Assessment and recommendations

With 21 years of uninterrupted growth Australia stands out among OECD countries. This performance has been sustained by sound policies and, more recently, booming demand for commodities from Asia. However, temporary factors, including the 2008-09 economic and financial crisis and increased caution among households from uncertainties in the international environment, have slowed growth. At the same time, Australia is adapting to structural changes prompted by the commodity boom, a strong exchange rate and terms of trade, which, while having moderated recently, remain high by historical standards. The main challenge for policy is therefore to manage a sustained recovery, while promoting important structural changes in the economy.

The medium-term outlook continues to be buoyed by proximity to a dynamic China, which buys large quantities of Australian resources, particularly abundant iron ore and coal. China also offers many new market opportunities for various sectors. Maintaining flexible markets, while ensuring that the burden and gains of adjustment are fairly distributed, would facilitate the implied structural changes. As a supply response in world coal and iron ore may permanently reverse some of the terms of trade gains in the future, it is crucial to ensure that conditions for a broader-based sustainable growth are reinforced. In this context, reversing the sharp downturn in productivity gains since the end of the 1990s is important.

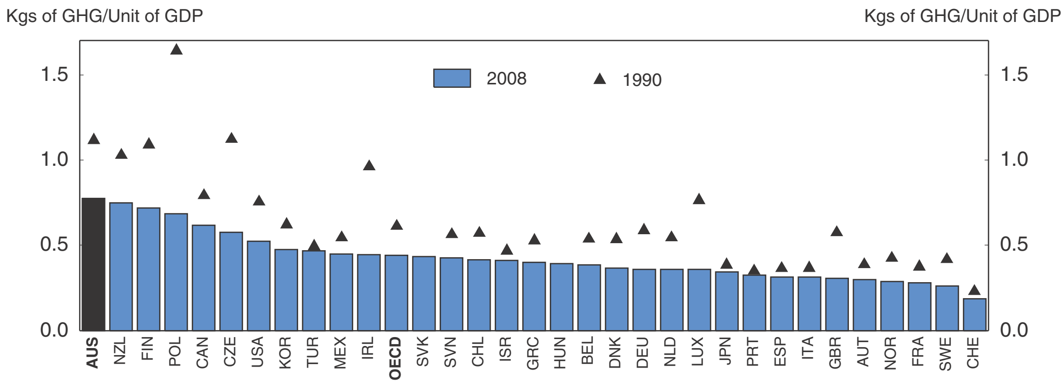
Recent efforts to improve environmental outcomes are welcome and should continue

One key to sustained growth in Australia is efficient environmental policy, especially in the areas of greenhouse gas emissions (GHG) and water management. Although Australia's GHG emissions account for only 1.5% of global emissions, their intensity per unit of GDP is higher than in other OECD countries due to widespread coal use, energy-intensive mining and heavy road transport (Figure 1).

To de-link emissions from economic growth, the government adopted in November 2011 the Clean Energy Legislative Package marking a decisive step forward in Australia's policy on climate change. The authorities intend to bring GHG emissions to 80% below their 2000 level by 2050, and have unilaterally committed to a 5% reduction by 2020. This latter commitment, which means cutting these emissions by 23% compared to a business-as-usual scenario (Figure 2), complements the previously approved goal of generating 20% of electricity supply from renewable sources by 2020. The Clean Energy Package is based on the following principles:

- Introduce a fixed price for carbon, for three years, set initially at AUD 23 per tonne, followed in financial year (FY) 2015/16 by a flexible price, based on an emissions trading system linked to international markets. Use the resulting revenues to compensate

Figure 1. **GHG emission**[1, 2]



1. Data include CO_2 from fuel combustion, fugitive, industrial processes and other; CH_4 from energy, agriculture, waste and other; N_2O from energy, agriculture, industrial processes and other; HFC, PFC and SF_6 from industrial processes.
2. Gross direct emissions including emissions or removals from land-use change and forestry (LULUCF).

