

TREASURY MINISTERIAL SUBMISSION

25 January 2018

PDR No. MS18-000201

Treasurer

UNITED STATES SOCIAL INDICATORS**Timing:** Ahead of your January visit to the United States.**KEY POINTS**

- On key headline measures the United States' recovery is well-progressed, aided by innovative US industries, a business-friendly regulatory environment and past investments in human capital and knowledge.
- But looking beyond the headline indicators, this growth has not been shared by all – and there are signs of deeper social dysfunction. US politics are partisan and divisive (and likely to remain so, partly exacerbated by poor social outcomes) making solutions harder to agree and implement.

Recovery is well-progressed

- The United States' recovery following the global financial crisis has been slow, but headline indicators show it is now well-progressed. The unemployment rate is down to 4.1 per cent; below the natural rate of 4.7 per cent. And annual GDP growth is 0.8 percentage points above potential.

Growth has not been shared by all

- But beyond these headline improvements, other labour market indicators remain weaker than they have been for decades.
 - Participation has stopped falling, but remains around a 40-year low of 63 per cent.
 - Long-term unemployment remains at 23 per cent of total unemployment – well down from its 2009 peak, but still higher than at almost any time from 1950 to 2009.
 - In nominal terms, median annual wage growth is around 3.4 per cent – well above the lows experienced after the crisis, but still below the longer-term average of 4 per cent.
- Income inequality is high compared to other countries, partly because US tax and social security systems do less to reduce inequality than those of most other advanced economies. Average income for the top ten per cent was 6.1 times the average income for the bottom ten per cent – the third highest in the OECD, after Mexico and Chile.
- Economic growth since the crisis has also been unevenly distributed across regions. Since the start of 2009, states in New England have seen real GDP increase by less than ten per cent, while those in the Southwest have enjoyed a real GDP increase of just over 25 per cent.
 - The large states of Texas and California have grown rapidly, enjoying total real GDP growth of 27 per cent and 21 per cent respectively since 2009.

Signs of social dysfunction

- Life expectancy fell in 2015 and 2016 – the first time since 1962 and 1963 that life expectancy has declined two years in a row. US life expectancy was overtaken by the OECD average in 1996 and the gap has continued to widen, reaching 1.4 years in 2015.
 - The largest single driver of this fall in life expectancy is the increasing drug overdose mortality rate, which tripled between 1999 and 2016 (from 6.1 per 100,000 to 19.8 per 100,000).
 - Particularly striking is the sharp increase in opioid overdose deaths, from 2.9 deaths per 100,000 to 13.3 per 100,000 between 1999 and 2016.
 - Also concerning (though a smaller contributor to overall life expectancy) are high levels of maternal mortality in the US, at 26.4 deaths per 100,000 live births in 2015, compared to 5.5 for Australia, 7.3 for Canada and 9.2 for the UK.
- Healthcare spending per capita is the highest in the OECD. But in 2016, 32 per cent of people reported their healthcare needs were going unmet due to cost – also the highest in the OECD.
 - The proportion of the population covered by public or private health insurance is the second-lowest in the OECD at 90.9 per cent, though this is a substantial improvement from 84 per cent in 2010, before the Affordable Care Act (Obamacare) took effect.
- The US incarceration rate is 698 per 100,000 – the highest in the OECD, more than twice the rate of the next highest (Israel) and nearly five times the OECD average.
 - More positively, crime rates have halved since their most recent peak in 1991 and the incarceration rate has fallen by around 5 per cent from its 2010 level.
 - But homicide rates rose in 2015 and 2016, erasing the gains made through a steady decline from 2007 through 2014.
- Education remains relatively strong – perhaps as an alternative to entering a challenging labour market. Since 2000, the share of 25-34 year olds with tertiary qualifications increased from 38 per cent to 48 per cent, while those with at least a Masters have almost doubled.

Other challenges loom

- Looking forward, challenges from ageing and inequality are likely to persist and grow. Income inequality has been rising for decades, both contributing to and being exacerbated by poor social outcomes. The ageing of the population will continue, dragging on participation rates and placing pressure on the resources devoted to healthcare and aged care services.
- Meanwhile, public opinion and the political system have become more polarised. This is perhaps unsurprising, as high levels of inequality can damage trust and social cohesion, which increases the potential for political dysfunction and fragmentation.
- Whatever its cause, political dysfunction will make policy solutions to social problems more difficult to find and harder to agree upon.

s.22(1)(a)(ii)

Contact Officer: s.22(1)(a)(ii)

Manager, Trade Policy Unit
 International Policy and Engagement Division
 Ext: s.22(1)(a)(ii)

Consultation: Macroeconomic Conditions Division, Social Policy Division, Washington Post

ADDITIONAL INFORMATION

Comparison of key statistics

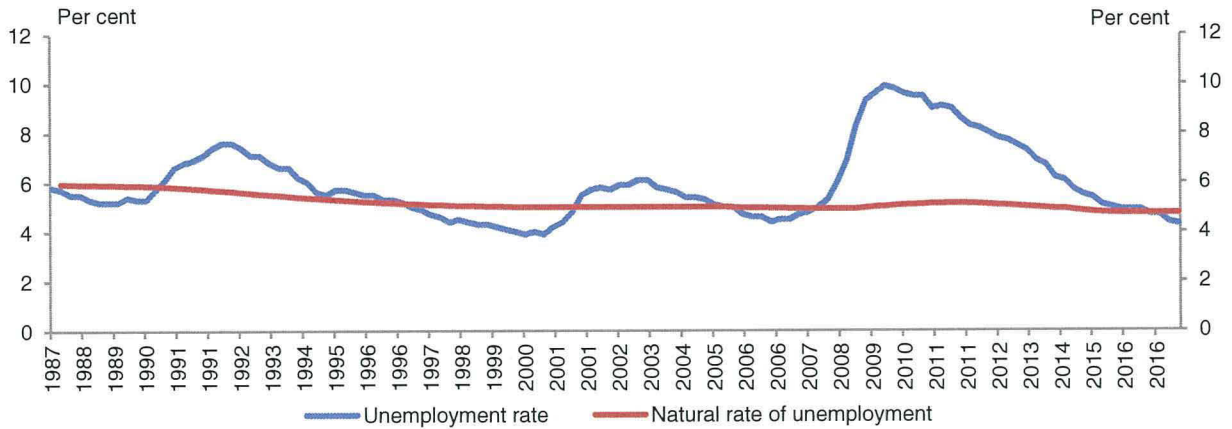
	US	OECD average	Australia
Participation rate (per cent of adult civilian population, 2017)	62.8	60.2 (2016)	65.1
Long-term unemployment ratio (unemployed for over a year as a per cent of all unemployed, 2016)	13.3 ¹	35.2	23.4 (2017)
Life expectancy at birth (years, 2016)	78.6	80.3 (2015)	82.5
People aged 65 and over (per cent of total population, 2016)	15.2	16.7 (2015)	15.4 (June 2017)
Income inequality (90/10 ratio, equivalised household incomes, 2015)	6.1	4.3	4.3 (2014)
Health spending (per cent of GDP, 2016)	17.2	9.0	9.6
Population coverage for health care (per cent, 2015)	90.9	97.7	100

¹ For comparability, this number uses the OECD definition (unemployed for one year or more). Other figures in this submission, including Figure 3, are based on the US definition (unemployed for 26 weeks or more).

