's OLG model, revenue as a percent of GDP would need to increase from 30% in 2025 to 37% in 2065 if expenditure pressures from ageing were funded from revenue changes alone. Governments could choose to raise taxes on income, consumption or other tax bases. In New Zealand, income and consumption taxes accounted for 88% of general government revenue in 2024.

New Zealand has a progressive income tax system. This means that as productivity and inflation increase wages, people move into higher tax bands and pay a higher share of their income in taxes; this process is commonly called fiscal drag. Fiscal drag has lifted tax revenue as a share of GDP over the last 15 years, although adjustments to tax thresholds were made in 2010 and in 2024. Future governments could continue to use fiscal drag to generate more revenue by delaying changes to the income thresholds for tax bands.[68] However, like all types of tax, it has costs and benefits and distributional implications and should be considered against other options for raising revenue – or reducing expenditures.

Box G compares our OLG baseline scenario, where income taxes are progressively increased to cover increasing NZS and health expenditure, with a scenario where goods and services tax (GST) is increased instead. While there are other approaches to model the economic and distributional impacts of tax, the Treasury's OLG modelling suggests increasing GST may have lower economic costs than income taxes. Inland Revenue's draft Long-term Insights Briefing (LTIB) suggests that GST could be a flexible and efficient way to meet future revenue needs,

[68] Studies have suggested that continued fiscal drag could fund the increased expenditure on superannuation and possibly even some of the health costs. Creedy & Gemmell (2013) illustrated automatic tax increases through fiscal drag would be sufficient to cover the increased costs of superannuation and healthcare as the population grows older. More recent work for the Treasury by Domican & Zhang (2025) illustrates that since 2011 fiscal drag has more than offset the increased expenditure on NZS.

but suggests that additional policies, like transfers to low-income households, may be required to meet distributional objectives.[69] However, the size of tax increases needed to meet expenditure pressures, whether income tax or GST, reinforces the importance of measures to moderate the growth in projected expenditures.

Box G: OLG modelling of income vs consumption taxes

Our OLG baseline scenario assumes income tax rates increase to fund increasing expenditure pressures. Stabilising debt would require an increase in the average tax rate on labour income from 21% in 2025 to 32% in 2065. If we instead relied on increases in GST, GST would need to increase from 15% to 32% by 2065. GST would need to increase by more than income taxes because it has a smaller tax base.

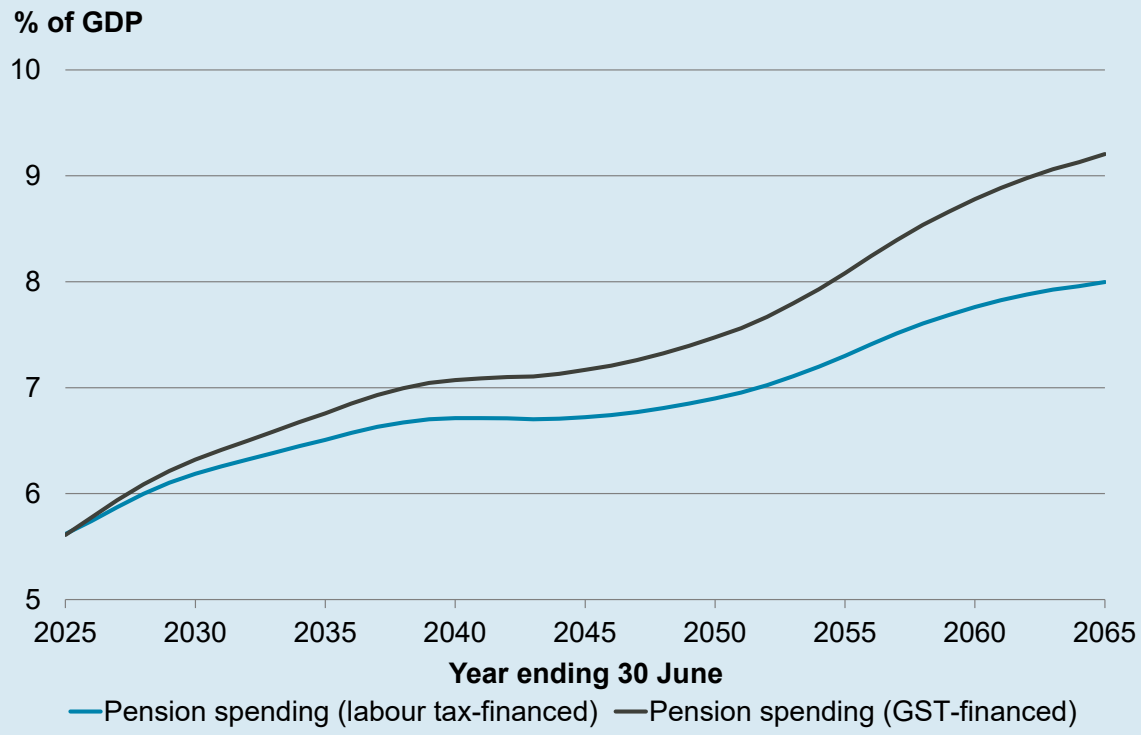
The economic and distributional effects of labour income taxes and GST are complex. Our OLG modelling suggest that:

- By the end of the projection period, per capita GDP would be higher under our GST scenario, as incomes taxes have a bigger negative impact on incentives to work and invest, which reduces GDP per capita.
- People at the beginning of their working lives are better off with an increase in GST rather than income taxes. However, most people already working would prefer income taxes, apart from those on the lowest incomes. This is because the changes in GST act as a tax on existing wealth, reducing its purchasing power. This impacts most on wealthier people or people near retirement.

Our OLG modelling highlights some important connections between tax and superannuation expenditure. NZS is tied to after-tax wages, so increases in income taxes tend to suppress superannuation expenditure, while changes in GST rates do not. Figure 42 shows that NZS as a percent of GDP would be 9% of GDP by 2065 under our GST scenario, compared to 8% in our baseline (or income tax scenario). This particularly benefits lower-income households for whom NZS is a bigger share of their income. However, increased superannuation expenditure also increases the tax burden on other households.

[69] Inland Revenue (2025) also consider exemptions in the current GST regime as an alternative to transfers (like reductions in GST on food) but notes such exemptions would not provide targeted assistance.

Figure 42: NZS expenditure would be a higher share of GDP if we fund increasing expenditure through GST rather than income taxes



Source: OLG model, The Treasury

While income and consumption taxes are two of the most important sources of government revenue, there are alternatives. Other papers from the Treasury have considered alternative labour tax schemes that are more and less progressive than the scenarios in this chapter, and they also consider adjusting capital income taxes. Those papers illustrate that taxable income in the upper income tax brackets and capital income tax bases may not be large enough to meet the expenditure pressures associated with superannuation and health.[70]

Given uncertainty around the extent to which future tax levels may need to increase to fund expenditure pressures, New Zealand needs a flexible tax system. In its draft LTIB, Inland Revenue explores how to develop a durable tax system flexible enough to meet future expenditure needs without creating undue efficiency or equity costs.[71] GST's wide base provides flexibility to increase rates as it limits the scope to avoid that tax. In contrast, a long-standing issue for income taxation has been the different treatment of labour, savings and investment income. Taxing all types of income more evenly, such as a capital gains tax or other measures explored in Inland Revenue's draft LTIB, would reduce the incentive for people to reclassify their income to minimise taxes. Such a change would make it easier to use income taxes to raise additional revenue.

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70 Binning, et al. (2025a and 2025b).

71 Inland Revenue (2025).

A combined policy response

The analysis in this Statement shows that governments would need large changes in tax or expenditure if they are to rely on changes in only one of these policy areas to make fiscal policy sustainable over the long-term.