Source: OECD, *Demography and Population Database* and International Energy Agency (IEA), *Energy Database.*

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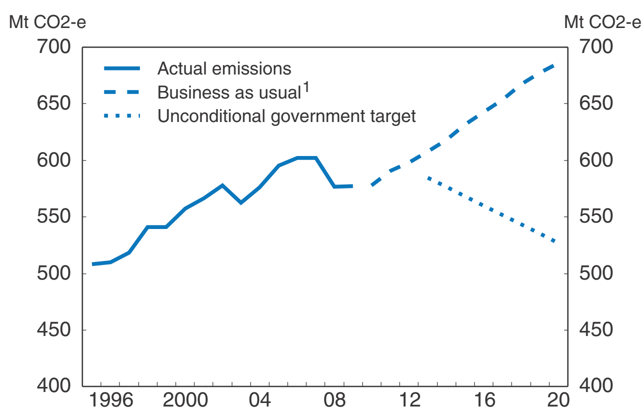
Figure 2. **Australia's emissions trends**



1. Emissions without carbon pricing or CFI (Carbon Farming Initiative) abatement.

Source: Australian Department of Climate Change and Energy Efficiency, *Australia's emissions projections 2010* and Treasury estimates from the report by SGLP (2011), *Strong Growth, Low Pollution, Modelling a Carbon Price,* Commonwealth of Australia.

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households for increased energy costs by reducing taxes and increasing pensions on a permanent basis, and to support energy-intensive trade-exposed enterprises through temporary allocations of free emission permits.

- Promote innovation, commercialisation and investment for renewable energies and energy efficiency, with financial support from the Clean Energy Finance Corporation and the Australian Renewable Energy Agency, funded respectively with budgets of AUD 10 billion and AUD 3.2 billion.

The use of these market mechanisms to reduce GHG emissions, together with accompanying measures, should drive structural change in the economy, moving resources towards and encouraging investment in clean energy and less emission-intensive technologies. Moreover, accompanying measures should limit the macroeconomic consequences of this reform. Apart from an estimated one-off price hike of ¾ per cent in FY 2012/13, the impact on the growth of national income per capita is projected to be around 0.1 percentage point per year to 2050 (SGLP, 2011). The adverse impact on firm competitiveness of the relatively high carbon price retained by Australia compared with the international market carbon prices, currently at AUD 10 per tonne, will be moderated by significant assistance measures initially granted in the form of free emission permits. Moreover, the recent decision to remove the previously announced carbon price floor, in the wake of the August 2012 agreement linking Australian and European emission trading systems as of July 2015, should limit future risks for competitiveness should the international carbon price remain permanently depressed. A lower-than-planned carbon price will have a budgetary cost unless household subsidies are reduced. However, their structure will make them difficult to unwind. According to some estimates, this fiscal cost would be relatively limited since a carbon price at AUD 15 in FY 2015/16 instead of the expected AUD 29, would reduce the budget balance by only around AUD 3 billion (less than 0.2% of GDP) (Priest, 2012; Bartos, 2012).

Better water pricing is also needed to improve economic efficiency and environmental outcomes. The water sector still faces obstacles to efficient allocation and use of water resources. In the rural sector, the over-allocation of ownership rights to use water resources leads to undercharging for irrigation water and hence to over-exploitation and poor investment decisions. To reduce over-allocation, water pricing should ensure full cost recovery, including environmental costs, and barriers to water trade should be removed. The National Water Initiative (NWI), Australia's blueprint for water reform, aims to price water efficiently through trading of water entitlements and removing barriers to trade. Best practice water pricing – including a user-pays principle – is a key element of the NWI. However, implementation has been slow, although it varies across jurisdictions. Government subsidies to irrigation infrastructure should be removed, even if they are transitory, as they confound efforts for an efficient pricing of water. Action taken by the government to address the problem of over-allocation through direct market purchases of privately held water entitlements is welcome.