Labour markets

- The unemployment rate was 4.1 per cent in December 2017, down from a peak of 9.9 per cent in late 2009 and early 2010 and well below the Congressional Budget Office’s estimate of the natural rate of 4.7 per cent.

Figure 1: US unemployment and natural rate of unemployment



Source: Bureau of Labor Statistics, Congressional Budget Office

- But other labour market indicators remain weaker than they have been for decades.
 - The participation rate has stopped falling – but despite unemployment falling steadily over the last decade, it remains flat around a 40-year low of about 63 per cent.
 - : Until around 1996, increasing participation was driven by strong growth in female participation. Female participation growth flattened around 1996, fell from 2009 to 2016 and has been stable since. Male participation fell steadily from World War II until the crisis, accelerated from 2009 to 2016 and now also remains stable.
 - : Some of those not participating will never re-enter the labour force – one estimate suggests half of all prime-age male dropouts since 1950 were permanent.
 - Long-term unemployment² remains at 23 per cent of total unemployment – well down from its 2009 peak, but still higher than at almost any time from 1948 to 2009.
 - And median nominal wage growth is around 3.4 per cent – well above the lows experienced after the crisis, but still below the longer-term average of 4 per cent.

Figure 2: Participation rate

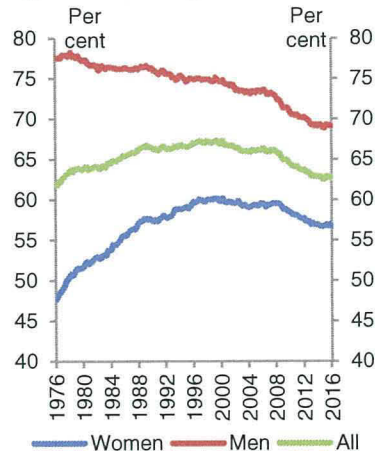


Figure 3: Long-term unemployment

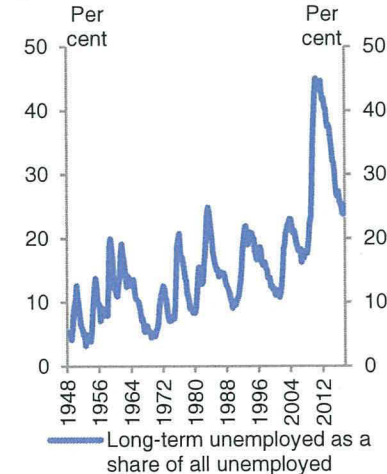
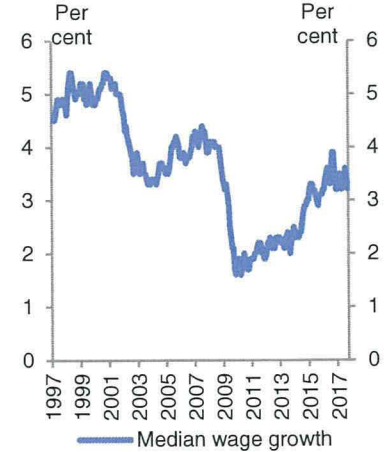


Figure 4: Median wage growth



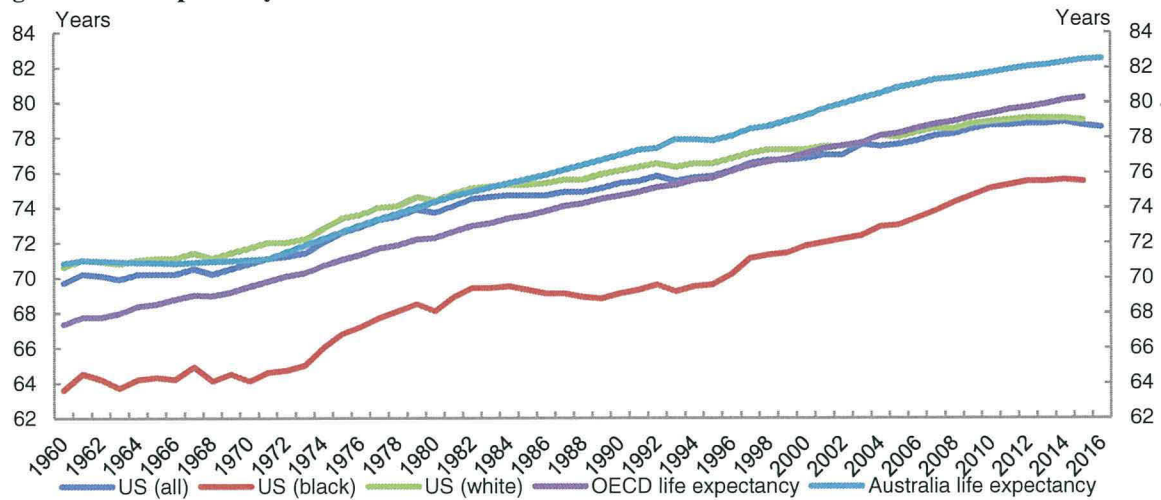
Sources: Bureau of Labor Statistics, Federal Reserve Board of Atlanta

² Long term unemployment based on the US Bureau of Labor Statistics definition: at least 27 weeks of unemployment.

Life expectancy

- Life expectancy fell in 2015 and 2016³ – the first time since 1962 and 1963 that life expectancy has declined two years in a row. US life expectancy was overtaken by the OECD average in 1996 and the gap has continued to widen.

Figure 5: Life expectancy



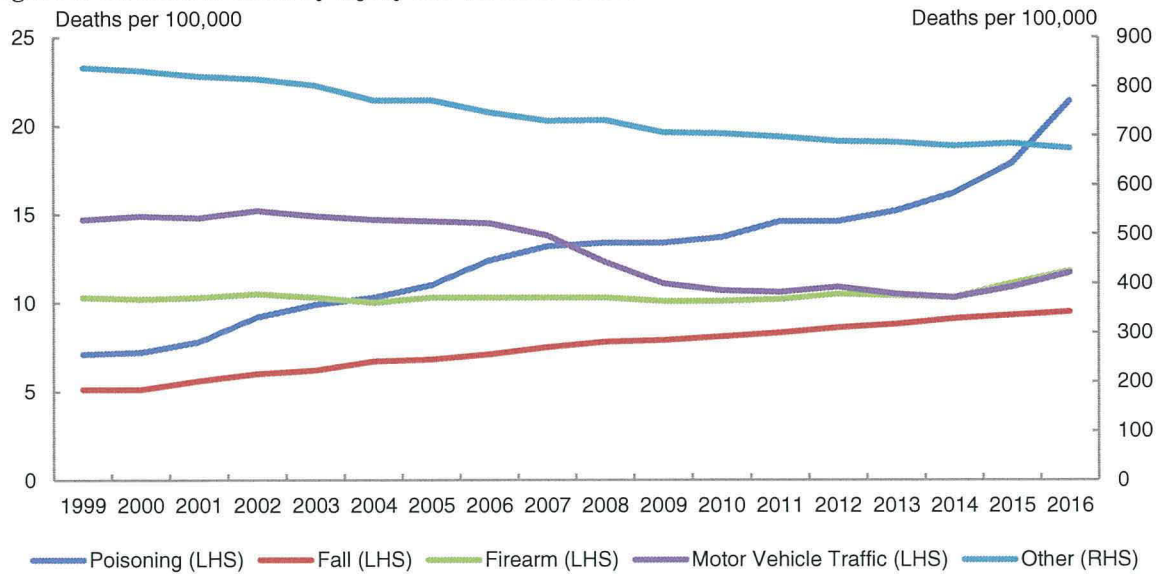
Sources: Centers for Disease Control, OECD