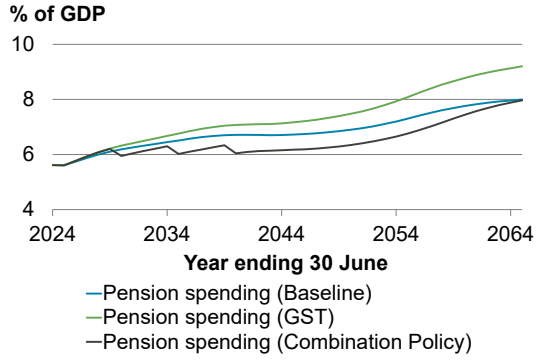
This Statement includes a 'combination policy scenario' as an illustration of how a mix of revenue and expenditure changes could support long-term fiscal sustainability. This scenario is illustrative only; there are numerous possible combinations involving different economic trade-offs and distributional implications. The combination policy scenario deploys both expenditure and revenue levers (see Figure 43 to Figure 46):

- An increase in the age of eligibility for superannuation to 68 years of age, spaced out over 15 years.
- A reduction in the annual rate of health cost growth, premised on a mix of efficiency, health prevention and user pays. As a result, health spending only increases to 9.8% of GDP by 2065, compared with 11.2% in the baseline scenario.
- A reduction in non-health/non-superannuation public expenditure on other goods and services, equivalent to 1.4% of GDP.
- An increase in GST from the current rate of 15% to 24% in 2065.

Figure 43 compares the combination policy scenario with the OLG baseline (where income taxes are increased to fund expenditure pressures) and the OLG GST scenario (where the only policy change is an increase in GST). By 2065 superannuation expenditure increases almost as much in the combination scenario as in our baseline, despite the increase in the age of eligibility. This is because income taxes are lower, as only GST increases in the combination scenario. As NZS is linked to after-tax wages, the superannuation payment is higher than in the baseline scenario, which offsets the fiscal savings from raising the age of eligibility. However, comparison with the GST scenario shows that GST rates would be much higher in the absence of a fiscal saving from the superannuation (and health) expenditure changes.

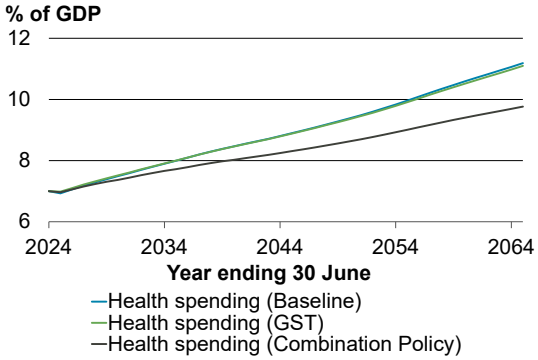
An illustrative combination scenario

Figure 43: Superannuation spending



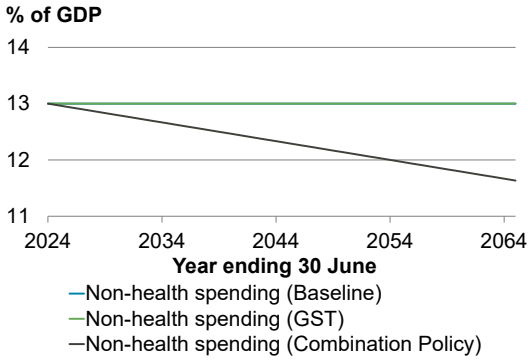
Source: OLG model, The Treasury

Figure 44: Health spending



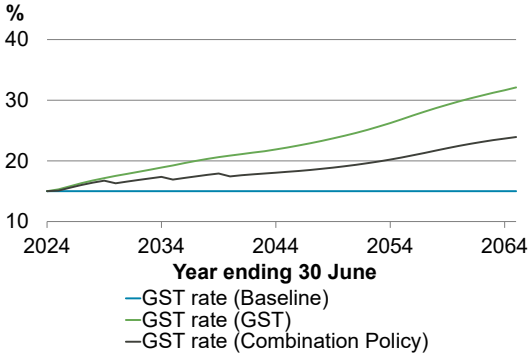
Source: OLG model, The Treasury

Figure 45: Non-health government consumption spending



Source: OLG model, The Treasury

Figure 46: Goods and services tax rate



Source: OLG model, The Treasury

The combined policy experiment delivers higher GDP per capita in the long run (beyond the 40-year projection horizon that we consider in this Statement) than relying only on labour taxes to meet expenditure pressures. The reductions in superannuation and health expenditure reduce the extent to which taxes need to rise, which encourages additional labour supply and investment. The combined-policy experiment also results in higher consumption per capita in the long run, reflecting the lower public expenditure.