Reform is also urgently needed in urban water (PC, 2011). Water security at the lowest cost would require the exploitation of all supply-side options, including rural-urban trade and water recycling, currently restricted by state regulations (OECD, 2008; IA, 2010). Rapid progress in implementing the NWI is essential in this regard. The extended drought has also made a case for more flexible pricing schemes, which are responsive to changes in water availability. A scarcity-based pricing scheme can be successful as long as it is accompanied by improvements in metering and a higher frequency billing to ensure that price signals are effectively transmitted to water users (PC, 2008).

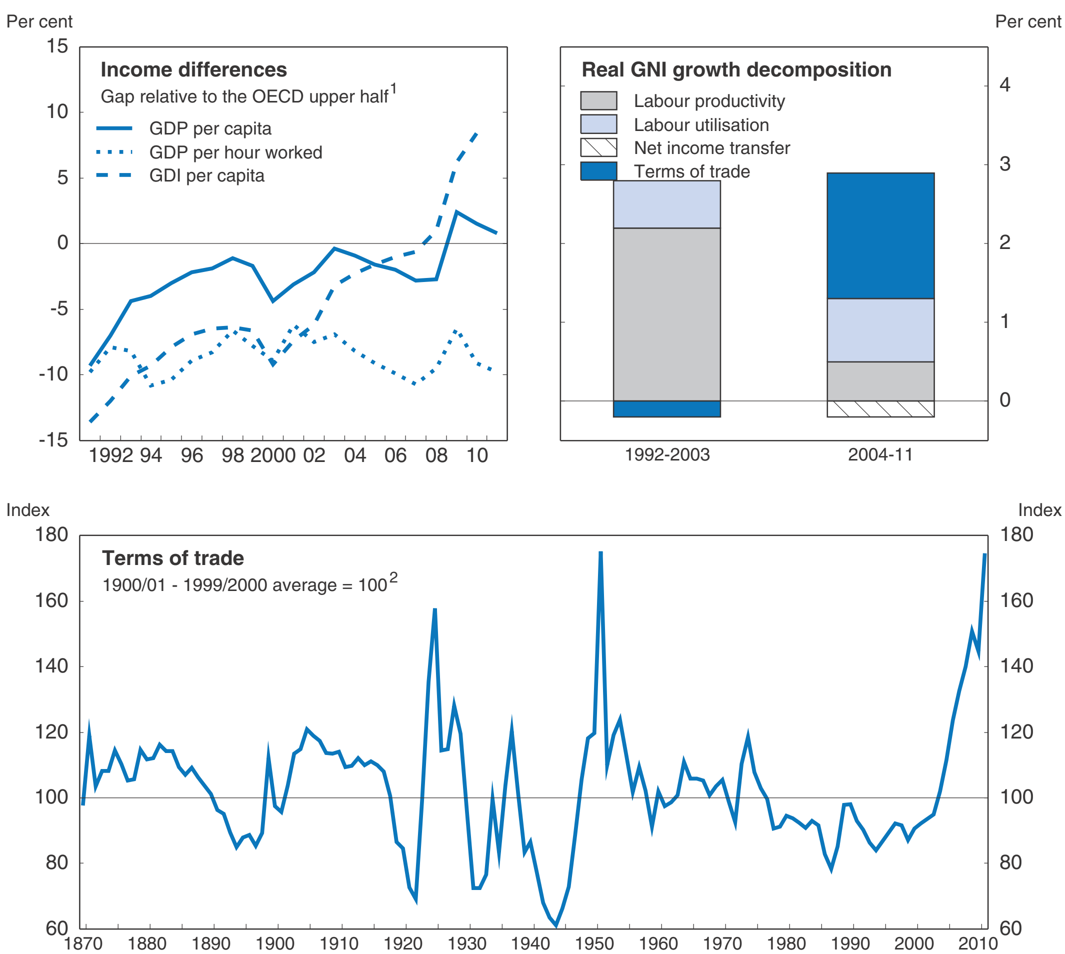
Most importantly, however, urban water prices are distorted by the focus on social objectives, which implies that water customers do not face the full cost of water services. Social objectives would be better pursued through the tax-transfer system. Additional concerns arise about the potential distortive impact on urban water prices from state subsidies which are likely to affect infrastructure decisions, even if the support is of short term and intermittent (OECD, 2010a; NWC, 2011). Ensuring that tariffs reflect the cost of providing water would also reduce the need for state subsidies to water companies.