- The largest single driver of this fall in life expectancy is the increasing drug overdose mortality rate, which tripled between 1999 and 2016 (from 6.1 per 100,000 to 19.8 per 100,000).
 - : This increase is largely driven by opioid deaths, which have increased four-fold since 1999 – from 2.9 deaths per 100,000 to 13.3 deaths per 100,000 in 2016.
 - : Every state saw drug overdoses increase substantially, from a twelve-fold increase in West Virginia (from 4.1 per 100,000 to 52 per 100,000) to a 38 per cent increase in California (from 8.1 per 100,000 to 11.2 per 100,000).
 - : Overdose death rates have increased more sharply among whites than blacks, and are now over 70 per cent higher among whites. The death rate for whites has quadrupled since 1999, from 6.2 to 25.3 deaths per 100,000; for blacks it doubled, from 7.5 to 17.1 per 100,000.
 - : Beyond the implications of the opioid epidemic for mortality, it is also contributing to a growing population of substance-dependent people where meaningful engagement with the workforce will be unlikely.
- One recent study⁴ found that growing mortality for 50-54 year old white Americans is overwhelmingly due to a large increase in ‘deaths of despair’ – those due to drugs, alcohol or suicide. Between 1990 and 2015 middle-aged US whites saw these deaths of despair more than double, reaching around 80 per 100,000.
 - : Over the same period, European countries saw equivalent rates fall to around 40 per 100,000, while Australia, Canada and the UK saw rates rise (though much more slowly than the US), also converging to around 40 per 100,000.

³ 2017 data will be released in December 2018.

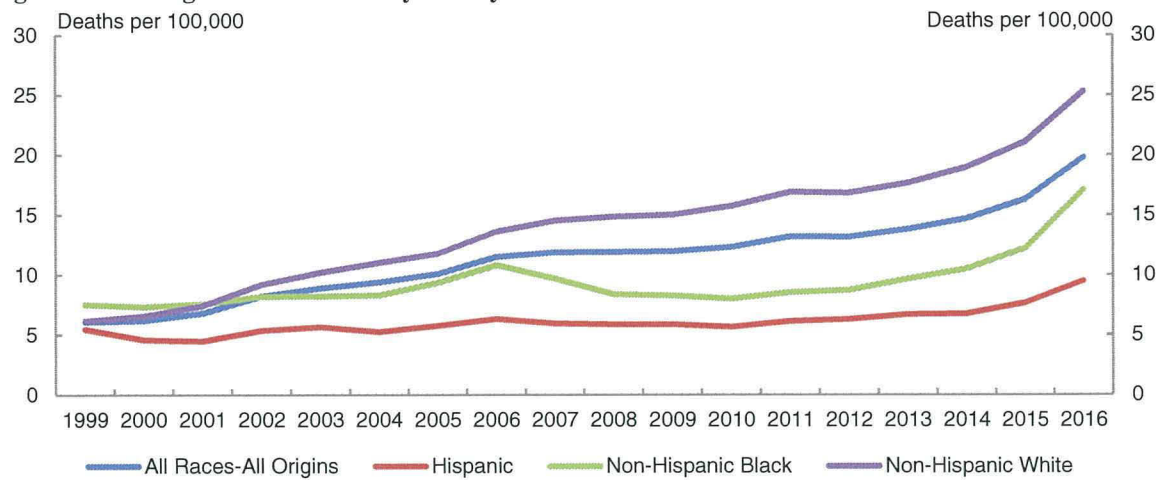
⁴ Case and Deaton, Mortality and morbidity in the 21st century, 2017