This combination scenario is illustrative only, but the Treasury proposes governments consider multi-pronged fiscal strategies, involving changes to revenue, superannuation and public services. Drawing on a range of tax and expenditure levers will help moderate the size of change required by any one fiscal lever. Given different levers will have different distributional impacts, governments may also wish to use a ‘combination package’ to spread the cost of the change across different groups of New Zealanders, depending on their distributional objectives.

Economic and fiscal inter-connections

New Zealand's economic and fiscal challenges are intertwined. The Treasury's third main strategic direction is the value of thinking about economic and fiscal challenges in an integrated way.

Chapter 2 highlighted that New Zealand has high labour participation and employment rates, but disappointing productivity performance. Achieving higher productivity means New Zealanders' real incomes would be rising over time, supporting higher living standards and ability to fund effective public services. On the flipside, fiscal sustainability, alongside independent and inflation-targeting monetary policy, are importance contributors to a stable macro-environment, which is essential for long-run growth. Keeping public debt down eases pressure on interest rates, encouraging and enabling private sector expansion and investment. Lower public debt also increases the scope for government to help when the economy and living standards are hit by adverse events, like pandemics and floods.[72]

Keeping visibility of the intertwined economic and fiscal challenges is necessary to ensure that policy is coherent and well-aligned. In particular:

- Policy makers need to be aware of the economic impacts of tax and expenditure options for reducing public debt. The scenarios in this chapter have highlighted the potential impacts of policy changes (such as changes to our NZS settings) on economic performance. The aim should be to minimise any negative impacts of policy changes on New Zealand's economic performance and living standards.

- In the same vein, the Treasury needs to ensure clarity about the fiscal implications of any policy changes aimed at boosting economic performance. The Treasury's advice is that improving our productivity and economic performance depends on increasing private investment and capital intensity, strengthening our connections to the world, lifting innovation and the diffusion of new technology and improving regulation and competition. Government will need to balance the policy changes it makes to support economic performance, such as changes to tax settings or increases to public investment, with the fiscal cost of these changes.

There are some opportunities to improve both economic and fiscal performance. Improving the effectiveness of the public sector, for example, has the potential to improve both the economy and the government's books. There may also be opportunities to improve the quality of regulation in ways that support businesses to grow, create jobs and invest, without significant fiscal costs.

However, there will also be some tensions or trade-offs between the two objectives. While pursuing public sector productivity makes sense, the improvements in public productivity required to offset expenditure pressures would be extremely large, especially as longer-term pressures from ageing and climate change start to kick in. This means governments will have to make choices with challenging trade-offs for economic outcomes and wider living standards.

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72 The Treasury (2025a).

Final thoughts

The challenges we have outlined in this report are complex and can seem daunting. When the costs of change are borne in the near-term, but the benefits lie decades ahead, the incentives to defer change are strong. Yet New Zealand has in the past made policy adjustments aimed at reducing long-term pressures. For example, the age of eligibility for NZS was raised from 60 to 65 during the 1990s, and in the 2000s the NZSF and KiwiSaver were established. Making further changes would be enhanced by greater public awareness and understanding of the long-term challenges explored in this report. The Treasury aims to play a greater role in keeping the longer-term fiscal position in the public debate between these Statements.

The good news is that New Zealand does not have to map the whole path forward; we just need to identify the path the country wants to start walking down. Over time, governments will choose to stride faster or slower down those paths. The important thing is to keep taking those steps and maintaining momentum in lifting our economic performance and keeping our fiscals on a sustainable footing. The Treasury will continue to advise successive governments on the choices they have to strengthen our economic and fiscal performance.

There are choices to be made as to the future New Zealanders want. The choice facing New Zealanders is what legacy we want to leave to future generations.

Annex 1

Key assumptions: LTFM projection and OLG projection financed by debt

The Long-term Fiscal Model (LTFM) is used to develop a projection of core Crown revenue, expenditure, and net debt over a 40-year horizon. As explained below, the model holds policy largely constant, helping to isolate the impact of demographic and other structural trends.