Macroeconomic challenges and policy requirements

The mining boom has boosted growth since the early 2000s

Per capita income grew strongly over the past decade despite weakening of productivity growth and, by 2010, was 10% above the average level of the top half OECD countries (Figure 3) and only 5% below the US level. Growth has mainly been driven by the commodity price boom and a related rise in investment in new mining ventures. Indeed, since 2003 over half of the per-capita income growth has come from improvements in the terms of trade. The buoyancy also reflects a higher employment rate, promoted by successive structural labour market reforms over the past decades. Lastly, the exemplary handling of the global economic and financial crisis helped avoid a recession in 2008-09. Thanks to prudent macroeconomic policies adopted in the years before the crisis, when the crunch hit, activity was supported by a prompt monetary policy response by the Reserve Bank of Australia (RBA) and a large, timely and targeted fiscal stimulus by the government.

Figure 3. **Key macrodevelopments**



1. Percentage gap with respect to the simple average of the highest 17 OECD countries.
2. Calendar year prior to 1900, financial year thereafter.

Source: RBA; OECD, *OECD Economic Outlook Database*; OECD (2012), *Economic Policy Reforms: Going for Growth*, OECD Publishing, Paris.

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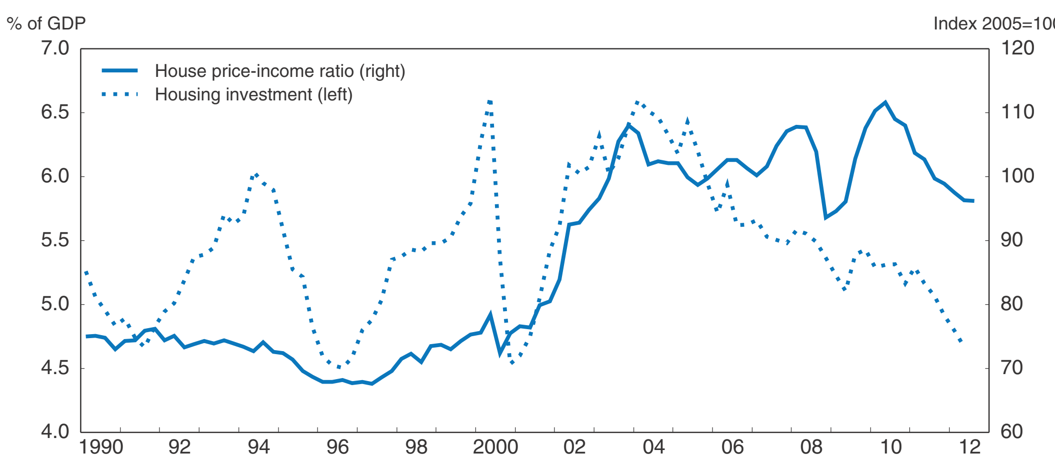
The economy has been temporarily weakened since the global economic crisis

Annual GDP growth, at 2¼ per cent on average in 2010 and 2011, was less vigorous than the OECD average, although it picked up in early 2012. Australia's relatively modest expansion reflects partly the fact that it had a relatively mild downturn during the global financial crisis (with no output decline) and partly a corresponding progressive withdrawal of the stimulus measures introduced in late 2008 and 2009, including a gradual increase of interest rates between October 2009 and end-2011. Output was also damped by major natural disasters that struck Queensland in early 2011 and disrupted coal exports. As in many other OECD countries, households, whose confidence has weakened, have become more prudent because of relatively high debt levels, declines in asset values and rising uncertainty (Stevens, 2011). Household savings rates have risen sharply since 2007, while demand for loans has slowed, penalising the retail sector.