Figure 6: US rates of death by injury and all other causes



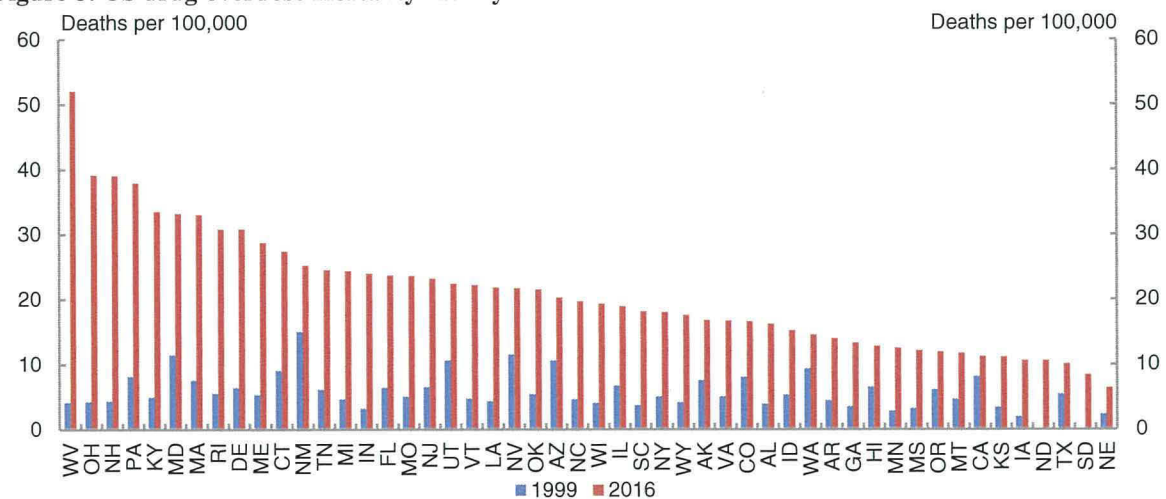
Source: Centers for Disease Control

Figure 7: US drug overdose mortality rate by race



Source: Centers for Disease Control

Figure 8: US drug overdose mortality rate by state



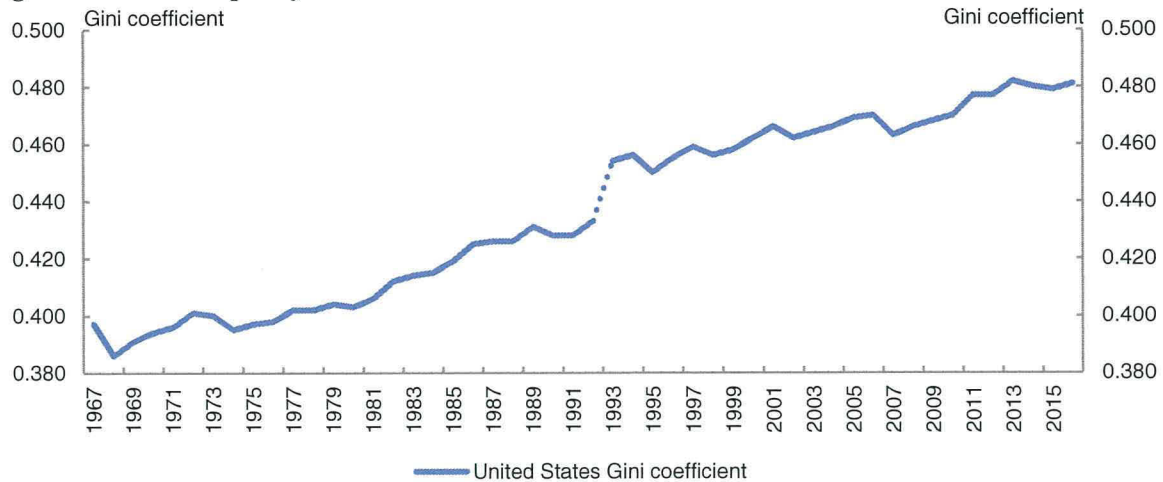
Source: Centers for Disease Control

- Maternal mortality rates are also high (though with a smaller impact on overall life expectancy), at 26.4 deaths per 100,000 live births in 2015.
 - Comparable countries have much lower rates: 5.5 for Australia, 7.6 for Canada and 9.2 for the UK. The US rate is closer to some much poorer countries: Kazakhstan (26.5), the Ukraine (24.0) and Costa Rica (24.3).
 - Available data suggest the US rate has also grown dramatically (from 17.5 per 100,000 in 2000), but as much as 80 per cent of this growth is thought to be due to underreporting in earlier years. Despite data quality issues, there is no indication maternal mortality has fallen, as it has in other rich (as well as developing) countries.
- Over a longer period, life expectancy inequality has persisted and widened on some measures.
 - High-income Americans have enjoyed disproportionate increases in life expectancy, with those on lower incomes falling behind: for Americans born in 1920, there was a five year gap in life expectancy between the top and bottom deciles of lifetime earnings. For those born in 1940, the gap was twelve years.
 - Despite some long-term progress closing the life expectancy gap between white and black Americans (which has fallen from seven years in 1960 to 3.5 years in 2015), the gap persists. In the last three years, the gap has changed little, with gains driven by declines in white life expectancy and black life expectancy remaining largely flat.

Other social indicators

- High levels of healthcare inequality contribute to falling and unequal life expectancy. Health spending per capita is the highest in the OECD. But the share of the population whose healthcare needs went unmet due to cost is also the highest in the OECD, at 32 per cent. For low-income households, the figure is 43 per cent.
 - Health insurance coverage remains the second-lowest in the OECD at 90.9 per cent, though this is an improvement from 84 per cent in 2010, before the Affordable Care Act (Obamacare) took effect.
 - Recent tax reform eliminated penalties from the Affordable Care Act's individual mandate (which required most Americans to have health insurance and imposed tax penalties on those who did not). The Congressional Budget Office estimates this will reduce insurance coverage by around 4.5 per cent by 2027, eliminating two-thirds of the gains made since 2010.
- The incarceration rate in the US is the highest in the OECD, at 698 per 100,000 – nearly five times the OECD average and over twice the rate of the next-highest OECD country. Nearly half of all US prisoners are serving sentences for drug offences.
 - More positively, crime rates have halved since their most recent peak in 1990 and the incarceration rate has fallen by around 5 per cent from its peak in 2010.
 - The homicide death rate had also been falling, going from 6 per 100,000 in 2007 to 4.9 per 100,000 in 2014. But it rose in both 2015 and 2016, again reaching 5.9 per 100,000.

- The US has relatively high income inequality, which has been rising for decades. Inequality both contributes to and is exacerbated by poor social outcomes.
 - The 90/10 ratio⁵ is 6.1, the third highest in the OECD, after Mexico and Chile.
 - The Gini coefficient⁶ has been rising for decades, reaching 0.481 in 2016 (noting some of the increase between 1993 and 1994 is due to a change in survey methodology).

Figure 9: Income inequality

Source: US Census Bureau

- US tax and social security systems contribute to this high level of inequality by doing less to reduce inequality than the systems in other advanced economies.
 - For instance, over the last three decades, inequality in pre-tax/transfer income for men has increased at a similar rate in the US and the UK. But overall the US has seen greater increases in household post-tax income inequality⁷.
 - : In the US, the 90/10 ratio for male pre-tax earnings has increased from around 4.5 in 1980 to around 6.5 in 2015. Post-tax household-level inequality increased by around the same amount.
 - : By contrast, in the UK, an even larger increase in male pre-tax inequality occurred over the same period (from 2.5 to 5.5), but post-tax household inequality did not rise, with the household post-tax 90/10 ratio remaining below 4.5.
 - This outcome is chiefly a result of the US tax and transfer system, which does less to reduce inequality than the UK system. But changes in household structure have also contributed – Americans have become more likely to choose partners with similar incomes, reinforcing inequality between households. And Americans have been more likely to drop out of work while Britons instead reduced their hours.

⁵ The 90/10 ratio is the ratio of average income for the top ten per cent to average income for the bottom ten per cent.

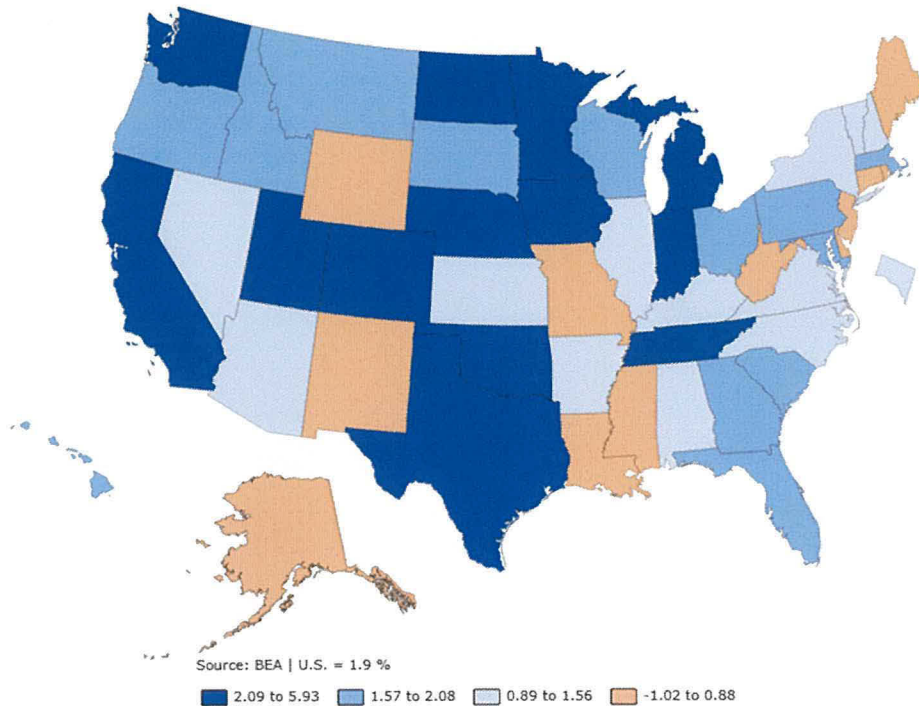
⁶ The Gini coefficient takes on a value between zero (wealth/income is equally distributed among all members of the population) and one (a single person has all the wealth/income).