The projection is anchored to the 2025 Budget Update through to 2028/29. From 2029/30 on, it extends through to 2064/65 using a stable set of assumptions about demographics, economic conditions, and fiscal settings. These are summarised in Table 9, Table 10, and Table 11, respectively.

The demographic trends are based on Stats NZ's latest population projections and are similar to patterns of demographic ageing in other countries. They have wide-ranging implications for the fiscal outlook – affecting labour supply, demand for public services, and the cost of age-related programmes such as New Zealand Superannuation (NZS) and healthcare.

The economic assumptions extend from the 2025 Budget Update forecasts and reflect long-run structural trends in productivity, labour supply, and interest rates. They influence both the revenue base (through wages, employment, and consumption) and expenditure pressures, particularly in health, superannuation, and debt servicing.

The fiscal policy assumptions, for example around revenue settings and benefit indexation, are designed to reflect how fiscal settings have tended to behave over time. They do not attempt to predict specific government decisions. Rather, they reflect what the Treasury has learnt over successive Statements about how to best represent long-term pressures in a way that remains consistent, credible, and policy relevant, to help assess the scale and timing of adjustment required.

Table 9: Key Stats NZ demographic assumptions underpinning the LTFM projections

Variable (millions)	2025	2035	2043	2065
Population total (median projection)	5.337	5.873	6.284	7.287
Working-age population (15+)	4.368	4.947	5.340	6.297
Labour-force participation rate	71.1	70.5	70.3	67.3

Note: Ethnic population projections end in 2043.

Source: Stats NZ

Table 10: Key economic assumptions in the LTFM projections

Baseline assumptions	Description
Demographic assumptions	Uses Stats NZ's national population projections' single year of age and gender growth rates, applied to an age- and gender-distributed population, calibrated to the Treasury's forecasts of aggregate total and working-age (15 years and above) populations.
Nominal interest rate on government borrowing	Stabilises at 4.3% per year (equivalent to a 2.3% real interest rate), projected the 10-year bond rate.
Labour productivity growth	Stabilises at 0.9% per year.
Labour supply	Uses Stats NZ (2025) national population projections' single year of age and gender labour force participation growth rates, applied to an age- and gender-distributed labour force, calibrated to the Treasury's forecasts of the aggregate labour force.
Real GDP	Grows each year in line with labour supply and productivity.
Nominal GDP	Grows each year in line with real gross domestic product (GDP) and consumer price index (CPI) inflation.
Revenue	The majority of core Crown tax revenue grows in line with nominal GDP. So do some other core Crown revenue types. Those that do not usually apply the combined growth of the working-age population and inflation.
Government policy	NZS projected using the growth of the "65 years and above" age group and average wage growth. The main working-age benefits apply to weighted age and gender group growth and payment rate indexation through inflation for the first decade and then wage growth. Health and education use weighted age and gender group growth, wage growth and an historical growth factor. Transport and communication expenses are projected in line with hypothecated transport taxes. Defence spending is transitioned to 2% of nominal GDP. Most other expense types are transitioned to a stable percentage of GDP, based on an average of their five-year forecast base and the most recent five years of history. Interest costs are a product of the debt stock and the nominal interest rate.
Government investment	Core Crown asset types funded from capital allowances in forecast years all transition to a stable percentage of GDP, based on an average of their five-year forecast base and the most recent five years of history. Their combined total reaches 42% of GDP by 2064/65, the final projected year.

In the debt-financed Overlapping Generations (OLG) scenario, the government postpones tax increases for 40 years and finances the excess of expenditure above revenue by issuing debt. Low tax rates provide a positive incentive for labour force participation, with effective labour levels staying higher. However, the growing government debt crowds out private investment, resulting in a lower capital stock.

