5 May 2015

The Hon Joe Hockey MP
Treasurer
Parliament House
CANBERRA
ACT 2600

Email: J.Hockey.MP@aph.gov.au

Dear Treasurer,

2015 Intergenerational Report

The Actuaries Institute is the professional body representing the actuarial profession in Australia. It has a vital interest in public policy issues linked to demographic change. For many years, the Institute has been at the forefront in advocating greater policy focus on managing Australia's longevity risk, an issue that is at the heart of the 2015 intergenerational Report ('IGR').

The attached paper is the Institute's response to the latest IGR. There are two broad areas of commentary. Firstly, actuaries understand financial risk and modelling. Accordingly, we have proposed a number of technical approaches that may enhance the value of future IGRs to policy analysts by increasing the transparency of the reports' modelling and its key assumptions.

Secondly, the Institute suggests some policy proposals as potential solutions to the challenges identified in the IGR. The Institute has previously canvassed similar policy options in our research papers; *Australia's Longevity Tsunami (2012)* and *Who Will Fund Our Health (2014),* and in our submissions to the Financial System Inquiry (2014). A new research paper on retirement incomes will be issued in June and it will also contain related policy suggestions. The key recommendations we make regarding the IGR fall under the following categories.

- **Retirement Income**

It is understood that the Government aims to benchmark Age Pension increases to cost of living indices from July 2017 rather than wages (MTAWE), to constrain social security costs as a percentage of GDP and to rein in budget deficits. We do believe, however, that in the long run it is important to benchmark all safety net type benefits to wage and salary measures. This should ensure living standard relativities between the disadvantaged and the broader community remain reasonable. Therefore we support a policy of resumption of the benchmarking to MTAWE, at some stage. We also recommend that means testing arrangements should be reviewed to further improve intergenerational and intra-generational equity.

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- **Aged Care**

As the cost of aged care is rising and as older people are often asset rich and income poor, they will increasingly rely on personal wealth to fund their care and health expenses in later life. We know that 80% of over 65s own their home and 70% of net wealth for over 75s is in the home. Older Australians will need ways to gain access to their housing wealth in an efficient manner to contribute towards their aged care and health costs in later years and we recommend appropriate options are investigated.

- **Health**

The IGR estimates that Australian Government health spending per person is predicted to rise in today's dollars from $2,800 to approximately $6,500 in 2055. The Institute's *Health Green Paper* projects that the working age population might be paying 1.6 times the cost of their own health expenditure by the middle of the century (compared to 1.4 times now) to fund the health care costs of older age groups. To help defray those rising costs we recommend that Government and business develop and adopt employment policies that fully support older workers that want to stay in the workforce.

- **Climate**

The next IGR should consider the potential financial impacts of increasing climatic events and undertake additional research to improve the capability of government and the private sector to project future economic costs and benefits of mitigation and/or adaptation measures.

The Institute welcomes the release of the 2015 IGR and hopes our suggested modelling and policy proposals assist government to better meet the financial challenges of our ageing population.

Yours sincerely

Estelle Pearson
President

2015 Intergenerational Report – response by the Actuaries Institute

1. Introduction

The Actuaries Institute notes the release of the 2015 Intergenerational Report ("IGR") and we commend the Government for its commitment to this important, ongoing work. We recognise the IGR's attempt to demonstrate the impact of different policy settings in relation to future expenditure. However, we note that there is very little supporting detail to enable the projections to be clearly understood and validated.

While the IGRs are valuable foundations for framing policy debate, the Institute provides the following commentary on the scope and modelling of the IGR. The suggestions are meant to be constructive in order to enhance future papers and allow wider and more fruitful discussion of important policy issues. Section 4 contains policy suggestions that are meant to stimulate discussion on how to tackle intergenerational equity and budgetary issues.

2. Scope of the IGR

The latest IGR is clearly not intended to predict the future. Rather, it is a projection, on a set of base assumptions, of the aggregate financial outcome for the Australian Government of a particular set of spending policies in the context of revenue at a constant long-term proportion of GDP. As such, it provides a useful framework for comparing policy outcomes. This also captures some measures of intergenerational equity through measuring the level of government debt passed from one generation to the next.

A more complete picture could also be obtained by extending the scope of research to include consideration of the experience of individual cohorts within the population as this would provide information which could be used to validate the model assumptions as well as to inform the policy debate.