⁷ Blundell et al, Income inequality and the labour market in Britain and the US, 2017

Regional gaps

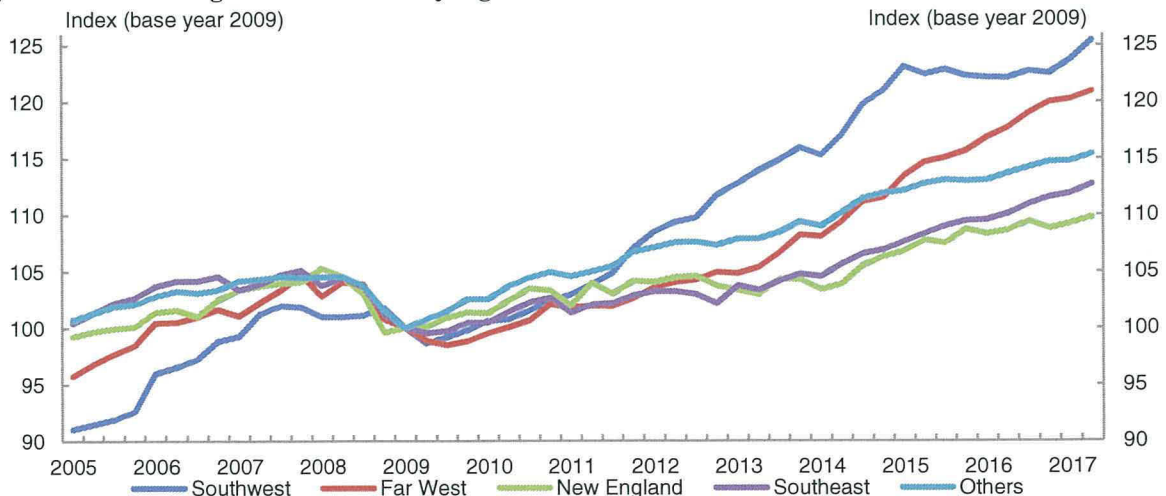
- Real GDP growth since the crisis has been unevenly distributed across the country, with the Southwest enjoying total growth of over 25 per cent since 2009, while New England’s real GDP growth has been only 10 per cent.
 - The highest total rates of growth in real GDP between 2009 and 2016 were in North Dakota (50 per cent), Texas (27 per cent), California, Oklahoma, Utah and Washington (all 21 per cent).
 - On the other hand, four states saw real GDP fall between 2009 and 2016: Alaska (-7 per cent), Wyoming (-5 per cent), Connecticut (-3 per cent) and Louisiana (-1 per cent).

Figure 10: Average annual real GDP growth since 2009 by state



Source: US Bureau of Economic Analysis

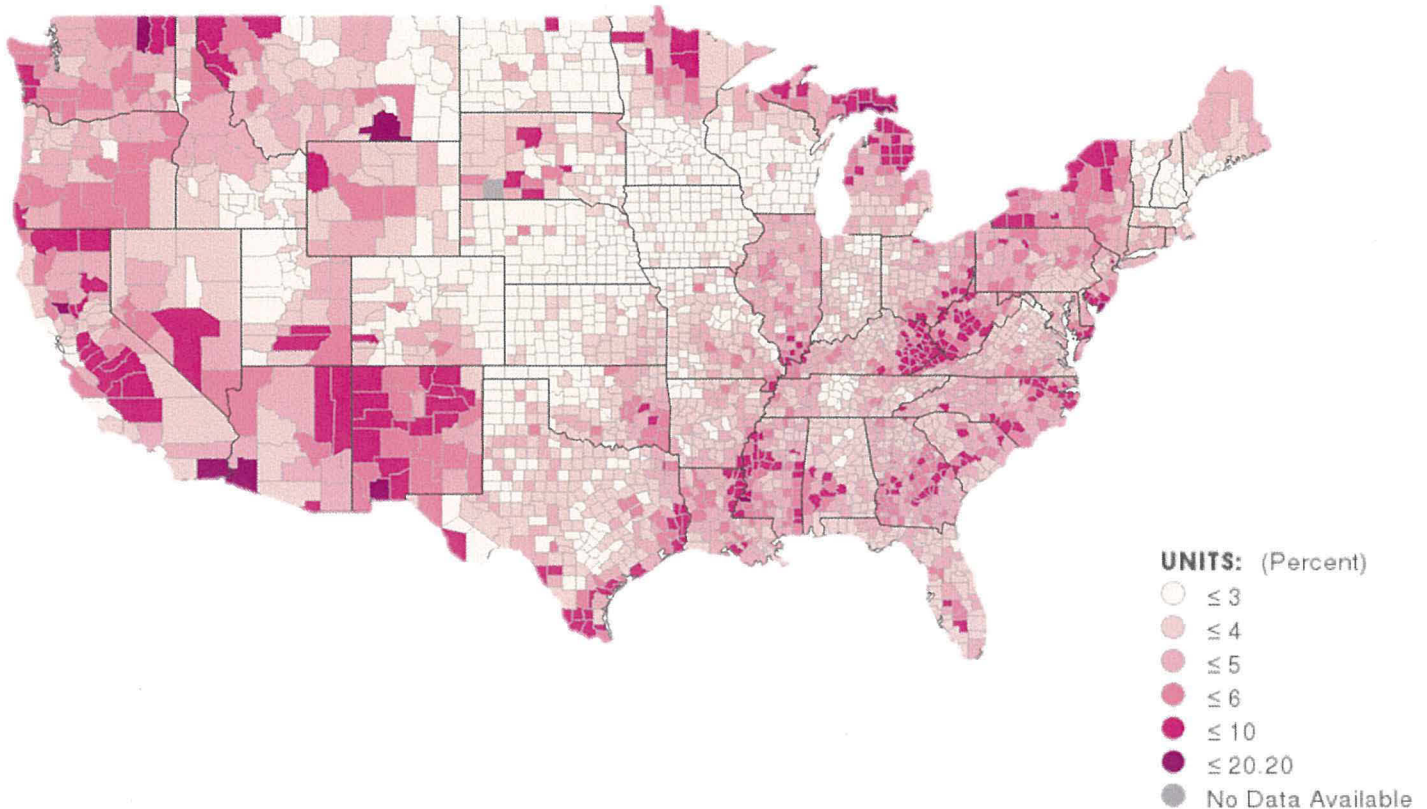
Figure 11: Real GDP growth since 2009 by region



Source: US Bureau of Economic Analysis, Treasury calculations

- Unemployment rates also remain highly uneven across the country.
 - The highest state-level unemployment rates are in Alaska (7.3 per cent), New Mexico and DC (6 per cent) and West Virginia (5.5 per cent).
 - Meanwhile, Hawaii (2 per cent), New Hampshire and North Dakota (2.6 per cent) and Nebraska (2.7 per cent) have the lowest rates.

