



Presentation to NZ Society of Actuaries

23 October 2015

Ben McBride

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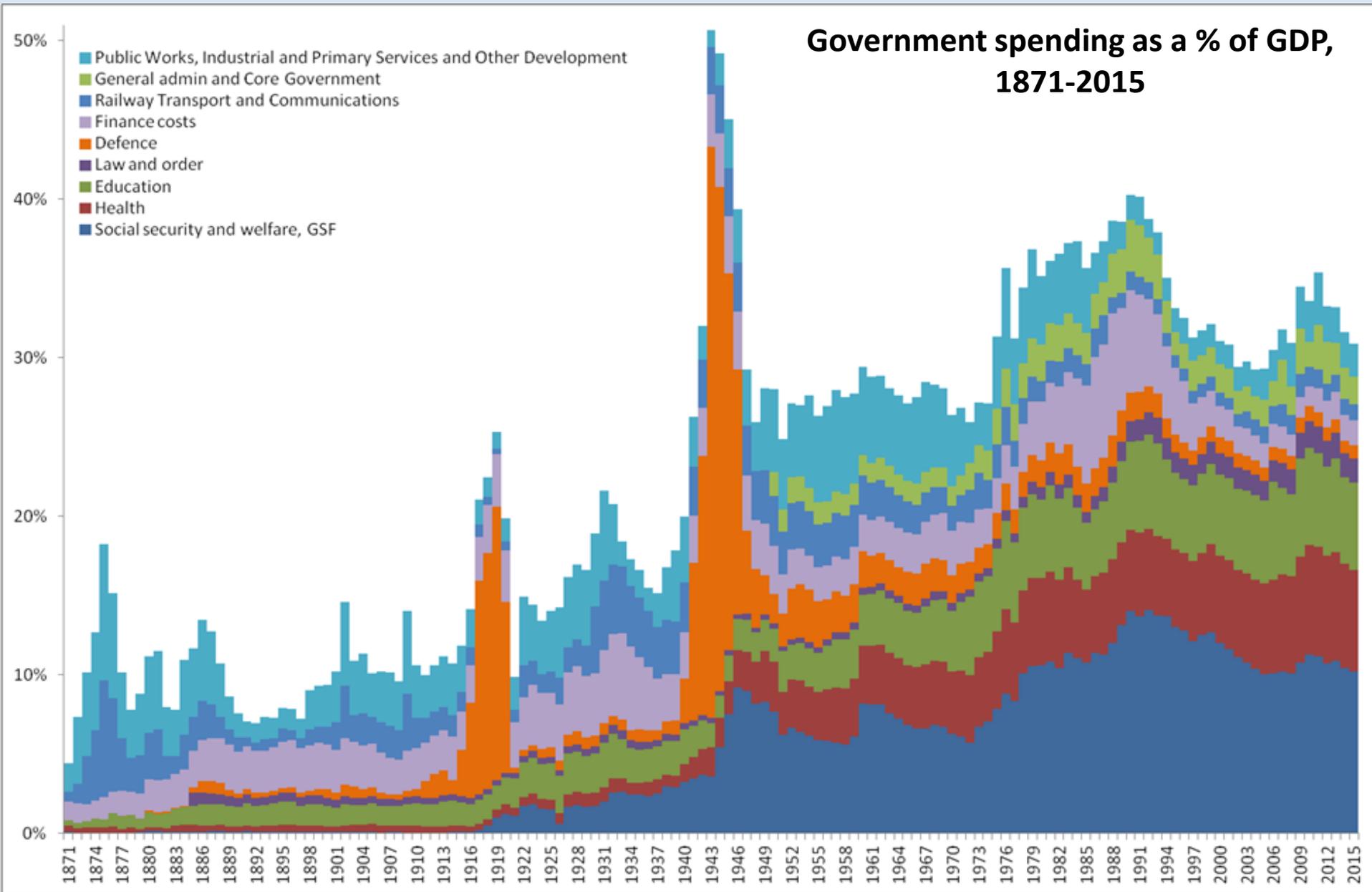
- 1. Health projections in Treasury's long term fiscal statement**
- 2. Social Investment / Investment Approach – the Government's Social Services Reform Agenda in the context of the health sector**