The extended house price boom, which continued through the global crisis, is now cooling (Figure 4). Real house prices fell by more than 8% between their peak of mid-2010 and mid-2012, and have recently shown some signs of stabilisation thanks to monetary easing. In the absence of a significant economic downturn, house price adjustment is likely to remain orderly. Although the housing sector as a whole is still quite indebted, households appear well placed to meet their debt obligations, as shown by the low rate of non-performing housing loans, which has remained below 1%. Indeed, nearly 50% of owner-occupiers are repaying their mortgages ahead of schedule. This reduced appetite for housing debt seems motivated by a desire of households to bolster their wealth given the weakness in some asset markets. Growth in household income has exceeded the pace of increase in debt in recent years, which has also reinforced households' debt-servicing capacity. The risk of a house price bust is also limited by the fact that mortgage lenders have been refraining from easing lending standards (Ellis, 2012). In Australia, most mortgage lending is done by firms that are prudentially regulated by a single regulator.

Figure 4. **Housing investment and house price-income ratio**



Source: ABS, Cat. No. 6416.0 and OECD, *OECD Economic Outlook Database*.

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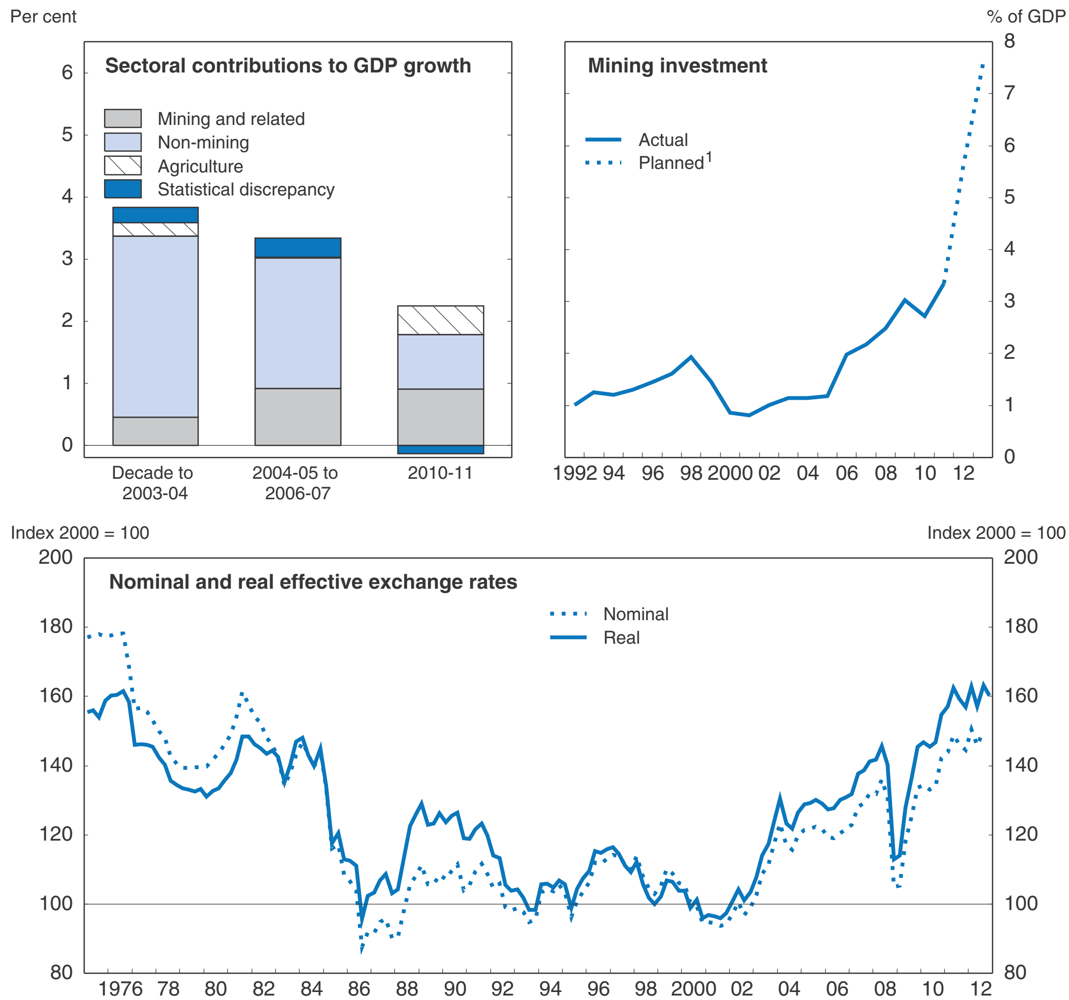
Since the mid-2000s growth has been built on rising mining revenues and capital expenditures, which had direct positive effects on the rest of the economy through, for example, purchases of local goods and services (Gruen, 2011; Connolly and Orsmond, 2011).