Figure 12: Unemployment by county (November 2017)



Source: Bureau of Labor Statistics, FRED Economic Data (St Louis Fed)

Education

- Educational attainment remains high and has continued to rise in recent years – perhaps because young people have chosen to continue their education rather than enter a labour market that has been particularly challenging for the young.
 - Upper secondary school attainment is now at an all-time high of 90 per cent of 25-64 year olds, well above the OECD average of 88 per cent.
 - Tertiary attainment among 25-34 year olds was 48 per cent in 2016, up from 38 per cent in 2000 and above the OECD average of 43 per cent.
 - And the number of young people with at least a Masters degree has increased from 4 per cent to 9 per cent since 2000.
- Upward mobility in education is also around the OECD average (in terms of how likely children of less-educated parents are to participate in higher education).
 - Of students with one tertiary-educated parent, 56 per cent earned at least a Bachelor-level degree, around the OECD average of 55 per cent. And of those whose

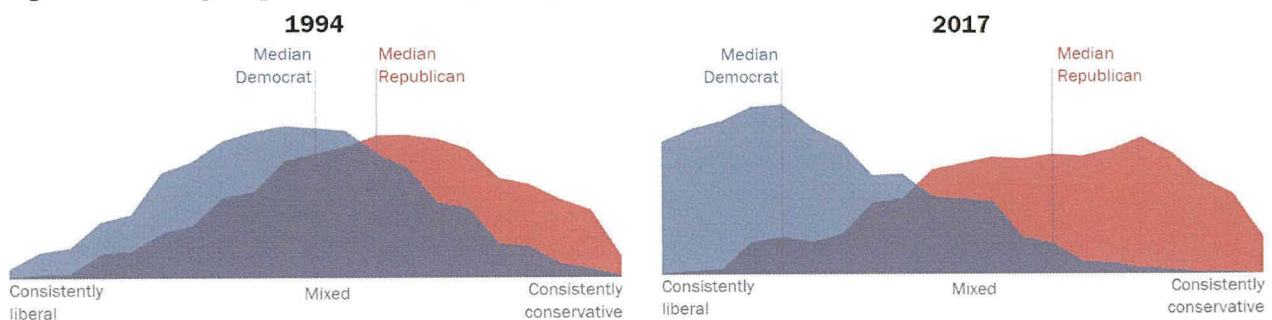
parents had no tertiary education, 19 per cent earned at least a Bachelor-level degree, also around the OECD average of 20 per cent.

- While the US hosts the largest number of international students of any country and has a relatively large migrant population, educational attainment of the American-born is slightly higher than that of migrants – 33.6 per cent of natives have at least a Bachelor degree, compared to 32.4 per cent of foreign-born residents.

Political and social polarisation

- Meanwhile, the US political system and public opinion have both become more polarised, making solving these problems challenging.
 - Over recent decades Republican voters have become more conservative and Democrat voters more liberal. Cross-party divides are now at their widest since 1994 on a range of issues, including: government help for the needy; discrimination and racial disadvantage; migration; and whether diplomacy or military strength is the best way to ensure peace.
 - : This ideological gap is much wider between political parties than it is between religious, racial, education, age or gender groups.

Figure 13: Ideological polarisation amongst the public



Source: Pew Research Center

30 January 2018

PDR No. MS18-000247

Treasurer

NATIONAL INNOVATION AND SCIENCE AGENDA - UPDATE ON IMPLEMENTATION

Timing: Prior to your appearance on the Sunrise program on the Seven Network.

KEY POINTS

- You, through your office, requested an update on the implementation of the Government's National Innovation and Science Agenda (NISA).
 - We understand that you will be interviewed on the Sunrise program on the Seven Network.
- The Government has made significant progress in implementing NISA. Most measures have been implemented and implementation of remaining measures is on track.
 - Treasury is the lead agency for seven NISA measures out of a total of 24 measures.
 - There are two Treasury NISA measures (access to company losses and intangible depreciation) for which legislation has been introduced into Parliament and we are awaiting passage.
 - Legislation to expand the crowd sourced equity rules to proprietary companies is also before the Parliament and awaiting passage.
- Further details about the Treasury measures and broader NISA measures are set out in Additional Information and Attachment A.

s.22(1)(a)(ii)

Louise Butler
Acting Assistant Secretary
Structural Reform Group
Ext: s.22(1)(a)(ii)

Contact Officer: s.22(1)(a)(ii)

Consultation: Financial System Division, Individuals and Indirect Tax Division, Corporate and International Tax Division and the Department of Industry, Innovation and Science.

ADDITIONAL INFORMATION

- The Government launched the \$1.1 billion National Innovation and Science Agenda (NISA) in December 2015 to stimulate innovation and further invest in Australia's science capabilities.
- The NISA measures will support businesses to embrace risk and will unlock access to funding for new, innovative businesses. Innovative companies produce more jobs, are more productive and are more likely to be internationally competitive.
 - The NISA measures complement a broader \$10 billion Government investment in science, research and innovation each year.
 - A summary of NISA achievements to date, provided by the Department of Industry, Innovation and Science, is included below.
- Implementation of the NISA measures is on track. 19 of the 24 measures have been implemented.
- The status of Treasury NISA measures is set out below, while broader the status of NISA measures are set out at Attachment A. The information set out at Attachment A was compiled by the Department of Industry, Innovation and Science.

Status of Treasury NISA measures

- Treasury is the lead agency for seven NISA measures.
 - Five have been implemented and legislation for two measures is before the Parliament.
 - Legislation to expand the crowd sourced equity rules to proprietary companies is also before the Parliament and awaiting passage

Measure	Status
Tax Incentives for Early Stage Investors	<p>Implemented.</p> <p>These tax concessions came into effect on 1 July 2016, and can be claimed from the 2016-17 tax year.</p> <p>Due to the expedited timeframe associated with this measure, some minor technical amendments were required.</p> <ul style="list-style-type: none"> • These amendments passed the Parliament on 27 March through the <i>Treasury Laws Amendment (2017 Measures No. 1) Bill 2017</i>. • The amendments provide certainty for investors who are looking to invest in start-ups and certain venture capital arrangements through an interposed trust.
New Arrangements for Venture Capital Limited Partnerships	Implemented , together with the above measure on early stage investors.