Part 1

Health projections in Treasury's long term fiscal statement

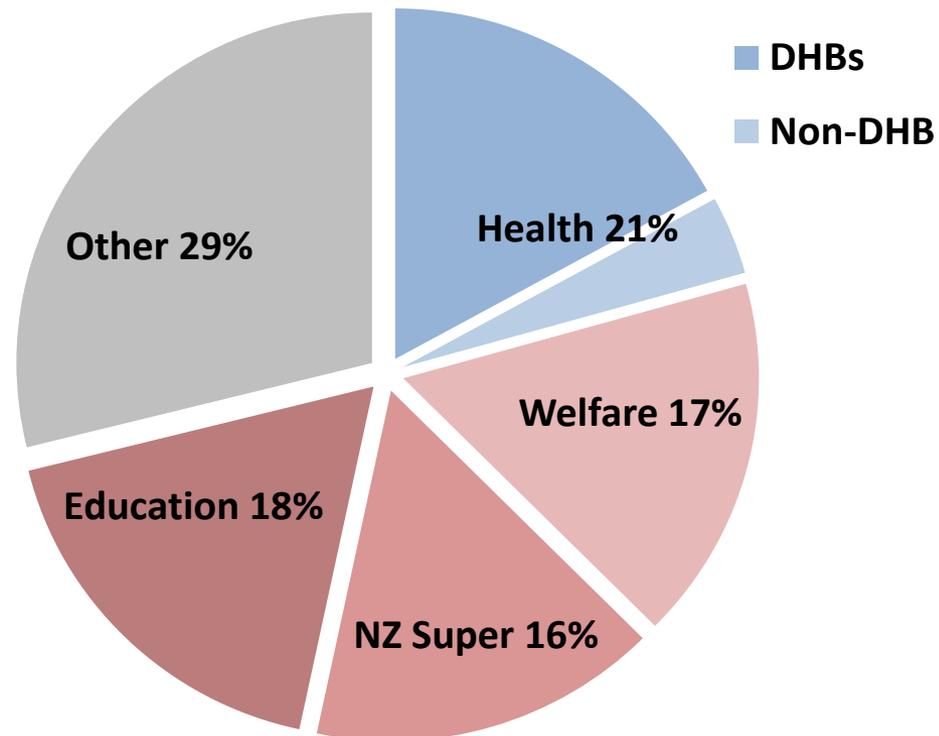
Trends in health expenditure

- Health expenditure has grown over time

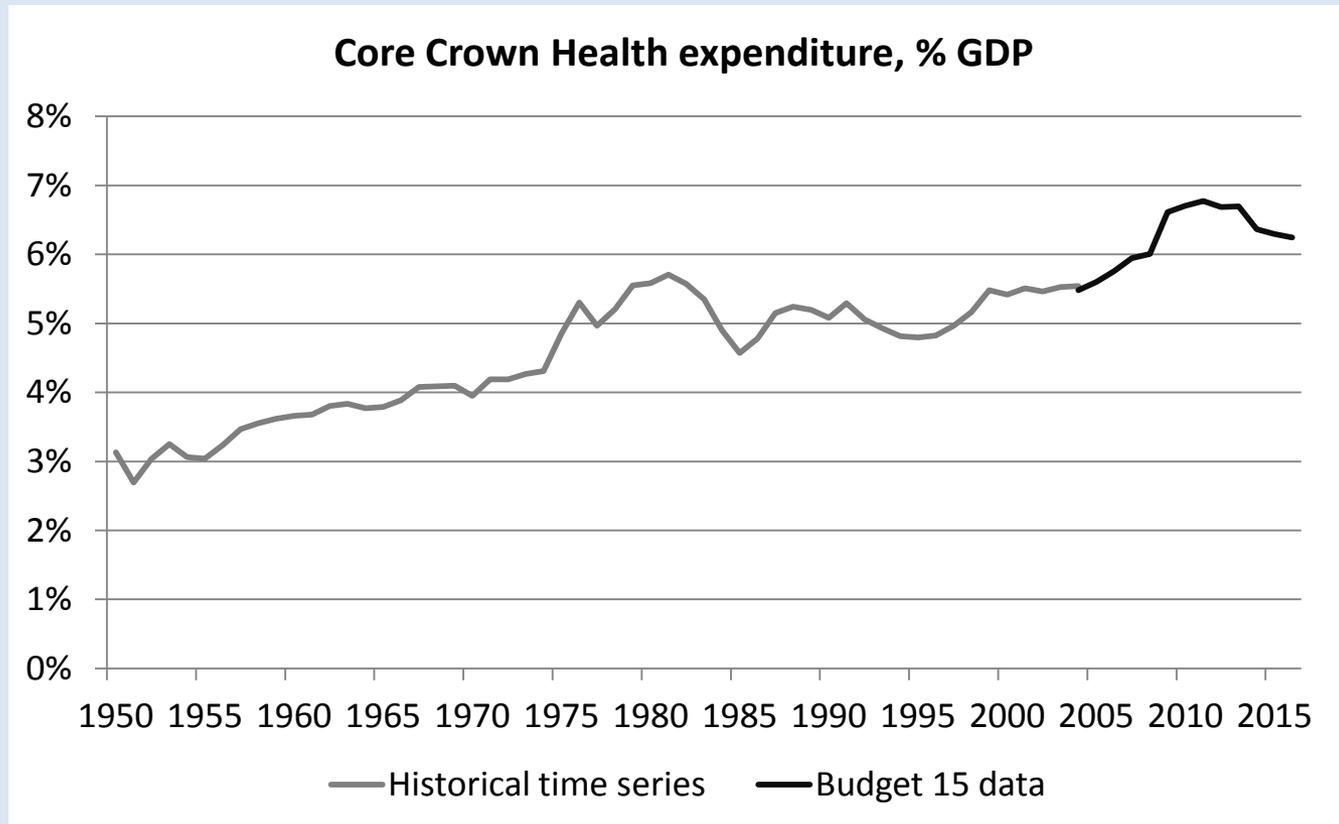


- **Health is central to the Government's overall fiscal story**

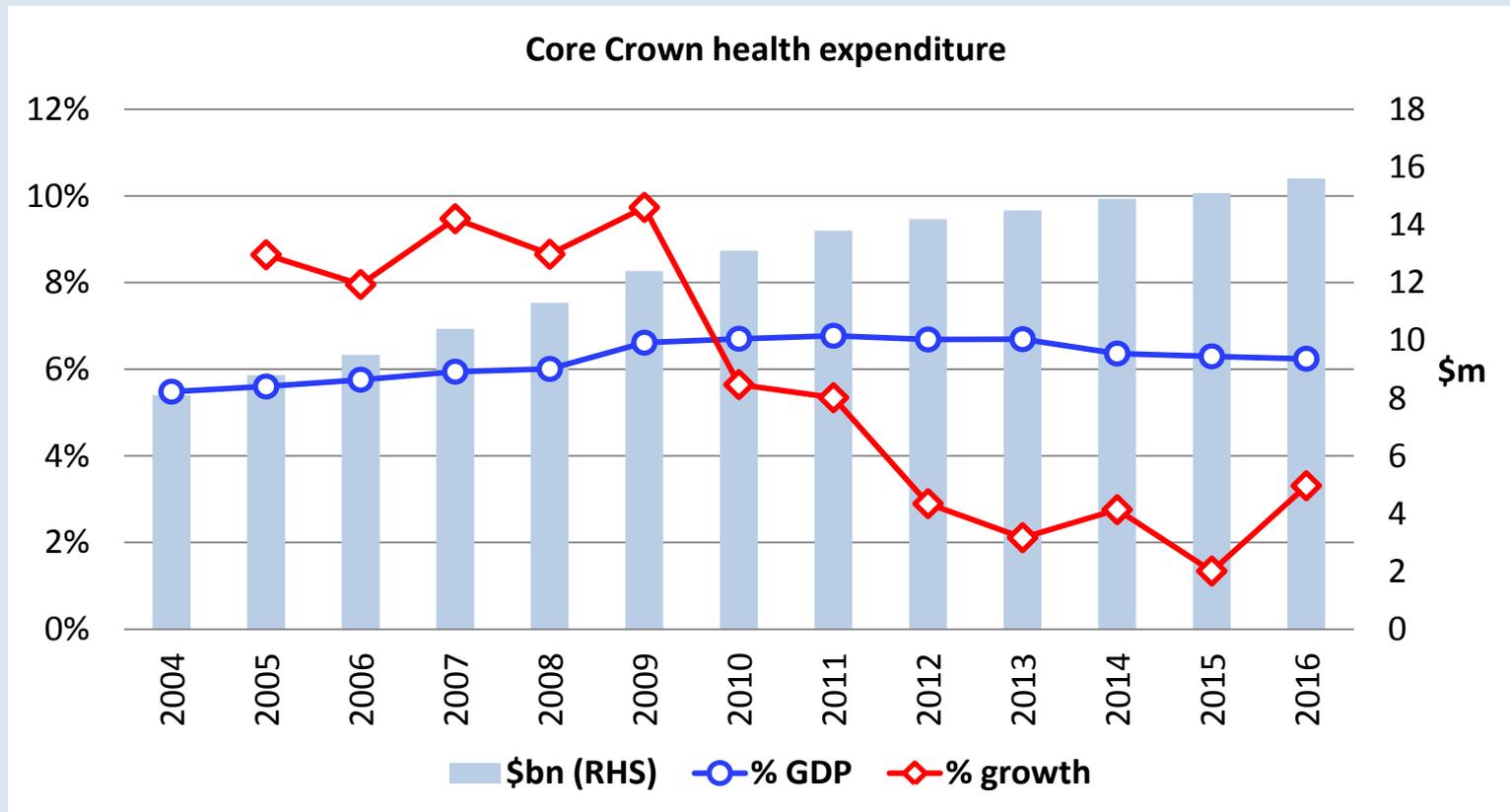
Core Crown expenses, 2015 (forecast)



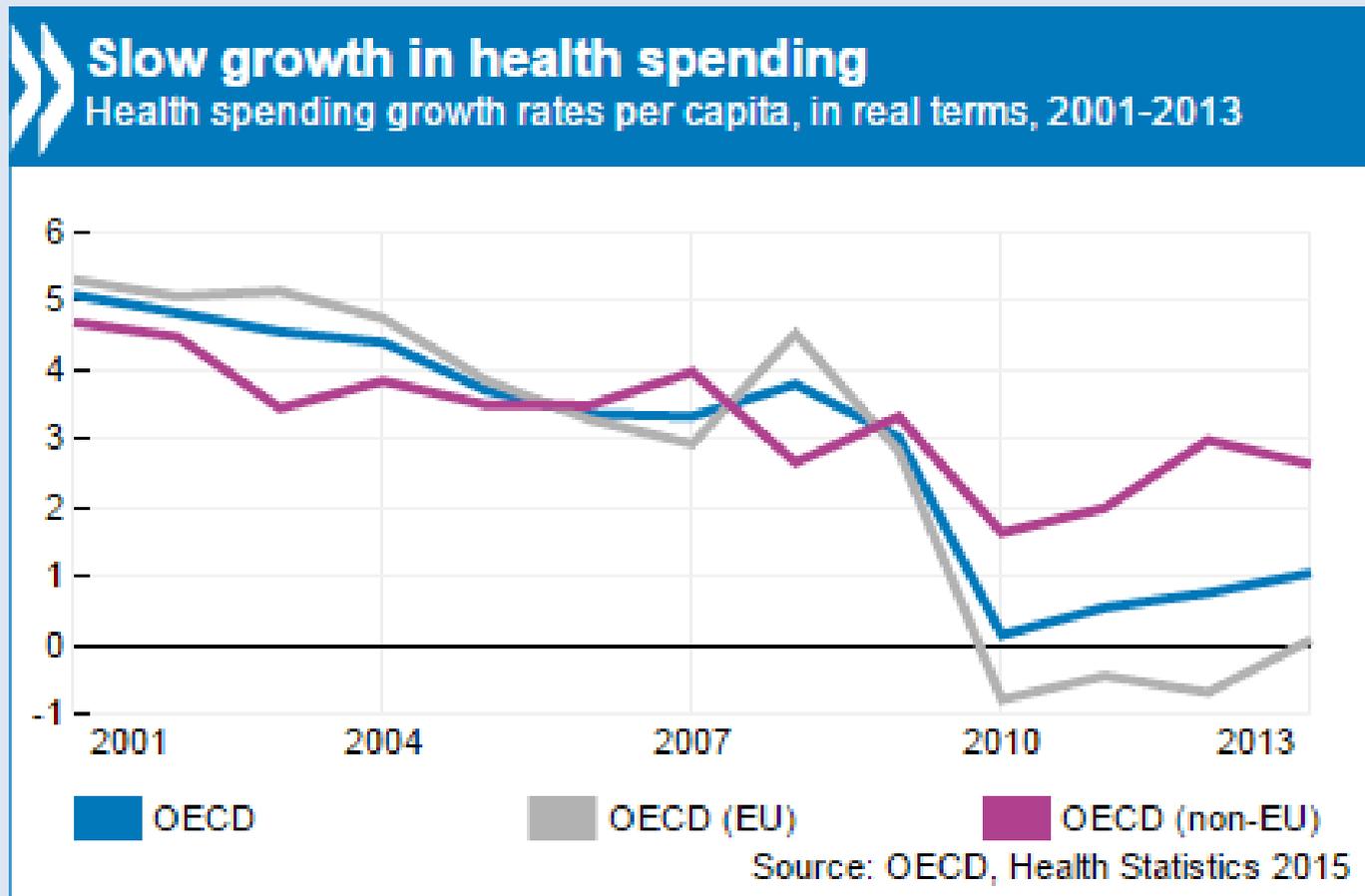
- **Public health spending has grown faster than the economy over a long period.**



- Spending has continued to increase in nominal terms, although the rate of growth has slowed.
- Now declining slightly as a proportion of GDP as economic growth picks up.