Notwithstanding the parameters contained in the Charter of Budget, future IGRs would be enhanced by extending its scope to cover state government finances (see S3.6). We would support such work, whether as part of future intergenerational reports or as a supplementary program. This would provide more complete information to aid future policy development.

3. Modelling

The Actuaries Institute values the IGR and we believe future reports would be enhanced, and allow for improved policy making, if the following recommendations are adopted.

Our **key recommendations** in relation to IGR modelling are:

1. Make the models more transparent and accessible
2. Clearly set out key assumptions and how and why they have changed since previous IGRs
3. Set out the implications of key assumptions
4. Use graphs and tables to more clearly demonstrate the uncertainty around key assumptions
5. Clearly demonstrate and justify the impact of alternative policy settings through sensitivity tests
6. Include state government budgets to obtain a true national picture

We discuss these recommendations below. Supplementary discussion of modelling can be found in Appendix A.

3.1 Transparent and accessible models

The Actuaries Institute recognises the Treasury's desire for the IGR to be understood by the broader community. Nevertheless it would be beneficial for policy commentators if additional technical information could also be provided (perhaps a separate volume) that would have all key assumptions and additional modelling around key scenarios and assumptions.

We recommend the opening up of IGR models and assumptions to enable genuine policy discussion and to increase stakeholder engagement, improve analysis and create greater understanding of the drivers shaping the future scenarios.

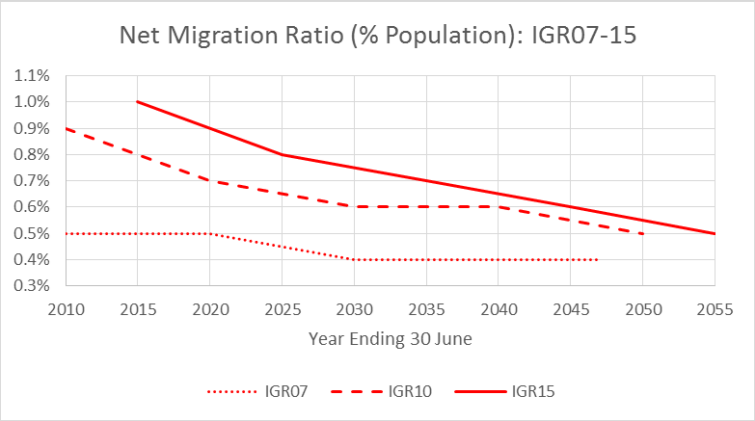
Such an approach reflects the rationale behind Recommendation 19 of the Financial System Inquiry that proposes consideration of the costs and benefits of increasing access to public sector data. The FSI objective is to "*improve the quality of business and consumer decision making, public policy development and implementation, and research into how the financial system and broader economy function".* (FSI Final Report, p181)

3.2 Key assumptions and the nature of changes since previous IGRs

The core methodology of the IGR has now become established and is, we believe, well documented. However, it is not possible to find key assumptions unambiguously set out and explained. Further, there is a lack of discussion of the changes in those assumptions since previous IGRs, why they have been made and what effect those changes have effected.

We believe that a vital consideration in the setting of assumptions is reviewing the performance of previous assumptions. Unfortunately, this IGR has not continued the approach of comparing projections with those from the immediately preceding IGR.

This is quite significant in the context of the changes in net migration assumptions, for example, between the 2007 and 2015 IGRs – see the following chart. This is one of the matters discussed in Appendix A.



3.3 Implications of key assumptions, particularly the long-term ratio of revenue to GDP

Although there is some discussion of some key assumptions, we note that most of that discussion relates to the historical values of the relevant parameter and the future trend projected in the model.

As the key outputs of the model are the projected annual budget surpluses and deficits and the consequences for net Australian Government debt, the long-term ratio of revenue to GDP is a critical assumption. We note that the constant ratio assumed in the IGR implies future changes to the structural settings of taxation policy.

We consider that the IGR would be significantly improved by an analysis of the extent to which policy changes would be required in the future – in other words, to what extent would the revenue ratio be supported in the future by the existing tax structures? In such an analysis, we suggest that allowance for bracket creep in personal income tax scales be limited to the real growth in incomes.