Access to Company Losses	<p>Legislation introduced into Parliament, awaiting passage.</p> <p>This measure was introduced into Parliament on 30 March 2017 as a category A Bill, Schedule 1 of the <i>Treasury Laws Amendment (2017 Enterprise Incentives No. 1) Bill 2017</i>.</p>
Intangible Asset Depreciation	<p>Legislation introduced into Parliament, awaiting passage.</p> <p>The measure was introduced into Parliament on 30 March 2017 as category A Bill, <i>Treasury Laws Amendment (2017 Enterprise Incentives No. 1) Bill 2017</i>.</p>
Improve Bankruptcy and Insolvency Laws	<p>Implemented.</p> <p>Legislation implementing reforms to insolvency rules has passed the Parliament (ipso facto clauses and safe harbour).</p> <p>Legislation to increase access to company losses and improve the intangible asset depreciation rules is currently before Parliament.</p>
Employee Share Schemes	<p>Implemented.</p> <p>Provisions to give effect to this measure were included in the <i>Treasury Laws Amendment (Measures No.1) Bill 2016</i>, which passed the Parliament on 28 March 2017.</p>
Crowd-Sourced Equity Funding	<p>Implemented, with legislation to expand the rules to proprietary companies currently before the Parliament.</p> <p>The new crowd sourced equity framework for public companies commenced on 29 September 2017.</p> <p>Legislation to expand the framework to proprietary companies is before the Parliament. The expanded rules will take effect six months from the date of Royal Assent</p>










**Summary of broader NISA achievements provided by the Department of Industry,
Innovation and Science**

- An 80 per cent increase on the amount invested by Early Stage Venture Capital Limited Partnerships in innovative Australian businesses.
- The \$200 million CSIRO Innovation Fund is making investments to commercialise our research. For example, Morse Micro who is building the next generation of Wi-Fi chip.
- The \$500 million Biomedical Translation Fund is making investments in companies like ProTA Therapeutics who are working to help people suffering from peanut allergies.
- The Government is investing \$25 million in Silicon Quantum Computing Pty Ltd, a new Australian company that is supporting the development and commercialisation of silicon quantum computing technology. It is a three-way venture between research, industry and government that has raised \$83 million so far.
- \$2.3 billion is being invested to develop and maintain critical research infrastructure. For example, a \$520 million investment for ANSTO to operate the Australian Synchrotron, which works across fields like cancer research, renewable energy storage and advanced materials.
- \$30 million in ARC Linkage Grants have been awarded since changes were made to allow continuous applications.
- Innovation Connections has been expanded and is helping more businesses – particularly in regional areas – to collaborate with researchers. Daly’s Potatoes has found a market for second-grade potatoes, which would have normally gone to waste – leading to two new brands and new jobs.
- Landing pads have been established in San Francisco, Tel Aviv, Shanghai, Berlin and Singapore to help Australian start-ups to crack into new markets.
- Young Australians are engaging with Science, Technology, Engineering and Maths (STEM) with help from the \$48 million Inspire all Australians initiative. For example, students from Pine Rivers State High School in Queensland will attend world finals of the 4x4 in Schools Technology Challenge in Abu Dhabi with help from a sponsorship.
- Thousands of Australians of all ages and backgrounds are engaging with science through Citizen Science projects, like the Galaxy Explorer Forensics project, which helps Australian astronomers discover how much light is arriving at the Earth from over two million galaxies.
- The Male Champions of Change for STEM, and the Superstars of STEM project are examples of our \$13 million investment to encourage more women to choose and stay in STEM research, related careers, start-ups and entrepreneurial firms.
- The Government is investing in building and maintaining Australia’s data science research capability through Data61—a merger between NICTA and CSIRO’s digital research units. The Government is providing \$75 million to CSIRO so that Data61 can capitalise on the data revolution.
- The Government is harnessing innovative ideas from smart SMEs to improve the way it operates and delivers its services. Under the Business Research and Innovation Initiative (BRII), 20 feasibility study grants and nine proof of concept grants have been awarded.

- To make it easier for smaller businesses to compete for the Australian Government IT services a Digital Marketplace has been created. Contracts worth \$47 million have been awarded to date, with approximately 77 per cent of contracts awarded to SMEs.

ATTACHMENT A

NISA Implementation Progress Summary Report (as at 30 January 2018)

Ref	NISA measure	Implementation status summary	Traffic light
Legend			
		<i>Significant risk of delivery failure</i>	
		<i>On track with emerging issues</i>	
		<i>On track</i>	
		<i>Implemented – business as usual</i>	
Culture and capital			
CC1.1	<i>Tax Incentives for Early Stage Investors</i>	<ul style="list-style-type: none"> The tax incentives can be claimed from the 2016-17 income year. 	
CC1.2	<i>New Arrangements for Venture Capital Limited Partnerships</i>	<ul style="list-style-type: none"> New arrangements took effect from 1 July 2016. 	
CC1.3	<i>Access to Company Losses</i>	<ul style="list-style-type: none"> Legislation was introduced to Parliament on 30 March 2017. It was passed by the House of Representatives on 22 June 2017 and is currently before the Senate. 	
CC1.4	<i>Intangible Asset Depreciation</i>	<ul style="list-style-type: none"> Legislation was introduced to Parliament on 30 March 2017. It was passed by the House of Representatives on 22 June 2017 and is currently before the Senate. 	
CC1.5a	<i>CSIRO Innovation Fund</i>	<ul style="list-style-type: none"> The Fund was launched on 4 December 2016, with Mr Bill Bartee appointed Managing Director. Martin Duursma, Mike Nicholls, Phil Morle and Mike Zimmerman have been appointed to the investment team. ASIC granted an AFSL on 7 July. Investments announced at Ministerial launch include Morse Micro, Maxwell MRI, Intersective and Q-CTRL 	

ATTACHMENT A

Ref	NISA measure	Implementation status summary	Traffic light
CC1.5b	CSIRO Accelerator Programme	<ul style="list-style-type: none"> The expanded program opened to applications in August 2016. New ventures have been formed, grants undertaken along with awards and achievements. 	■
CC1.6	Biomedical Translation Fund	<ul style="list-style-type: none"> The Fund was launched on 13 December 2016. Subscription deeds between Commonwealth and three BTF fund managers were signed on 17 February 2017. The first investment was announced on 27 May 2017. Three further investments were announced on 11 September 2017. 	■
CC1.7	Incubator Support Programme	<ul style="list-style-type: none"> Twenty nine Incubator Support applications have been approved, worth over \$4.9 million in total. 	■
CC1.8	Improve Bankruptcy and Insolvency Laws	<ul style="list-style-type: none"> Legislation dealing with changes to the insolvency regime has been passed. Legislation dealing with bankruptcy was introduced into the Senate on 19 October 2017. Referred to Senate Legal and Constitutional Affairs Legislation Committee (report due 19 March 2018). 	■
CC1.9	Employee Shares Schemes	<ul style="list-style-type: none"> Legislation passed the Parliament on 27 March and commenced on 5 April 2017. 	■
Collaboration			
CO2.1a	Critical Research Infrastructure – NCRIS	<ul style="list-style-type: none"> NCRIS funding will be ongoing from 2017-18. The Roadmap has been released. 	■
CO2.1b	Critical Research Infrastructure – SKA/Australian Synchrotron	<ul style="list-style-type: none"> Ownership of the Synchrotron transferred to ANSTO in August 2016. International negotiation meetings on the SKA Convention continue. Ratification is expected in 2018. On 31 August 2017, the Australian and NZ Governments announced new funding to expand the Australian Synchrotron. The \$520m NISA funding commitment has helped ANSTO secure capital for new beamlines. 	■