In 2010 and 2011, over half of non-agricultural GDP growth came from the expansion of the mining industry and related sectors, which together account for less than 20% of total GDP (Figure 5). The booming mining sector has also had wider, indirect effects on demand. Real household income is boosted by cheaper imports because of the stronger exchange rate, and job creation was solid between 2003 and 2010 in services and mining, despite the crisis.

Figure 5. **Growth has been uneven across sectors**



1. Survey-based expected capital expenditure corrected for the average realisation ratio.
Source: ABS, Cat. Nos. 5204.0 and 5625.0; OECD, *OECD Economic Outlook Database*.
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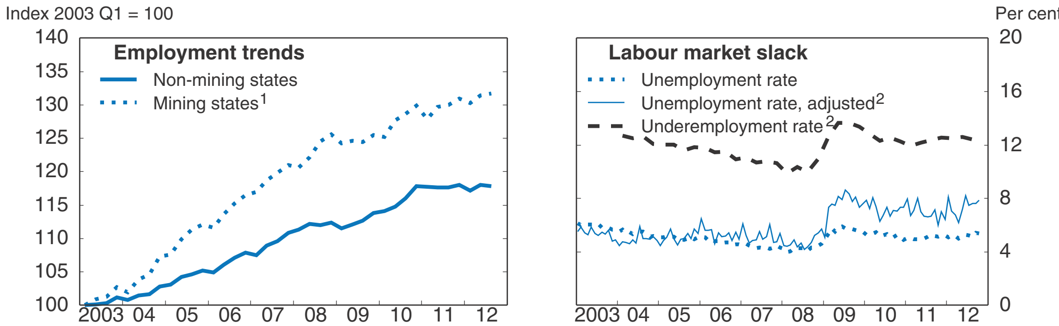
This buoyant demand has raised the real effective exchange rate, put pressure on other tradable sectors and changed the composition of demand. Higher mining investment has not yet been fully reflected in an expansion of export capacity. A growing number of firms, particularly in manufacturing, tourism and education, are facing problems of international competitiveness. The stronger exchange rate together with capital-goods investment have increased imports and thus widened the current account deficit.

The slowdown in job creation, which has been more visible in the non-mining states since 2012, largely reflects the weakening of the service sector (Figure 6). Although

Figure 6. **Labour market indicators**



1. Western Australia, Queensland and Northern Territory.
2. The adjusted unemployment rate takes into account the change in the number of hours worked. It is computed assuming that the people in the labour force would be willing to work the same numbers of monthly hours as, on average between January 2001 and October 2008. Underemployment rate includes employed persons aged 15 and over who want, and are available for, more hours of work than they currently have.

Source: ABS, Cat. No. 6202.0.

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unemployment has remained stable near its structural level of 5% up to mid-2012, some slack has persisted in the labour market, as shown by the high underemployment rate. Hours worked, which had decreased during the crisis, have only slowly recovered, as firms have aimed to retain labour and forestall potential skill shortages, which have occurred in the past. Overall, the output gap is estimated to be slightly negative, at around 2%, although there is considerable uncertainty in such estimates. Against this background, wages rose only moderately and inflation remained contained because also of falling import prices. Despite the introduction of carbon price in July 2012, headline and core inflation increased respectively by 2 and 2½ per cent in the third quarter of 2012.