3.4 Clear communication of the degree of uncertainty in the projections

We support the IGR practice of continuing to include a sensitivity analysis. However, this analysis remains very limited and we note that the IGR no longer includes a comparison with the previous one.

We consider that the IGR would be significantly improved by clearer communication of the key drivers inherent in the projections. For example, graphical and tabular projections of net revenue and net debt would be more meaningful if they included upper and lower bounds based on reasonable “high” and “low” settings of the key assumptions – including the revenue ratio. In this context, the alternative settings used should be justified with reference to past observations and/or logical argument as to the likely range in which the values would fall.

3.5 Impact of alternative policy settings

We recognise the IGR’s attempt to demonstrate the impact of different policy settings in relation to future expenditure but noted a lack of detail to enable the projections to be validated. In particular, there is no discussion or justification of the extent (if any) of adjustment to key assumptions to reflect the impact of the alternative policy settings. In that context, we note that policy settings are usually expected to have an impact on GDP. For example, investment in the NDIS is intended to enable the disabled to contribute more to the economy, thereby benefiting both the individuals concerned and the community in general.

We consider that the IGR would be significantly improved by better descriptions and greater discussion of the alternative policy settings being modelled and by discussion and modelling of potential initiatives in relation to future levels of GDP.

3.6 A true national picture

A significant proportion of education and health expenditure is borne by the states and territories:

- According to the AIHW[1], the Australian Government's contribution to total health expenditure dropped from 44.0% in 2001–02 to 42.4% in 2011–12, while the state and territory contribution grew steadily from 23.2% to 27.3% over the same period.
- According to the ABS[2], the Australian Government contributed about $29.3 billion (37%) of $79.5 billion of government education funding in 2012-13, meaning that states and territories contributed about 63%.

This means that significant expenditure that is driven by demographic factors is met by the states and territories and is therefore not specifically modelled in the IGR.

We consider that the IGR would be enhanced if it included a supplement that contained state and territory government revenues and costs and presenting a national picture. We appreciate that this may be difficult to achieve, and is outside the current mandate of the IGR, but it is worth striving for so that a true assessment of all spending in areas such as health and education can be considered. Without such an extension, it is possible for costs transferred to the states and territories to be excluded from the IGR leading to misleading projections.

3.7 Intergenerational equity

The focus of the Report is on projected economic activity and Government budgets, at the aggregate level over the long term. These issues are intergenerational in the sense that the projected changes over time will affect future generations. However, there is no detailed assessment of the impact of the projections on different age and social cohorts of the population.

Comparing cohorts and their context can reveal significant discrepancies in areas, such as, accumulation of wealth, income trends and expenditure habits. It is important that the trends of past generations are not assumed to continue in younger cohorts when we can foresee they are likely to follow different paths to their predecessors. Although the IGR points out budget shortfalls that will impact younger cohorts, it does not explicitly address these potential inequities which may become even more acute in the future.

4. Policy issues

The IGR examines the impacts of various government policies on future budgets. In addition to our modelling proposals the flowing commentary reflects the Actuaries Institute's views on policy positions it has been advocating to improve the sustainable financing of the economy.

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[1] Australian Institute of Health and Welfare 2014 *Australia's health 2014* - Australia's health series no. 14. Cat. No. AUS 178. Canberra: AIHW

[2] http://www.abs.gov.au/ausstats/abs@.nsf/mf/5518.0.55.001

4.1 Retirement Income

The Institute has supported the FSI recommendation for government to seek broad political agreement for, and enshrine in legislation, the objectives of the superannuation system and report publicly on how policy proposals are consistent with achieving those objectives over the long term.

The Institute considers the IGR to be an important base to assess the longer term sustainability and efficacy of our retirement income system, particularly in relation to the key pillars of Age Pension and superannuation. Policy changes must be planned and executed with reference to sustainability and intergenerational equity and in accordance with the overall objectives of the system.

Under the Government's 'proposed policy' settings, the eligibility age for the Age Pension will continue to increase until it reaches 70, in 2035, when it stops increasing. Table C.2 of the IGR shows that the period of life expectancy for 70-year-olds is projected to be about 18 years (men) and 20 years (women) at that time[3]. The table also shows that this remaining life expectancy increases by about one year in every ten. In particular, men and women retiring at age 70 in 2055 are projected to have about two years' greater life expectancy than those retiring at age 70 in 2035.