ATTACHMENT A

Ref	NISA measure	Implementation status summary	Traffic light
CO2.2	<i>Sharper Incentives for Engagement</i>	<ul style="list-style-type: none"> • Payments to universities commenced in January 2017. 	■
CO2.3	<i>Global Innovation Strategy Policy Statement</i>	<ul style="list-style-type: none"> • The Statement was released on 4 November 2016. 	■
CO2.3a	<i>Global Innovation Strategy – Global Innovation Linkages & Global Connections Fund</i>	<ul style="list-style-type: none"> • The program has been established. • In June 2017 funding agreements were finalised with the nine successful GIL recipients. • The total government funding awarded so far under the GCF is nearly \$2.9 million with Australian researchers and SMEs collaborating with various global partners. 	■
CO2.3b	<i>Global Innovation Strategy – Regional Collaboration program</i>	<ul style="list-style-type: none"> • On 11 October 2017 five projects worth \$0.9 million were announced under the first round with project partners committing \$2.76 million in cash and in-kind contributions. 	■
CO2.3c	<i>Global Innovation Strategy - landing pads; in-bound innovation forum</i>	<ul style="list-style-type: none"> • Landing Pads are operational in San Francisco, Shanghai, Berlin, Singapore and Tel Aviv. • The first in-bound innovation forum was held in May. 	■
CO2.4	<i>Cyber Security Growth Centre</i>	<ul style="list-style-type: none"> • The Centre was launched in December 2016, with Mr Craig Davies appointed CEO. • The Centre released a Cyber Security Sector Competitiveness Plan in April 2017. 	■
CO2.5	<i>Innovation Connections</i>	<ul style="list-style-type: none"> • The program expansion took effect in August 2016. • Since the launch of NISA there have been 384 researcher placements, 39 business researcher placements and 38 graduate placements. 	■
CO2.6	<i>Quantum Computing</i>	<ul style="list-style-type: none"> • On 29 May 2017, the Australian Government co-founded Silicon Quantum Computing Pty Ltd (SQC). It has attracted a total investment of \$83 million across the government, research and private sectors. 	■
CO2.7	<i>Measuring Impact and Engagement in University Research</i>	<ul style="list-style-type: none"> • A pilot assessment has been undertaken. The first national assessment and report is planned for 2018. 	■

ATTACHMENT A

Ref	NISA measure	Implementation status summary	Traffic light
CO2.8	ARC Linkage Grants	<ul style="list-style-type: none"> The continuous application process commenced on 1 July 2016. For funding commencing in 2016 (proposals submitted between 1 July and 22 December 2016) the ARC received 225 proposals of which 89 were funded. 	■
Talent and skills			
TS3.1a	STEM Literacy: Inspiring nation of scientists - PM Prize for Science	<ul style="list-style-type: none"> A 'New Innovators' Prize has been added to the PM's Prizes for Science. 	■
TS3.1b	STEM Literacy: Inspiring nation of scientists - Students in International competitions	<ul style="list-style-type: none"> Arrangements are in place to deliver science, mathematics and physics Olympiads. Grants for student participation in international competitions are open to applications on an ongoing basis. Australian team performed extremely well at the six 2017 International Olympiads winning: <ul style="list-style-type: none"> 3 x Gold 10 x Silver 12 x Bronze 	■
TS3.1c	STEM Literacy: Early Learning initiatives.	<ul style="list-style-type: none"> Literacy and numeracy-focused initiatives (especially Little Scientists and Let's Count) are in place. Early Learning pre-school app is under development. 	■
TS3.1d	STEM Literacy: Inspiring nation of scientists - Community Engagement	<ul style="list-style-type: none"> Grants are being awarded. The department is developing a 'science engagement policy' which will provide overarching policy guidance on these activities. 	■
TS3.2	Equipping students to create and use digital technologies	<ul style="list-style-type: none"> All elements of this program are in place, with online computing challenges, ICT summer schools, and additional support for ICT teaching underway. 	■

ATTACHMENT A

Ref	NISA measure	Implementation status summary	Traffic light
TS3.3	<i>Expanding Opportunities for women in STEM</i>	<ul style="list-style-type: none"> Male Champions of Change in STEM and Science and Gender Equity initiatives are underway. Funds have been awarded under Women in STEM and Entrepreneurship grants. 	■
TS3.4	<i>Supporting innovation through visas</i>	<ul style="list-style-type: none"> The Entrepreneur visa and changes to the points system for skilled migration (extra points for STEM and ICT postgraduates) came into effect in September 2016. 	■
Government as an exemplar			
GE4.1	<i>Data61</i>	<ul style="list-style-type: none"> Data61 has delivered key initiatives under each objective and will continue its work under ongoing administration. 	■
GE4.2	<i>Business Research Innovation Initiative</i>	<ul style="list-style-type: none"> 20 applicants received 'feasibility study' grants in March 2017 followed by nine grants for 'proof of concept' in October 2017. 	■
GE4.3	<i>Digital Marketplace</i>	<ul style="list-style-type: none"> The Digital Marketplace became publicly available in August 2016. Approximately \$61 million of contracts have been awarded, with around 73 per cent going to SMEs. 	■
GE4.4	<i>Innovation and Science Australia (ISA)</i>	<ul style="list-style-type: none"> Legislation to formally establish ISA came into effect on 20 October 2016. On 3 November 2017, the Chair of ISA transmitted ISA's 2030 Strategic Plan, Australia 2030: Prosperity through innovation' to government. 	■
GE4.5	<i>Public Data Strategy</i>	<ul style="list-style-type: none"> Key public data initiatives have been completed. Further work will occur within established governance arrangements. The number of datasets hosted on the site has increased from 1,264 on 7 December 2015 to 25,868 on 9 October 2017. 	■
Miscellaneous			

ATTACHMENT A

Ref	NISA measure	Implementation status summary	Traffic light
M5.3	Crowd-Sourced Equity Funding	<ul style="list-style-type: none"> • Legislation passed the Parliament on 22 March. • ASIC will now finalise the regulatory framework before it takes effect on 28 September 2017. 	■
M5.4	I&S Agenda Communication Strategy	<ul style="list-style-type: none"> • The NISA communications campaign finished in May 2016. 	■
M5.5	Review of the Research and Development Tax Incentive Programme	<ul style="list-style-type: none"> • The review panel provided its report to the Government in April 2016. (The measure is rated 'blue' because the deliverable was the review report.) • The Government is considering its response to the review. 	■