Australia should continue to benefit from the mining boom but faces strong sectoral disparities

Growth, which strengthened in the first half of 2012, is expected to decelerate from 3¾ per cent in 2012 to 3-3¼ per cent in 2013 and 2014, *i.e.* slightly below the estimated potential (Table 1). The tightening of fiscal policy should dampen the domestic demand especially in FY 2012/13. Activity will remain tepid in many sectors facing pressures to adjust to the strong dollar. Moreover, the boost to demand provided by the resources investment boom is expected to fade in 2014 because of the fall in commodity prices, which reached almost 20% through the year to the third quarter of 2012, while the production costs have increased relatively rapidly in the mining sector. These forces will be partly offset by the more accommodative monetary stance adopted by the RBA and easier financial conditions, reflected by the recent upturn in housing prices, the rise in share markets and lower long-term interest rates. Resource investments will also remain very robust in 2013 with the share of mining investment in GDP projected to double compared with 2011 given plans announced in the sector (Figure 5). In addition, export growth should pick up thanks to the gradual enlargement of capacities of the resource sector and the recovery in foreign coal sales after the Queensland floods of 2011. With the expected progressive dissipation of global uncertainties and the gradual strengthening of the international environment over time, these offsetting forces should help the economy grow closer to its potential rate in the second half of 2014. With a still negative output gap and unemployment rate projected to hover around 5½ per cent, inflation should remain low at 2¼-2¾ per cent.

Table 1. **Short-term projections**

	2008	2010	2011	2012	2013	2014
	Current prices AUD billion	Percentage changes, volume (2009/2010 prices)				
GDP	1 232.4	**2.4**	**2.3**	**3.7**	**3.0**	**3.2**
Private consumption	668.6	2.9	3.3	3.9	2.6	3.1
Government consumption	213.3	3.4	2.5	2.6	0.1	1.1
Gross fixed capital formation	355.4	4.6	7.2	8.6	7.3	5.0
Final domestic demand	1 237.3	3.4	4.2	4.9	3.5	3.3
Stockbuilding[1]	3.5	0.6	0.4	-0.1	-0.2	0.0
Total domestic demand	1 240.8	3.7	4.7	4.9	3.3	3.3
Exports of goods and services	277.0	5.4	-1.3	5.6	5.6	6.1
Imports of goods and services	285.4	14.3	11.1	7.1	6.6	6.6
Net exports[1]	-8.4	-1.8	-2.5	-0.2	-0.3	-0.2
Memorandum items						
GDP deflator	_	5.7	4.1	-0.3	1.7	2.3
Consumer price index	_	2.9	3.4	1.8	2.8	2.3
Private consumption deflator	_	2.7	2.5	2.0	2.8	2.3
Unemployment rate	_	5.2	5.1	5.2	5.5	5.5
Output gap		-1.2	-2.0	-1.5	-1.9	-2.2
Household saving ratio[2]	_	8.9	9.9	8.9	8.7	9.0
General government financial balance[3]	_	-4.7	-4.0	-2.8	0.0	0.5
General government gross debt[3]	_	23.5	26.7	29.3	28.9	28.0
Current account balance[3]	_	-2.9	-2.2	-3.8	-5.0	-5.2

Note: National accounts are based on official chain-linked data. This introduces a discrepancy in the identity between real demand components and GDP. For further details see *OECD Economic Outlook Sources and Methods* (*www.oecd.org/eco/sources-and-methods*).
1. Contributions to changes in real GDP (percentage of real GDP in previous year), actual amount in the first column.
2. As a percentage of disposable income.
3. As a percentage of GDP.
Source: OECD, *OECD Economic Outlook 92 Database*.