Extract from IGR Table C.2 – Period Life Expectancy at Age 70

	2014-15	2024-25	2034-35	2044-45	2054-55
Men	15.7	17.0	18.1	19.2	20.2
Women	18.1	19.2	20.2	21.1	22.0

By comparison, the Australian Government Actuary has calculated[4] that period life expectancy at age 65 increased from about 12 years (men) and 16 years (women) in 1970-72 to about 19 years (men) and 22 years (women) in 2010-12 – a rate of about 1.5 years in every 10.

Extract from Australian Life Tables 2010-12 – Period Life Expectancy at Age 65

	1970-72	1980-82	1990-92	2000-02	2010-12
Men	12.21	13.80	15.41	17.70	19.22
Women	16.09	18.00	19.26	21.15	22.05

Comparing the two tables, we note that projected life expectancy at age 70 in 2034-35 is similar to that at age 65 (the current eligibility age) in 2000-02. This, in turn, was considerably greater than it had been 30 years earlier.

[3] Note that the cohort life expectancy would be even higher.
[4] *Australian Life Tables 2010-12*, published in 2014

With life expectancy continuing to improve, we suggest that it is fair and equitable that the eligibility age for the Age Pension and the superannuation preservation age be responsive to the expected length of retirement, for different cohorts. We consider that these ages could reasonably be set with reference to remaining (period) life expectancy, as published by the Australian Government Actuary. In the IGR, a sensitivity projection, where the Age Pension entitlement age and the preservation age were adjusted in line with increased life expectancy, would help to inform the debate about available alternatives.

A further natural response to increasing life expectancy is increased workforce participation rates at older ages and we note that the IGR has reflected this in its modelling. However, there are barriers to overcome and safety nets will always be required for those unable to work. Therefore, there are significant policy decisions to be taken in order to achieve appropriate outcomes for older Australians below or around the new retirement age.

We also note that increasing the retirement age above 65 means that the historical "dependency ratio" calculations built around age bands 15-64 will become increasingly less relevant. While the standard bands will still be required for historical and international comparisons, discussions of Australia's demographics should reflect the changing reality.

Age Pension costs are projected to increase from 2.9% of GDP in 2014-5 to 3.6% of GDP in 2054-5 under the "currently legislated scenario". Under the "proposed policy" scenario the costs are projected to be 2.7% of GDP in 2054-5, 25% lower. The main proposed policy change driving this outcome is benchmarking Age Pension increases to cost of living indices from July 2017 rather than wages (MTAWE).

The projections assume that benchmarking to MTAWE will resume in 2028-9. Based on the productivity growth assumption in the IGR of 1.5% p.a. this means the single pension after 2028 will be 23.1% of MTAWE compared to its current level of 27.7%, a 17% reduction.

Proposed changes to Age Pension indexation from wages to cost of income indices aim to constrain social security costs as a percentage of GDP to rein in budget deficits. We do believe, however, that in the long run it is important to benchmark all safety net type benefits to wage and salary measures. This should ensure living standard relativities between the disadvantaged and the broader community remain reasonable. Therefore we support a policy of resumption of the benchmarking to MTAWE at some stage.

It is noteworthy that the proportion of those of eligible age with some entitlement to either part or full Age Pension reduces by only 3% from 70% (2013-14) to 67% (2054-55). The proportion of those receiving a full Age Pension in 2013-14 was 60% and this is expected to reduce significantly by 2054-55; a pointer to the effective constraining influence of the superannuation guarantee on GDP outlays and a boost for intergenerational equity. Nevertheless, we recommend means testing arrangements should be reviewed to further improve intergenerational and intra-generational equity.

The UK Intergenerational Foundation presents a fairness index to report on several indicators of intergenerational unfairness. We believe that a similar index could be developed for Australia to provide an evidence base for policy decisions, aiming to minimise the inequitable cost burden on future generations as Australia's population ages.

4.2 Aged Care

The Australian Government Aged Care expenditure is projected to increase from 0.9% GDP now to 1.7% GDP. IGR 2015 noted that the major driver of aged care expenditure is the increasing number of people aged over 70, which is projected to triple over the next 40 years to just over 7 million. Also the number of people over age 85, which would be expected to require a higher level of care is expected to increase from 80,000 (1%) in the 1970s to 2 million (4.7%) in the next 40 years.