Table 11: Key assumptions in the OLG model projections

Overlapping Generations model (baseline)	
Demographic assumptions	Assumptions broadly align with Stats NZ (2025) median population projections.
Steady-state population[1]	12.3 million
Migration assumption (2065)	46,000
Long-run total fertility rate	Total fertility rate 1.55 per female.
Steady state real interest rate	3.56% per year, reflecting the return on capital.
Total factor productivity growth	0.9% per year.
Labour supply	Labour supply and wages are determined within the OLG model, reflecting assumptions about lifetime productivity profiles and consumer preferences.
Real GDP	Real GDP is determined by labour supply, the capital stock, and productivity within the OLG model.
Government policy	Labour income taxes are adjusted each year to stabilise debt. (Each marginal tax rate is adjusted by the same percentage point amount.) Tax thresholds are indexed to total factor productivity. Superannuation policies align with current policies. Government consumption (inclusive of base health) is fixed at 20% of GDP. 'Additional health' expenditure grows faster than GDP reflecting demographics, and cost and demand pressures. The OLG model does not model government investment.
Health cost shares[2]	As per the 2021 LTFM.
Health residual growth factor[3]	0.5% per year.

Notes:

1 The steady state population is the population the model converges to after several centuries.

2 The health cost shares reflect how much money is spent on a person depending on their age and sex, reflecting the effect of demographics on health expenditure. See The Treasury (2021a and 2021c), in particular the 'Exogenous' sheet of the spreadsheet.

3 The health residual growth factor, reflecting a mix of supply and demand factors, affects how fast health expenditure increases excluding demographic drivers.

Annex 2

Explaining the LTFM and OLG

The Treasury has used two macro-fiscal analytical approaches to produce projections and analysis for this 2025 Long-term Fiscal Statement:

- The Long-term Fiscal Model (LTFM).
- A newly developed Overlapping Generations (OLG) model.

They are complementary approaches that give us insight into different aspects of revenue and expenditure over time and the impact this will have on the government's fiscal position, businesses, and us in the future. In this Annex we briefly describe the features of the models and their inputs and outputs. In summary:

- The LTFM projects fiscal trends assuming fixed policy settings and no behavioural feedbacks, providing a clear view of pressures under a 'passive' policy path.
- The OLG model incorporates behavioural responses and macroeconomic feedback over time, enabling richer analysis of who is affected by fiscal choices and when.

The LTFM has been used in Long-term Fiscal Statements (Statements) since 2006 to produce macroeconomic and fiscal projections over 40-year horizons. LTFM is an accounting model that takes demographic projections from Statistics NZ on population and labour force and combines them with macro data on gross domestic product (GDP), unemployment, prices, wages, interest rates, migration, and other variables to project forward economic and fiscal variables.

The LTFM has a very detailed fiscal structure, projecting the financial stocks and flows of the government. The flows include tax and other revenues and expenditure on various 'functional' components like health and New Zealand Superannuation (NZS). LTFM also breaks down expenditure into 'segments' like personnel expenses and finance costs, which cut across functional components. The stocks summarising the government's financial position include assets and liabilities and net worth, for both core Crown and total Crown representations of the government (where total Crown includes Crown entities and state-owned enterprises). The real strength of the LTFM is its detailed fiscal structure, which allows us to explore specific aspects of government revenue and expenditure.

Many of the variables in LTFM are projected forward in relation to GDP, prices, and various labour force variables including working-age population, participation, and the unemployment rate. These macro-fiscal relationships are approximated from historical ratios and typically depend on some relationship between growth rates. Steady-state values are estimated and any discrepancies from steady state at the starting point of the projection are run off over the projection horizon. In the long run the LTFM assumes the average historical ratios will continue through into the future, and the behaviour of consumers and workers to changing government policies is not explicitly modelled.

The fiscal projections of the LTFM in past Statements have consistently shown demographic change combined with other fiscal pressures (such as those related to climate change) will lead to government debt increasing to untenable levels unless policies are adjusted to correct the imbalance between government expenditure and revenue.

The OLG model is similar in spirit to the work of Auerbach & Kotlikoff (1987) and various models used in policy institutions. The OLG model is much more aggregated than LTFM in both its economic and fiscal structure. It incorporates different types of households, firms, and the government, who interact with each other determining future economic outcomes. The strength of OLG is it allows us to consider how changes over time affect different groups of people across different generations – how they choose how much to work, consume, and save across time and over their expected lifetimes. They accumulate assets during their working life and save for a period of retirement.