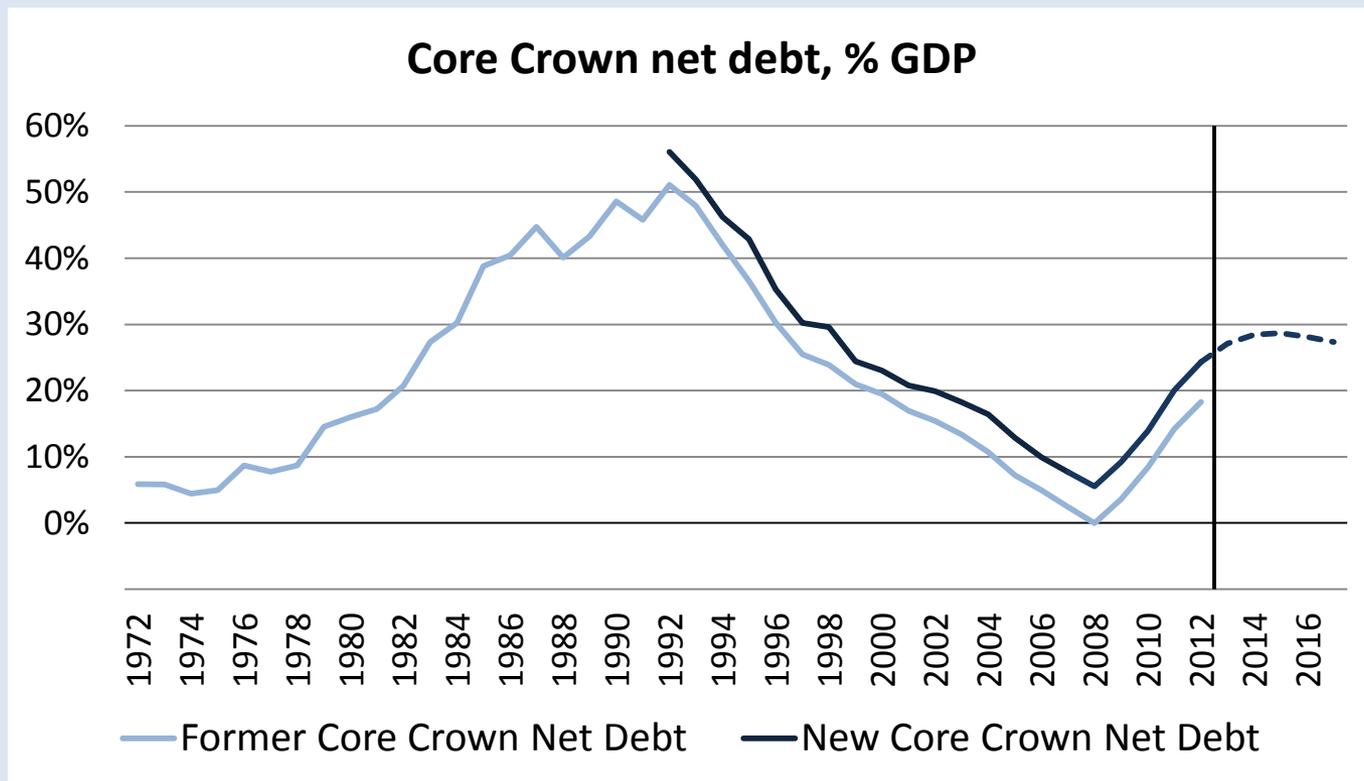


- Health spending growth slowed for the OECD as a whole following the GFC.
- Most pronounced for EU countries.

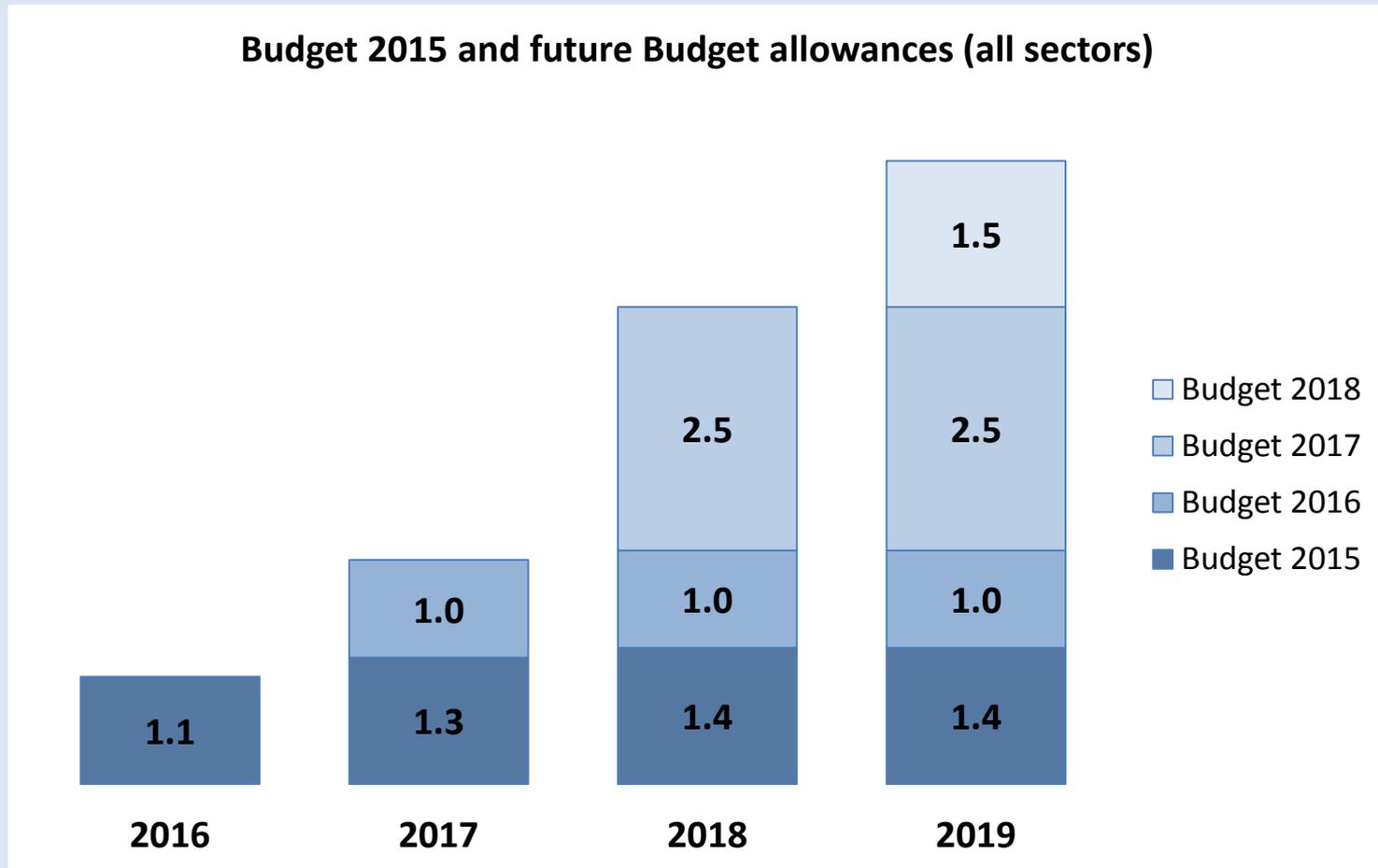


The fiscal strategy

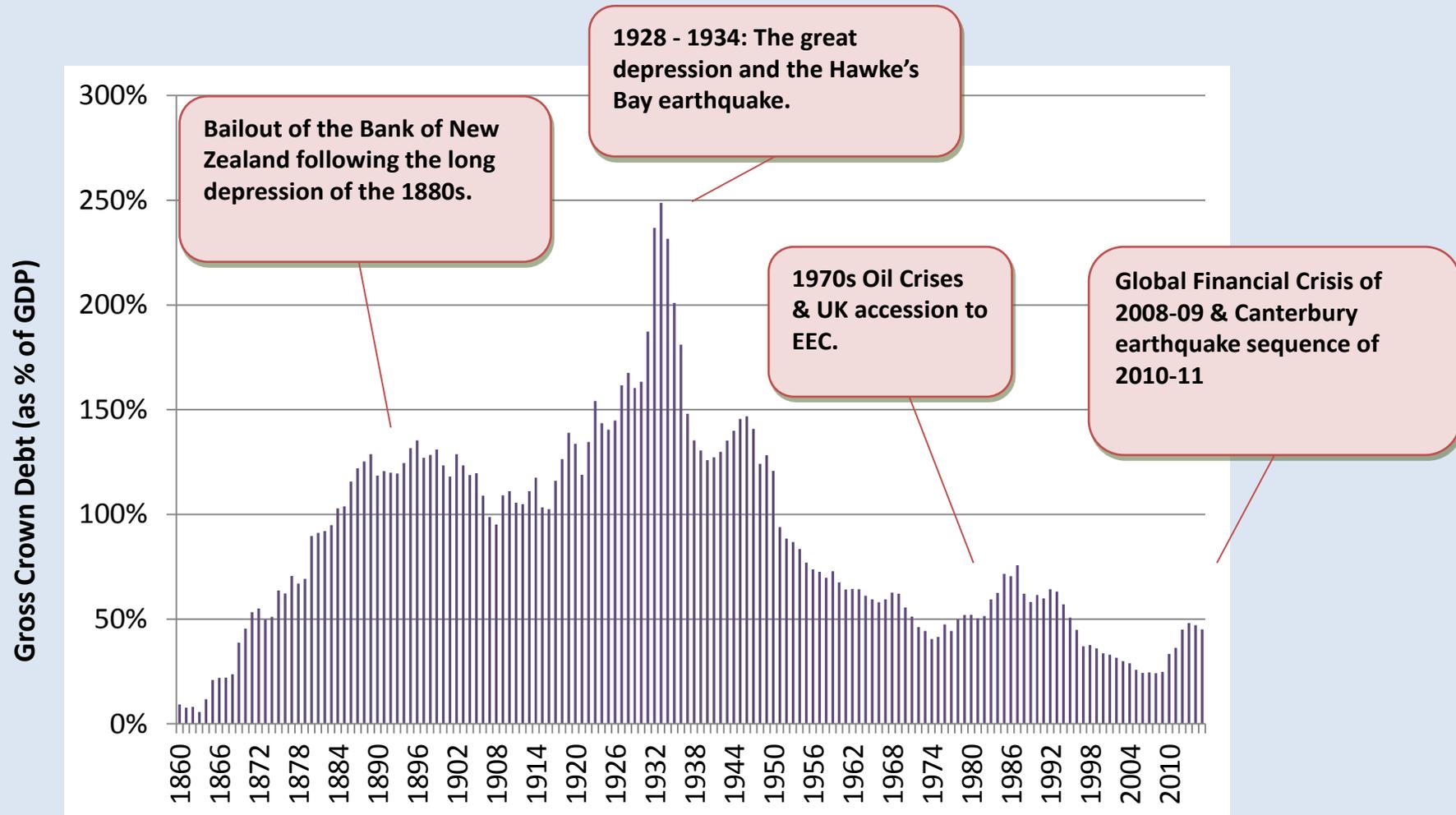
- Since the early 1990s, successive governments have shown commitment to reducing debt to manageable levels.
- Net debt has increased since the GFC. The fiscal strategy involves running surpluses to reduce the debt stock.