Since the last IGR (2010), which projected a marginally higher aged care expenditure of 1.8% GDP, there have been a number of reforms. On 1 July 2014, the Living Longer Living Better reforms became law. This is a 10 year reform program that provides older Australians with more choice, control and easier access to a full range of services, where they want it and when they need it. The key objective of these changes is to make the system more efficient and sustainable in the longer term.

The main changes include the removal of the distinction between high and low care in residential aged care and a greater focus on keeping people in home for longer and funding in-home care packages. This is consistent with IGR 2015 which noted more and more older people wish to remain to be cared for in the community for as long as possible.

Importantly, there is now a greater emphasis on "user pays" with increased means testing arrangements, along with fee caps and lifetime limits. Also, there are new accommodation payment arrangements for residential aged care, which will result in residents paying more in most cases.

In the 2014-15 Budget the Australian Government also took measures to adjust the real rate of growth in the Commonwealth Home Support Programme (which will replace the current Home and Community Care Programme) to 3.5 per cent annually. All of these measures have resulted in a containment of costs and in fact a small decrease in projected expenditures.

As the cost of aged care is rising and as older people are often asset rich and income poor, they will increasingly rely on personal wealth to fund their care and health expenses in later life. We know that 80% of over 65s own their home and 70% of net wealth for over 75s is in the home (HILDA survey 6554.0 201323). Older Australians will need ways to gain access to their housing wealth in an efficient manner to contribute towards their aged care and health costs in later years and we recommend appropriate options are investigated.

Other cost drivers include the assumed mix between in-home care and residential care packages, the costs of these packages, the assumed level of individual contribution to these costs and individuals' assumed wealth.

We recommend more detailed discussion and assessment of the key drivers and sensitivity to these key drivers would help the wider community understand the risks in these projections and the direction of any future policy changes. Establishing some key metrics for aged care would allow an assessment to be made of the effectiveness of policy in future reports.

Over the period of the IGR material changes are likely to occur in the provision and delivery of care to those in our community with disabilities. The NDIS is at the forefront of the provision of these services for those aged below 65 and the aged care reforms for those above age 65. The NDIS allows people to continue to access services from it after they turn 65. This presents a future policy challenge if aged-care-funded services are not comparable to NDIS funded services.

On modelling, we note the model appears to assume that age-specific disability rates and utilisation rates remain constant. We note however that historically there have been fluctuations in the prevalence of disability by age across Australia. This prevalence is impacted by changing incidence of disability and changing mortality patterns across the duration of a disability.

The IGR does not specifically discuss the change in the number of carers in the community. With an increased life expectancy and increased support for the disabled and elderly to remain in their own home, the number of people taking on carers' roles in some capacity should be expected to change.

4.3 Health

The Actuaries Institute recognises that there is a global challenge of increased health care expenditure due to a combination of ageing populations, the cost of new medical technologies and higher public expectations about access to health services. Lifestyle factors are also contributing to increased health expenditure with, for example, 28% of Australian adults now classified as obese.

Health care remains almost entirely funded on a pay-as-you-go basis and largely through general taxation. The Report estimates that Australian Government health spending per person is predicted to rise in today's dollars from $2,800 to approximately $6,500 in 2055. The Productivity Commission's 2013 forecasts indicates that spending on health care across all levels of government will grow over four percentage points of GDP over the next 50 years, from 6.5% to 10.8% of GDP. This is by far the most significant change in government expenditure in the coming decades.

There are considerable intergenerational issues relating to the cost of health care which will only be exacerbated with Australia's ageing population. The Actuaries Institute's Health Green Paper (Dec 2014) noted that health expenditure for an 85 year old Australian is more than four times that for a 50 year old and by 2049-50 the number of Australians over 85 will more than triple.

The Green Paper projects that the working age population might be paying 1.6 times the cost of their own health expenditure by the middle of the century (compared to 1.4 times now) to fund the health care costs of older age groups. Enabling people to work longer, pre-funding future private health insurance increases and devising innovative ways for older Australians to tap into their wealth are measures that could help fray future health costs.