Households making choices about consumption, saving, and labour supply also respond to the tax, transfers and expenditure decisions made by the government. Firms' profit maximisation creates demand for factors of production, thereby influencing economy-wide wages and interest rates. In the OLG model, the government has 'endogenous' tax policy rules that ensure the ratio of public debt to GDP stabilises at a target level.

The OLG model replicates New Zealand's progressive labour income taxes, the goods and services tax (GST) and approximates taxes on capital income (a mix of business and income taxes). The expenditure side of the government's financial accounts is approximated with just four categories: superannuation expenditure, health expenditures, and other expenditures and transfers. Expenditures on superannuation are determined by demographics and legislated rules, while health expenditures are (exogenously) driven by demographics and other cost drivers.

Although much simpler than the LTFM, the OLG model illustrates how people and firms respond to changes in government policies. People adjust their consumption and supply of labour to optimise their lifetime wellbeing. The OLG model is intended to be a 'structural' model in which household and firm preferences and certain production technologies or capabilities are taken to be durable, primitive determinants of behaviour, which are invariant to government policies. Agents are assumed to re-optimise their decision rules when new policies are introduced, which then affect macroeconomic and fiscal variables.

The OLG model is also 'general equilibrium' in character, meaning policy changes in one area can propagate through to others, and expectations of future market conditions can also affect current behaviour. The model also ensures the decisions of consumers, firms, and government aggregate in sensible ways. For example, income must be allocated across all three groups, and consumption and investment in a time period cannot exceed the amount of goods available.

One advantage of the OLG framework is it can be used to evaluate the welfare implications of many policies relative to a 'baseline' view of how the government will implement fiscal policy. The households have five levels of productivity, which can be thought of as mapping to low, median and three higher income groups. The welfare analysis illustrates how these productivity types are affected by changes in policy and how the various generations are affected. Alternative policies are evaluated relative to a baseline in which labour income taxes are adjusted to stabilise public debt. The policies are compared by identifying the percentage increase in consumption in each remaining year of life a person would need to receive under the baseline policy to leave them as well off as under the alternative policy.

(This increase or decrease in lifetime consumption compensates for both changes in consumption and changes in hours worked.) When this percentage is negative, the baseline is preferred and when it is positive the alternative leaves a person better off. These policy effects often depend on where someone is in their life cycle and whether they are rich or poor. A labour income tax affects retirees directly through the indexation and taxation of their pensions, and indirectly by altering returns to capital (part-owned by retirees).

This rich and complex framework illustrates how difficult it is to identify 'good' policies, since the effects depend on which policies are implemented, their timing, whether they are preannounced, and of course the magnitude of any policy changes. Policies often involve trade-offs between different generations, between rich and poor, or between working and non-working people. Policy choices then involve decisions about whose welfare to prioritise.

Table 12: Key fiscal projections (% GDP)

		LTFM				OLG			
	2025	2035	2045	2050	2065	2035	2045	2050	2065
Healthcare	7.1	7.4	8.1	8.5	9.9	8.0	8.8	9.2	10.6
Gross NZS	5.3	5.9	6.2	6.5	7.8	6.8	7.2	7.5	9.2
Education	4.8	4.3	4.2	4.2	4.3	N/A	N/A	N/A	N/A
Debt-financing costs	2.0	2.7	3.9	4.8	8.8	1.8	2.8	3.5	6.9
Total expenses	32.7	33.2	35.4	36.9	43.8	31.8	33.1	33.9	37.1
Total revenue	30.8	30.6	30.4	30.3	30.1	30.4	30.3	30.3	30.8
Operating balance	-0.2	-1.3	-3.4	-4.8	-11.6	-3.3	-5.6	-7.1	-13.1
Primary balance	-0.7	-0.7	-1.8	-2.5	-5.5	-1.5	-2.8	-3.6	-6.3
Net debt (excl. NZSF and advances)	42.7	53.6	82.6	103.6	200.0	52.9	83.6	106.5	219.1
Net debt (incl. NZSF)	21.3	28.9	51.7	68.8	156.8	N/A	N/A	N/A	N/A
Nominal GDP ($ billion)	435.1	671.3	978.1	1169.3	1934.4	654.1	962.2	1153.7	1931.2

Source: The Treasury

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