- So fiscal restraint will continue, with modest increases in the operating allowance over the next few years.



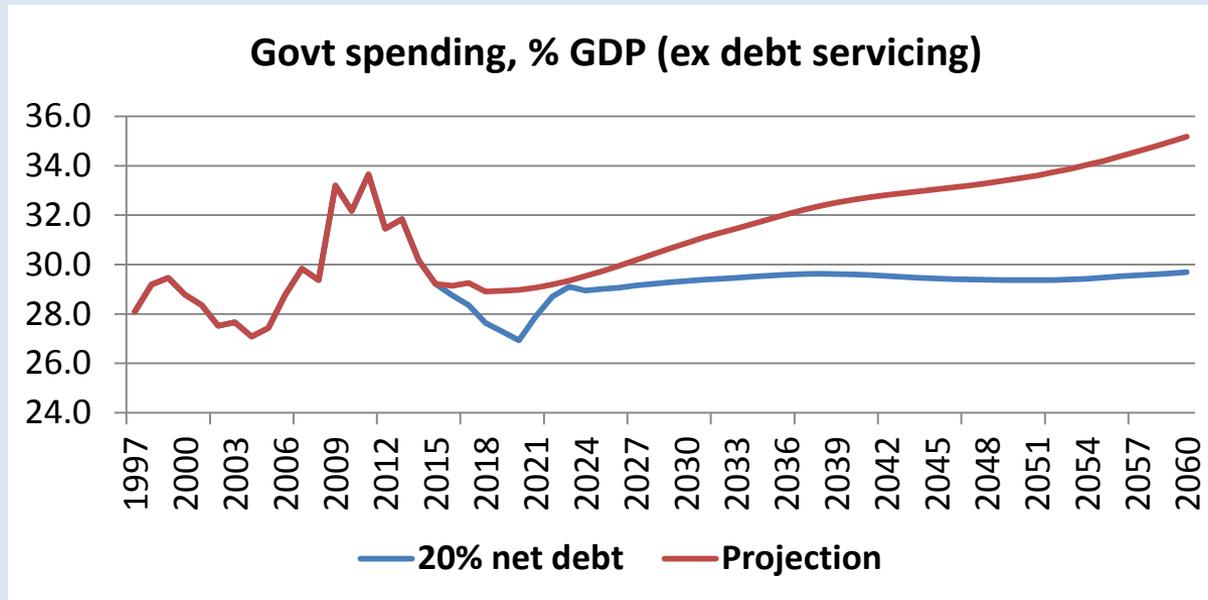
- Although things could be (and have been) worse ...



Long-term fiscal statement

- **Legislative requirement under the Public Finance Act 1989 for the Treasury to publish a long-term fiscal statement at least every 4 years.**
- **Based on a set of projections that look at the sustainability of government finances over at least the next 40 years.**
- **Latest statement published in July 2013. Timing of next statement not yet decided.**
- **Straightforward Excel model, publicly available.**

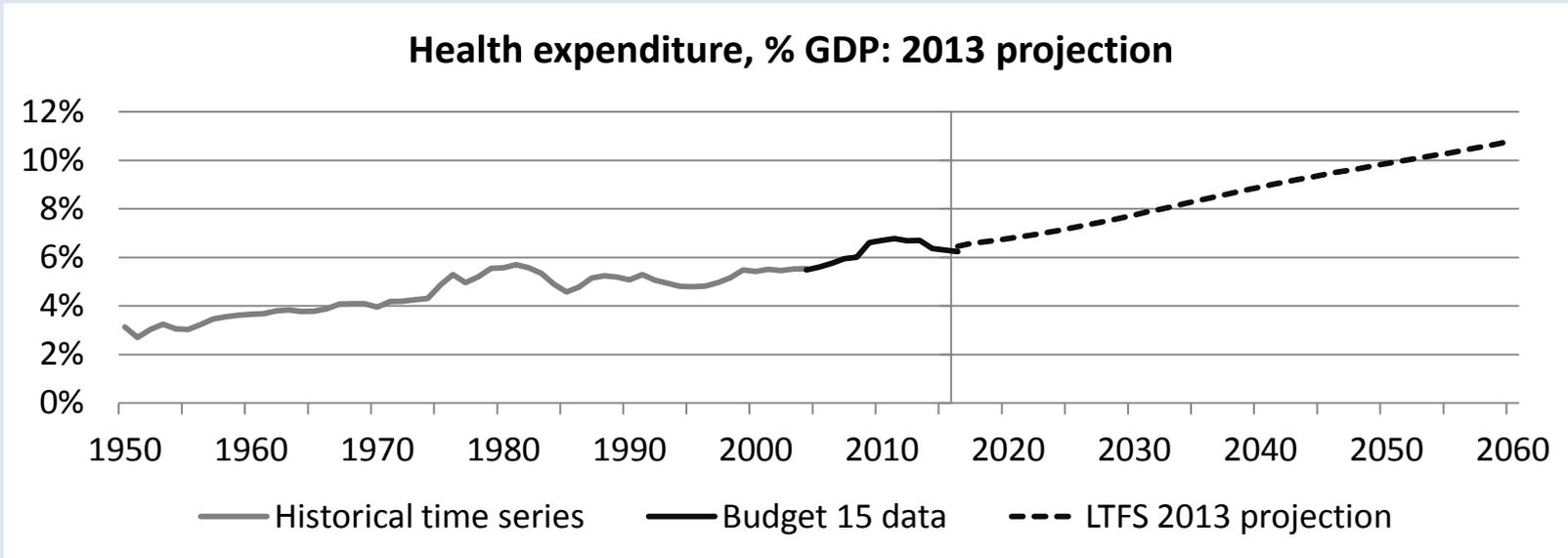
- The 2013 projections: government expenditure at 36% of GDP and revenue of 33% by 2060.
- So net debt increases over time, missing the 20% target.



Main areas of projected spending growth:

- **NZ Super** 4.4% (2010) to 8% (2060)
- **Health.** 6.8% (2010) to 10.8% (2060).

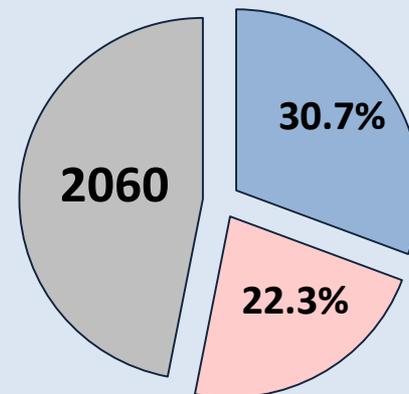
- Health expenditure projected to increase as a proportion of both GDP and total government spending.