4.4 Climate exposure

Over the projected period covered by the IGR, Australia's exposure to natural disasters and other climate related phenomenon is likely to increase (IPCC 2014). This projected increased exposure arises from a number of factors, including increasing population density in disaster prone areas, increased wealth and asset values, and changes in the global climate. These

changes are likely to have significant economic, environmental, and social impacts on future Australians.

We suggest that the future economic and fiscal costs of adaptation to the impact of Australia's harsh climate and/or mitigation should be addressed through explicit modelling within the intergenerational fiscal projections.

- Economic costs may arise directly from natural disasters or other changes in weather patterns, as well as from changes in global investment decisions and access to capital.
- There will also be current and future costs of mitigation and adaptation to account for such as the Direct Action policy, natural disaster mitigation and recovery costs, and other future adaptation measures.

Previous analysis has indicated the economic impacts in the absence of any adaptation or mitigation could be significant. The Garnaut Climate change review (2008, tech. paper 5 – modelling the costs of climate change) estimates additional costs of climate change of ~8% of GDP by the end of the century. The outcomes are unclear due to the significant uncertainty in estimating the likelihood and consequence of climate related events, as well as the uncertain nature of extreme tail impacts. Even taking into account these uncertainties, without explicit modelling and accounting for these costs, the impact on future generations will not be captured.

Investment in additional research would improve the capability of government and the private sector to project future economic costs and benefits of mitigation and/or adaptation measures. Transparency in cost benefit decision making analysis for natural disaster and climate economic modelling would allow for improved feedback into the policy making decision process resulting in assessing cost effective opportunities to lessen the burden on future generations.

The 2014 Productivity Commission draft report on natural disaster funding arrangements recommends a number of policy responses which we believe are also relevant for this intergenerational analysis. In particular we would note the following proposals:

- Estimates of the future costs of natural disasters should be published by the Australian Government and provision should be made in government budgets for these expected future costs.
- Increase mitigation funding for natural disasters to improve the resilience of communities to increased natural disaster frequency and severity.

5. Concluding remarks

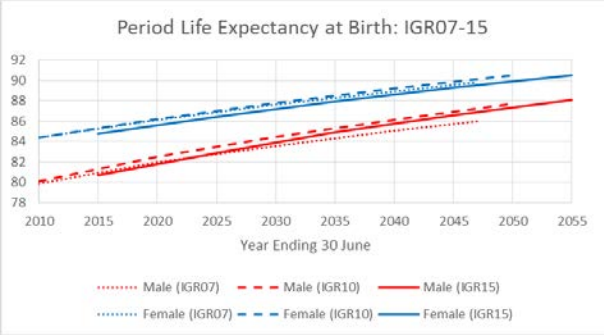
The Actuaries Institute commends the Government for its commitment to this important, ongoing work which we believe is an important foundation for framing policy debate. The Institute's comments aim to assist Treasury to enhance future Intergenerational Reports to facilitate wider and more fruitful discussion of important policy issues. We would be happy to discuss any aspects of this submission.

APPENDIX A - Modelling

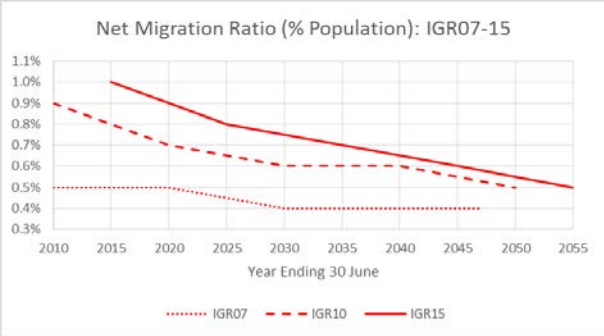
Several key assumptions relating to the projected GDP have changed quite significantly over the course of the last three IGRs, issued in 2007 ("IGR07"), 2010 ("IGR10") and 2015 ("IGR15").

Note that the charts in this Appendix are derived from rounded figures in tables printed in the three IGRs, so the precise shapes of projections may differ slightly.