Composition of government spending

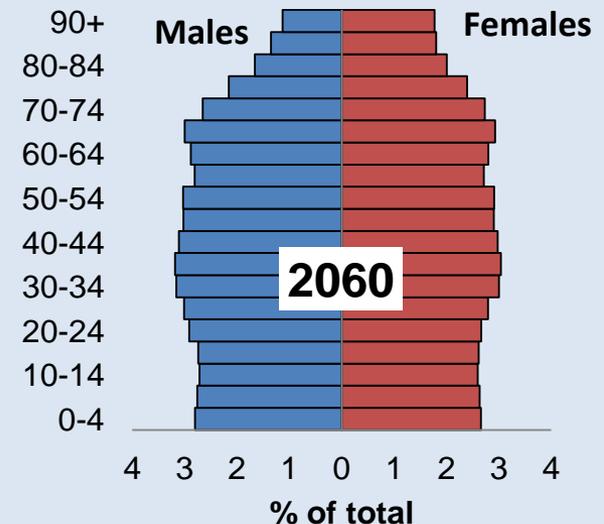
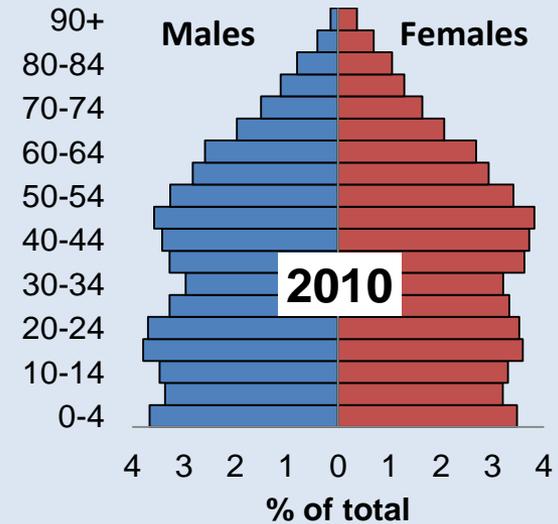
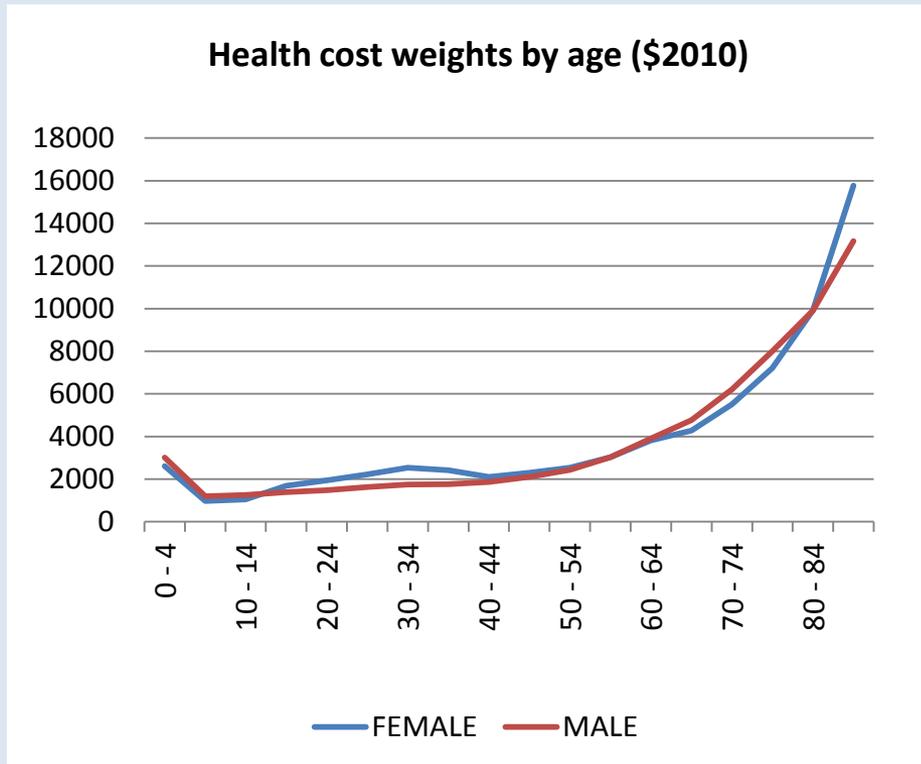
(excludes debt financing).

■ Health



- **Projections of future health expenditure are based on three key assumptions about demand and cost growth:**
 - **Demographic demand growth.** Population ageing, including assumptions about how this translates into additional costs pressures.
 - **Non-demographic demand growth.** Income and technology effects.
 - **Input cost growth.** Differences in economy-wide and public sector productivity growth.

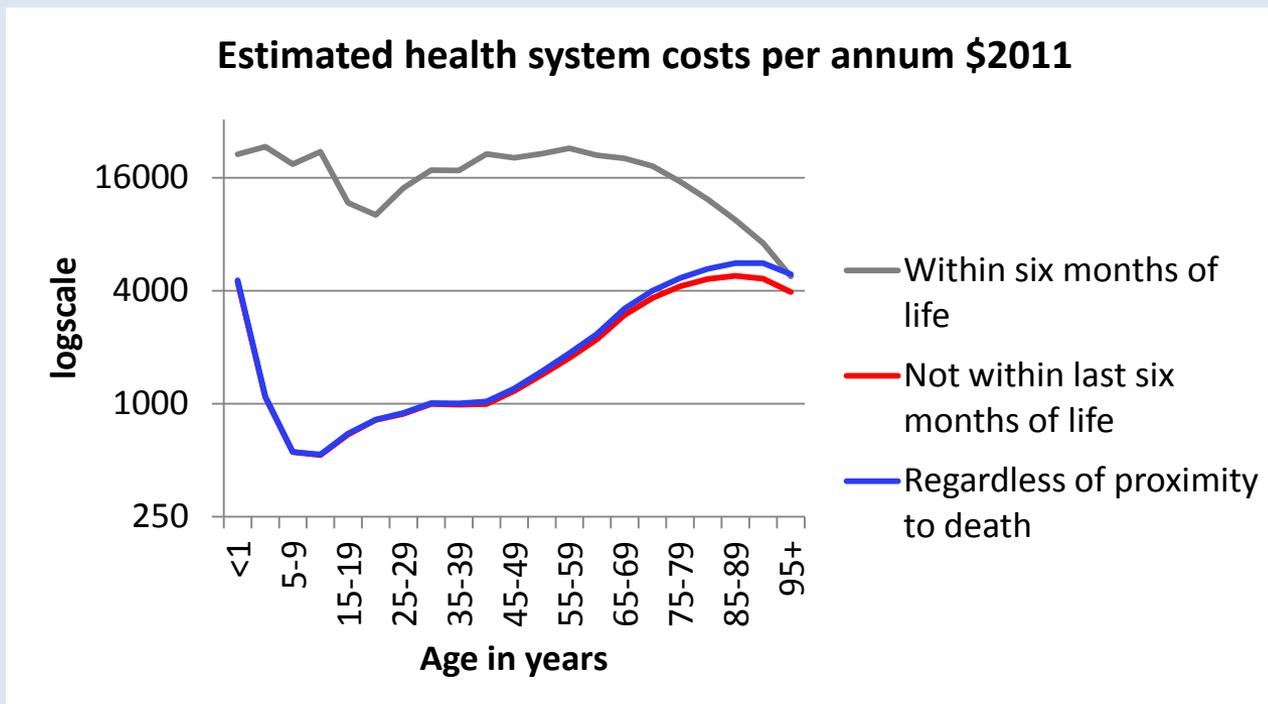
- Demographic demand growth. Health costs increase with age, so an ageing population will tend to increase spending ...



... unless the population becomes healthier as life expectancy increases (healthy ageing).

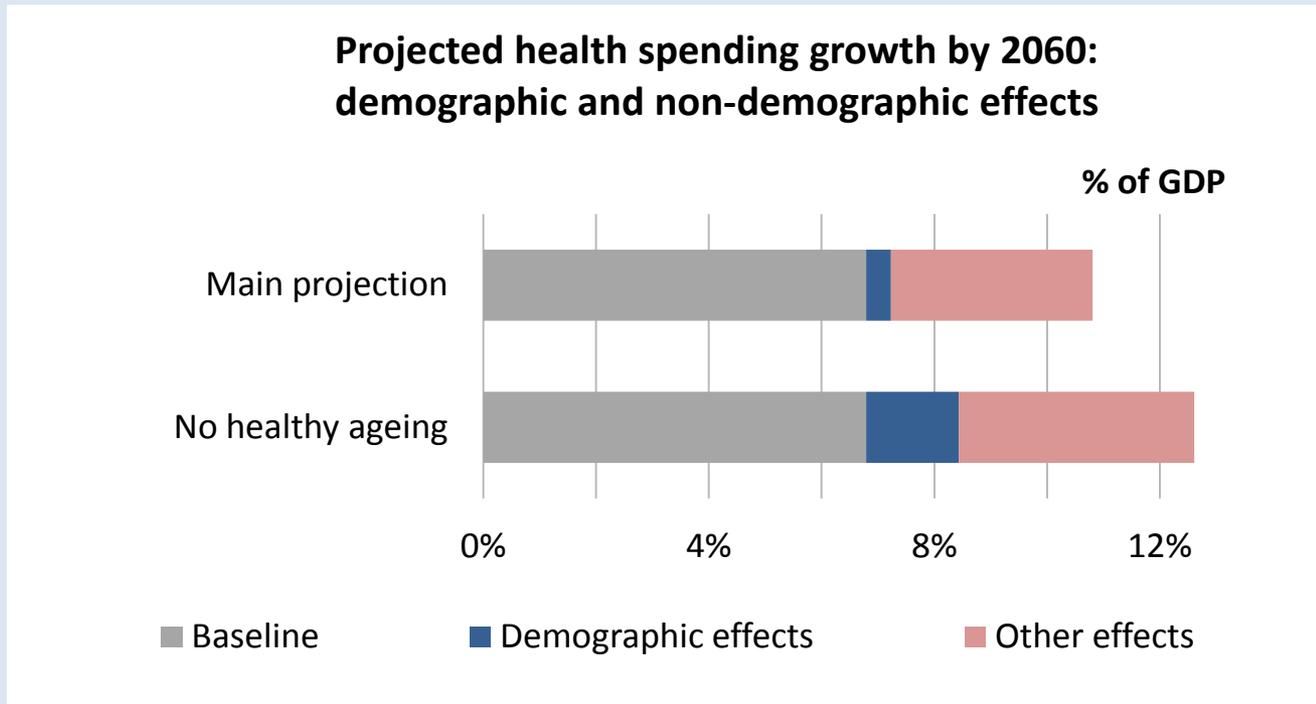
- Evidence on healthy ageing is mixed, with various hypothesis:
 - expansion of morbidity
 - compression of morbidity
 - dynamic equilibrium (shift in morbidity from more to less severe).
- 2009 statement: no healthy ageing (cost curve is fixed).
- 2013 statement: Part of each extra year of life assumed spent in good health (cost curve shifts to the right).

- **High cost weights for older people also partly due to end-of-life costs.**
 - For most age groups, the cost of dying is much higher than the cost of being old per se.
 - These costs are deferred by increased longevity.
 - Projections do not adjust for this directly.



*Blakely et al (2015).
Updated New Zealand
health system cost
estimates from health
events by sex, age and
proximity to death.*

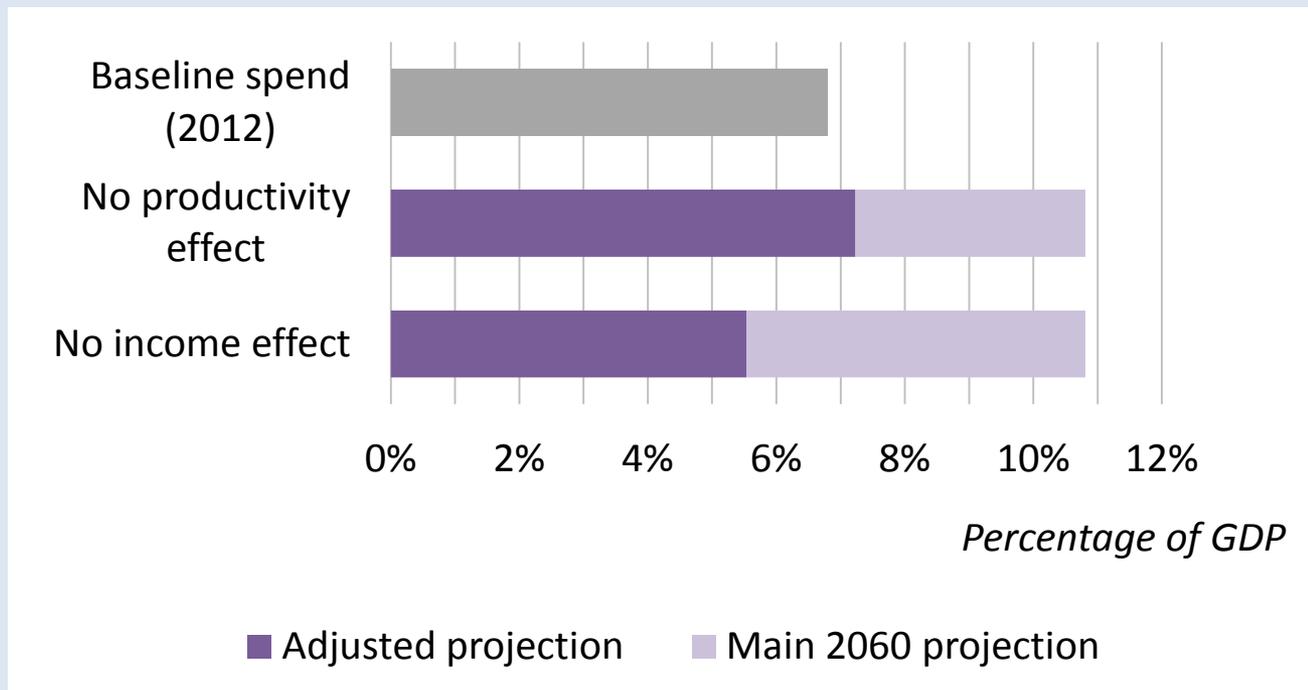
- Demographic effects make a relatively modest contribution to the projected increase in expenditure.



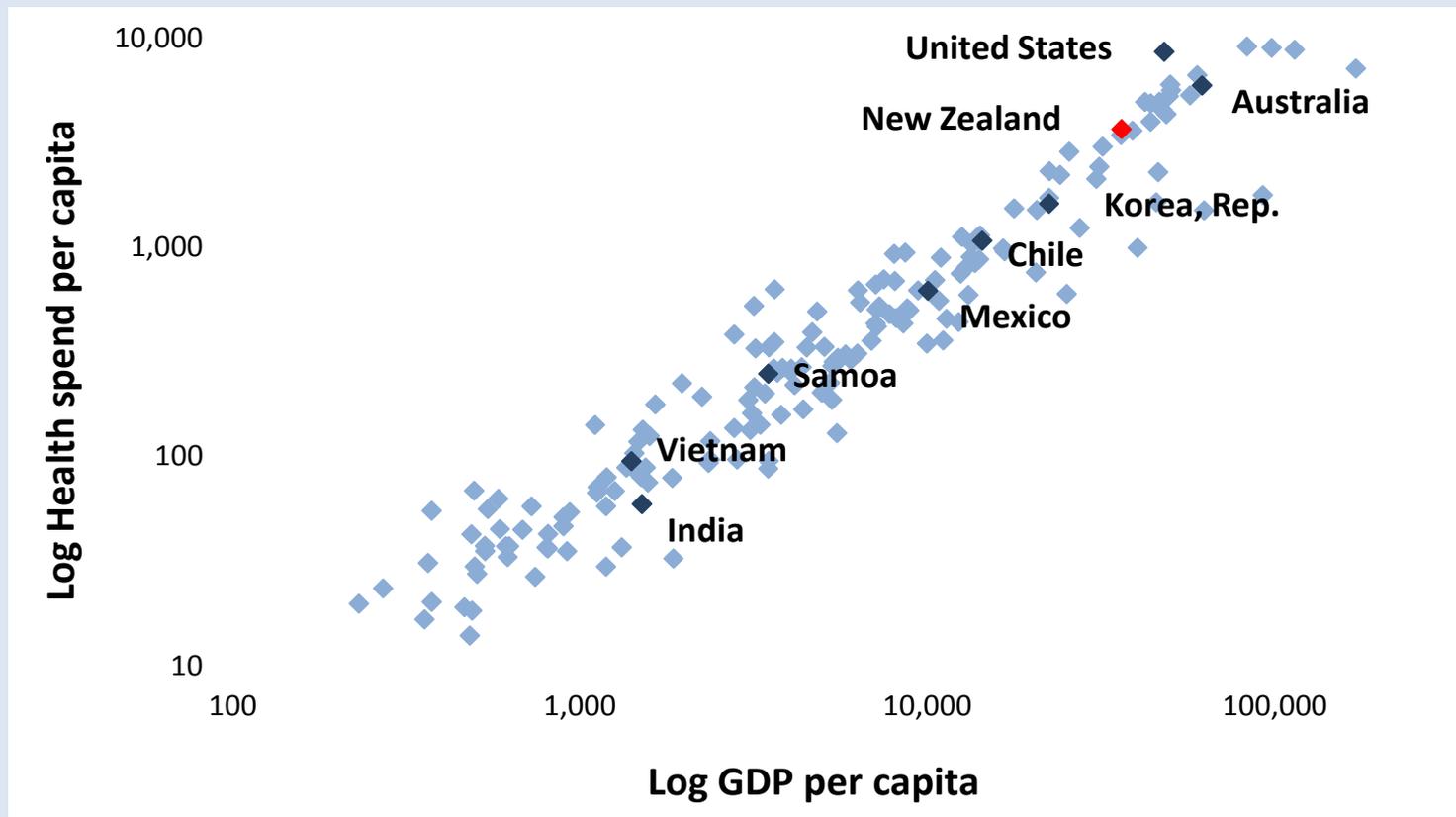
- **Non-demographic demand growth.** Reflects two considerations:
 - **Income elasticity of demand.** Older studies suggested health was a luxury good. More recent literature suggests elasticity <1 at population level.
 - **Technology effects.** May deliver efficiency savings, but considered to increase costs overall due to an increasing range of possible treatments.
- **Projections assume combined effect is 1.5% per annum** (the same as projected growth in GDP per capita).
- **On its own, holds health spending constant as a proportion of the economy.** Although still makes the biggest contribution to projected spending growth.

- **Input cost growth.** Due to an assumed difference between economy-wide and public-sector productivity growth.
- **Economy-wide productivity growth (assumed to be 1.5% per annum)** increases the long-run cost of labour in all sectors.
- **Projections based on public-sector productivity growth of 0.3% per annum.** Productivity growth assumed to be lower in the public sector, partly because it is labour intensive. Empirical evidence is limited.
- **The differential (1.2%) causes projected health spending to increase as a percentage of GDP** once other assumptions are taken into account.

- **Non-demographic effect demand growth is the most important assumption for the projections.**
- **Without it, spending would actually fall.**



- Both non-demographic demand and input costs are related to income growth.
- Strong correlation between GDP and health spending.

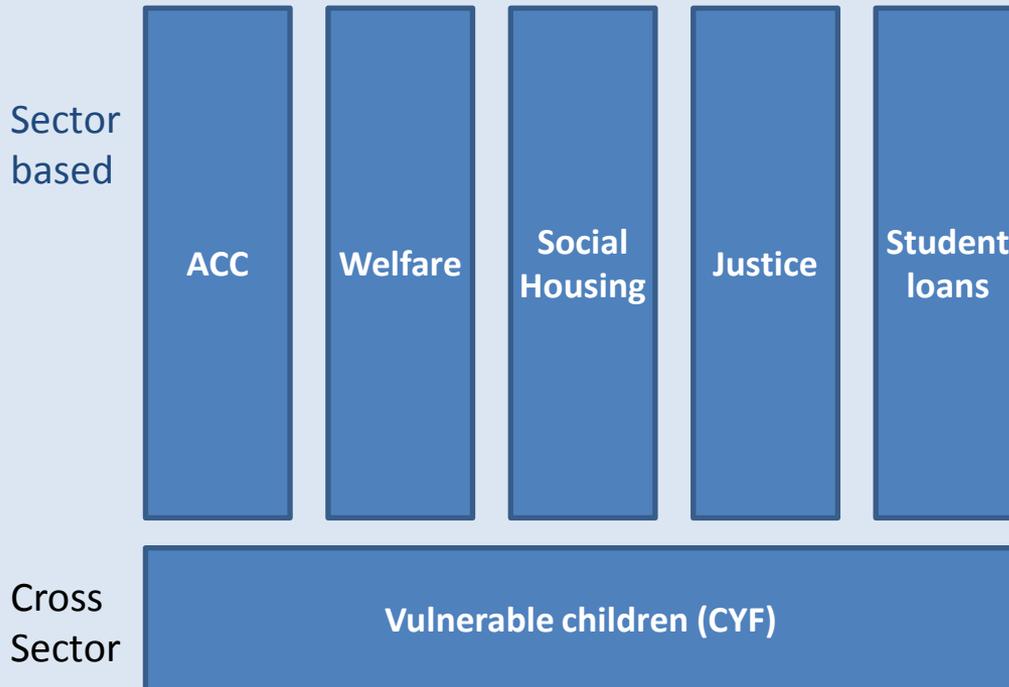


Part 2

Social Investment and the Investment approach

Context: Government's social services reform agenda

Actuarial based investment approaches



Cross agency initiatives:

- Better Public Services reforms (targets, changes to increase the function of the system)
- using the Budget process to drive the Social Investment agenda (B15 – ideas from community groups; B16 – focus on high risk population groups)
- Productivity Commission Report on Social Services

Other sector specific initiatives:

- Health Strategy refresh
- Education, etc

Social Investment

Social Investment puts the needs of people who rely on public services at the centre of decisions on planning, programmes and resourcing, by:

- Setting clear, **measurable goals** for helping those people
- **Using information** and technology to better understand the needs of people who rely on social services and what services they are currently receiving
- Systematically **measuring the effectiveness of services**, so we know what works well and what doesn't
- **Purchasing results** rather than specific inputs, and moving funding to the most effective services irrespective of whether they are provided by government or non-government agencies.

The investment approach

Origins in insurance models, used by ACC, now welfare. An actuarial approach:

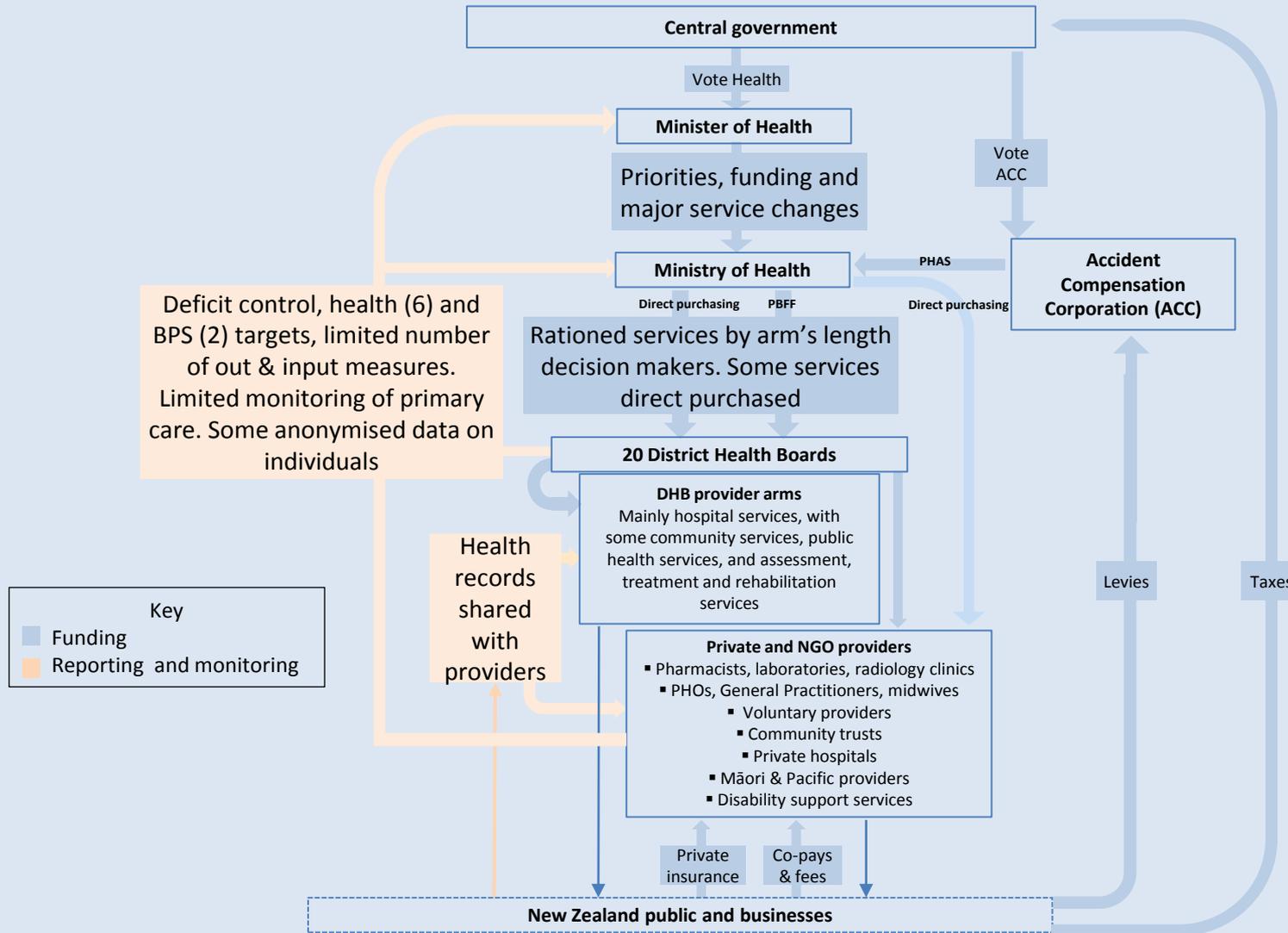
- Using a forward liability as an information framework for performance measurement and improvement
- Insights from the valuation process to inform policy interventions and as a management tool

The investment approach

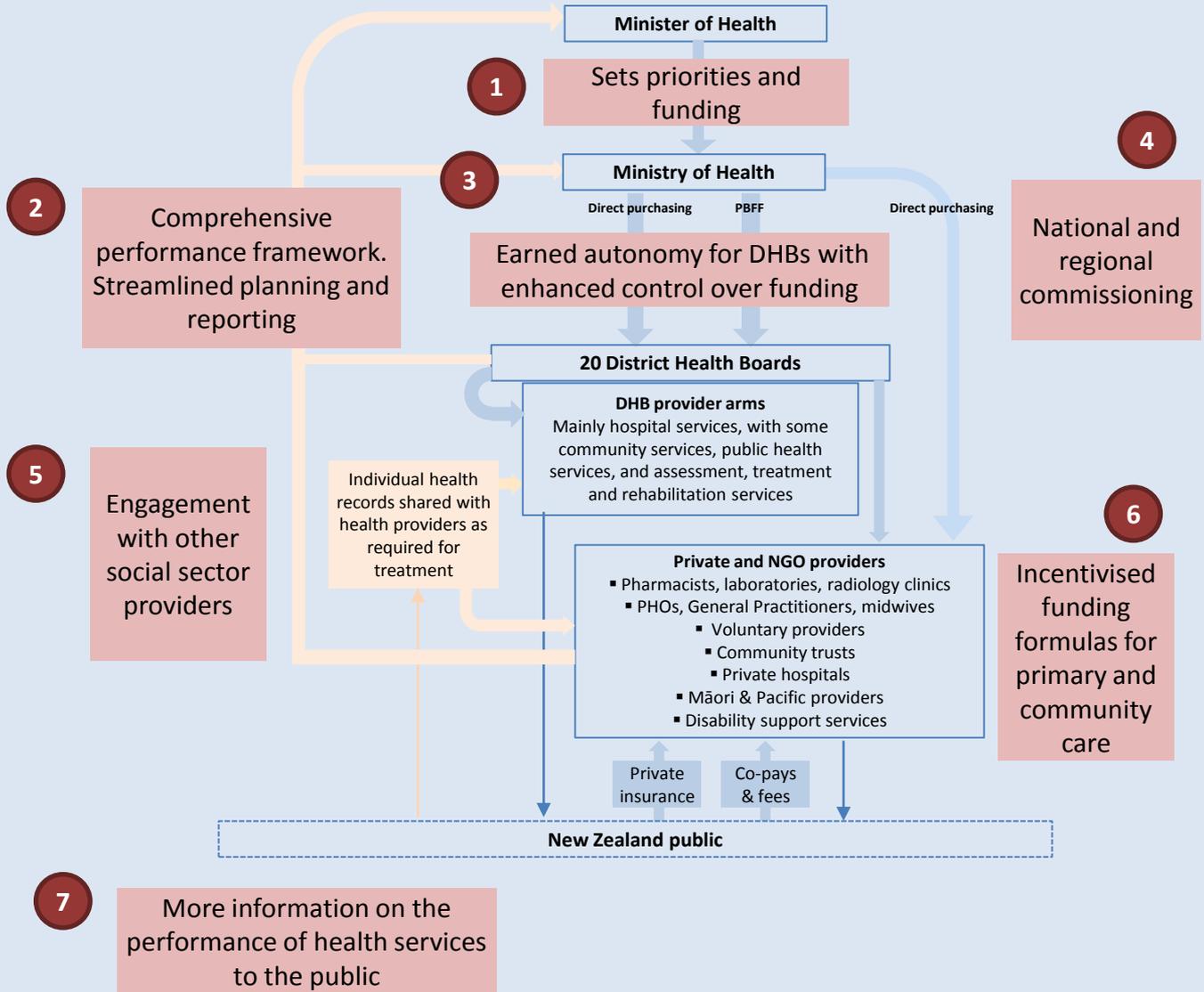
In other areas, such as devolved sectors, an actuarial approach has its limitations, but the core elements are applicable:

- information framework for managing performance with clear specification of outcomes
- operational (including financial) flexibility
- targeting of those at highest risk of poor outcomes over the long term
- enhanced feedback loops on financial and non financial performance

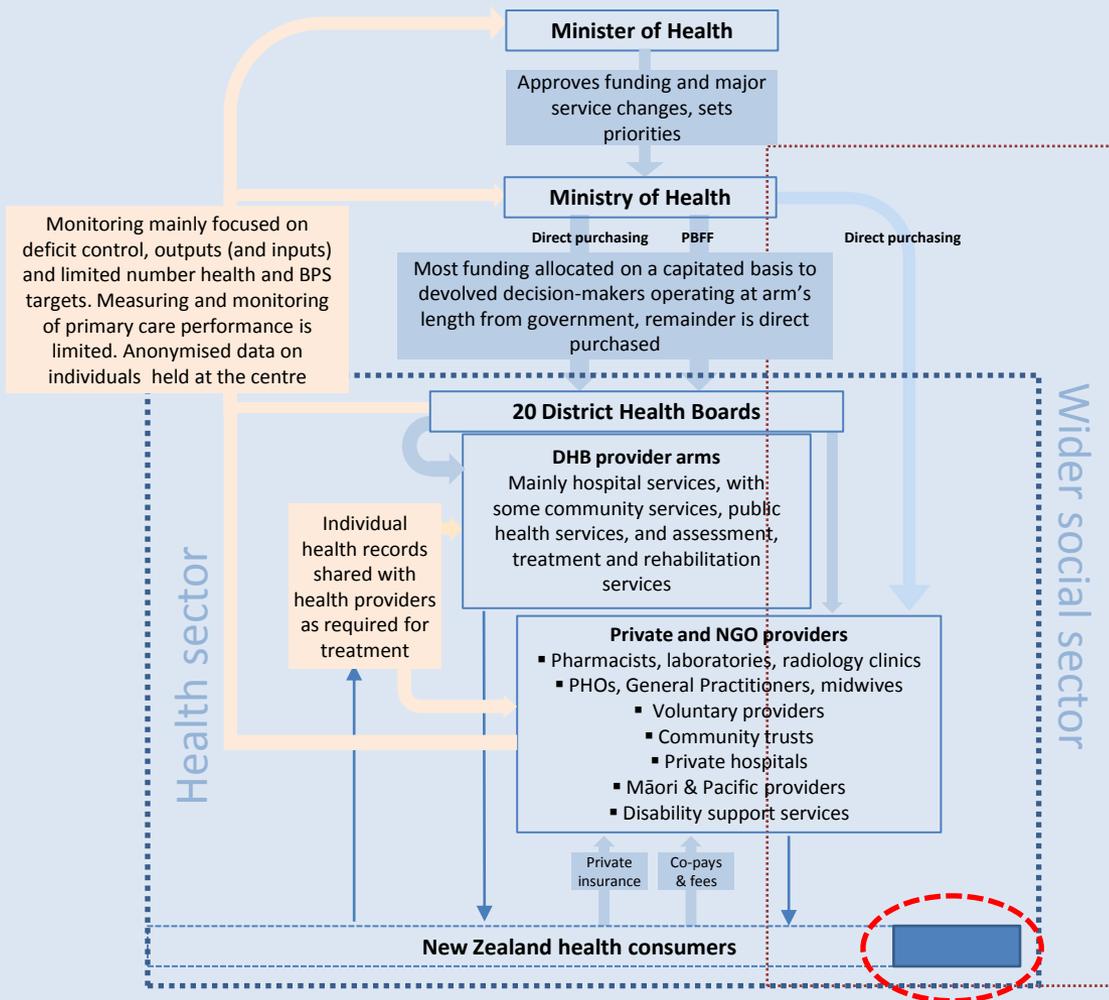
The NZ health system



Applying investment approach to health



The health sector and the wider social sector



- Wider social sector comprised of:
- Government agencies (Education, Welfare, Justice Sector, Housing, ACC, etc)
 - Local government
 - NGOs and Community Groups (nationally and locally configured)
 - Maori Providers (Whanau Ora, Iwi and other providers)
 - Private sector providers (including philanthropic trusts)

The system works well for most but poorly for those with complex needs that span across multiple agencies and sectors.

How does the health sector support the rest of the social sector to improve the outcomes for the most vulnerable?

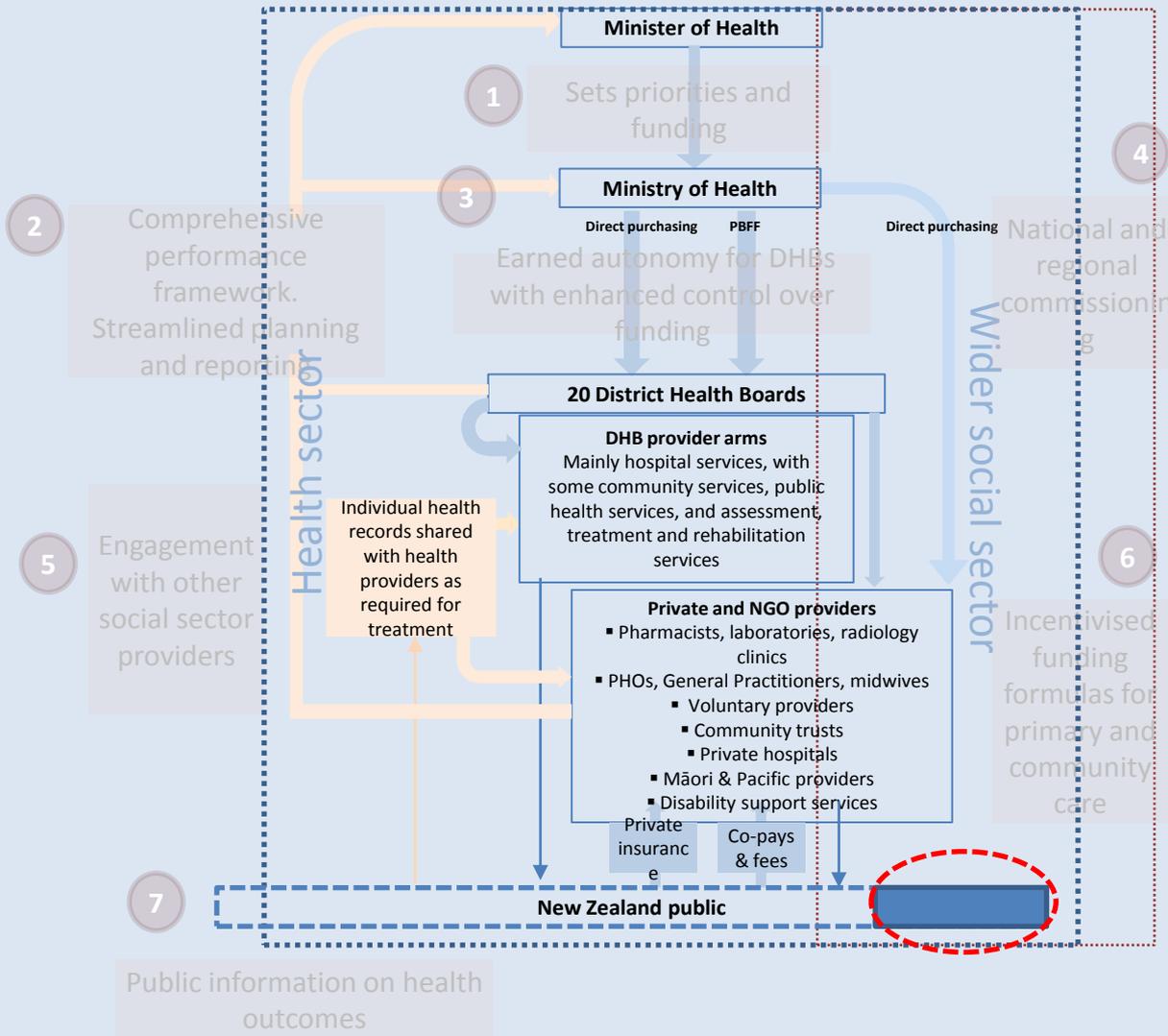
How does the health system use its knowledge and infrastructure to contribute to raised outcomes in other sectors?

Universal health services serve most people well. A small proportion of people with complex health needs are often exacerbated by other factors (poor housing, unemployment, lack of education, criminal history, etc).

Health Sector and Social Investment

Key Social Investment questions for the health sector

- How does the health sector support the rest of the social sector to improve the outcomes for the most vulnerable?
- How does the health system use its knowledge and infrastructure to contribute to raised outcomes in other sectors?



The investment approach is about improving the functioning of the health system. Social Investment is about improving the functioning across systems focused on those with complex needs that span sectors and achieve poor outcomes.

1 The centre manages the overall performance of the health system and uses anonymised data to improve wider social sector outcomes and looking for levers to increase collaboration across sectors.

2 DHBs and primary and community providers work with other social sector providers to improve the outcomes of individuals identified through the data they hold.

Questions for discussion

- Liability management and improving client outcomes, are they aligned?
- Are fiscal metrics appropriate as primary indicators of performance?
- Are actuarial based approaches driving changes in service delivery?
- Does an approach based on targeting those at highest risk have limits when universal services are concerned?