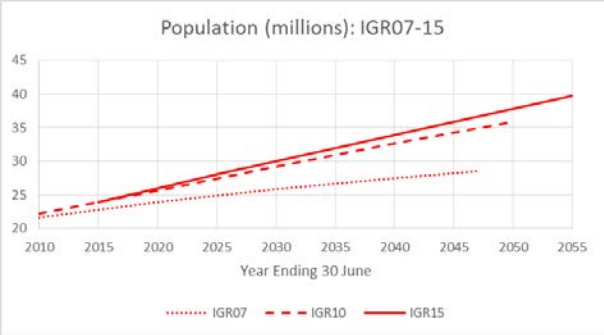
Projected increases in longevity have been broadly similar in the three IGRs:

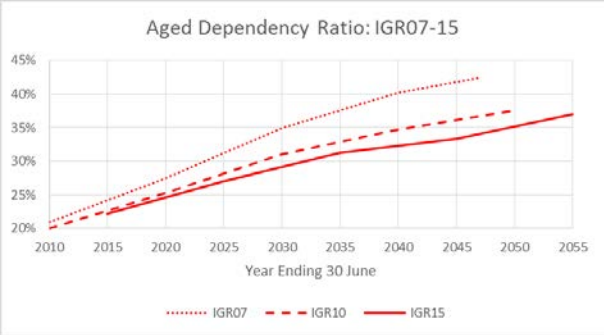


However, the fertility rate assumption increased significantly in IGR10 and the net migration ratio increased in both IGR10 and IGR15:



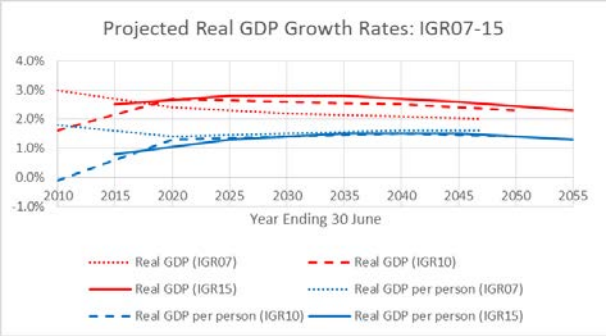
The net result is higher projected future population sizes in the later IGRs, coupled with lower aged dependency ratios[5]. The lower dependency ratios, in particular, tend to have a favourable impact on the financial projections.





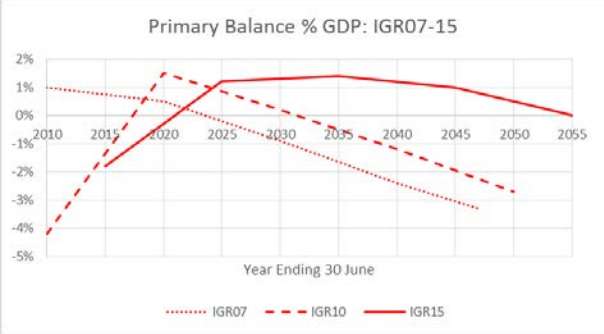
[5] Expressed in the traditional format of the number of persons aged 65+ divided by the number aged 15-64

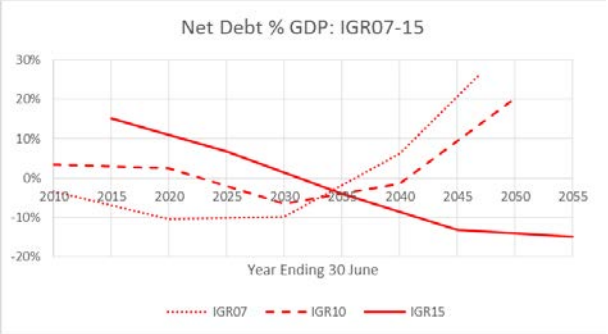
The later IGRs have also assumed higher participation rates. Combined with larger and (relatively) younger populations, this leads to higher projected real GDP growth rates:



It is interesting to note that there is very little difference in projected long-term real GDP growth rates per person in the three IGRs. In effect, all of the additional growth comes from the higher population projections.

It is not absolutely clear how the revenue assumptions compare between the three IGRs, although it does seem that IGR15 assumes a higher rate of revenue (as a % of GDP) than IGR10, at least. Differences in projected financial outcomes between IGR07 and IGR10 appear to be driven by the higher population (and hence GDP) growth assumed in the latter. IGR15 would therefore be expected to exhibit further improvement, but the different structural shape of expenditure dominates the comparisons:





The Institute considers that these simple comparisons demonstrate the need for more disclosure of the rationale for changes in assumptions and better analysis of the lessons learned from previous projections.