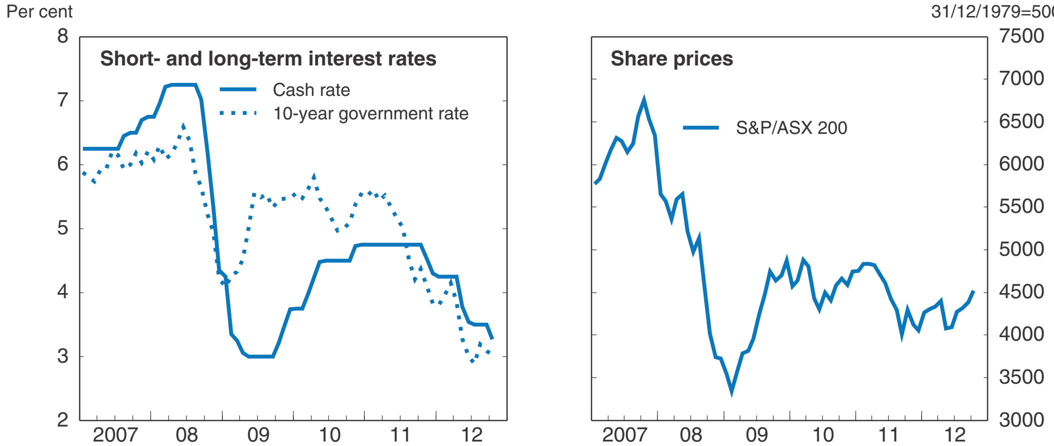
The main risks to these projections stem from the external environment and, in the first place, a potential worsening of Europe's sovereign debt crisis. Although Australia will likely be less vulnerable to such a scenario than many other OECD countries due to its low exposure to Europe, it is exposed to the risk of a substantial weakening of China and other Asian countries. A sharper-than-expected slowdown in this part of the world would reduce exports, the terms of trade and, most likely, the real exchange rate. Increased supply of resource production might also place downward pressure on commodity prices. The structural shifts towards resource sectors are also a source of uncertainty and may affect employment, confidence and growth, which could further weaken real estate prices.

The boom complicates short-and medium-term monetary and fiscal policy

The monetary easing is welcome

The flexible exchange rate and credible inflation target have facilitated adjustment to the mining boom so far. The appreciation of the dollar has eased the pressures of increasing demand on limited short-term supply. Unlike previous mining shocks, growth has remained relatively robust, unemployment low and inflation contained. In the absence of inflationary pressures, the RBA cut its cash rate by 1½ percentage point, to 3.25%, in five steps between November 2011 and October 2012, consistently with its inflation targeting framework (Figure 7). While bank funding costs remain elevated (Box 2), monetary policy

Figure 7. **Interest rates and share prices**



Source: RBA.

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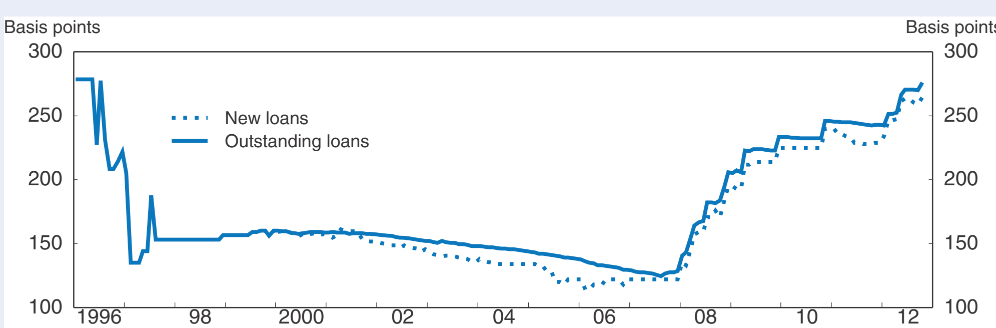
Box 2. **Bank funding costs have fallen more slowly than the cash rate**

The cash rate set by the RBA is a key factor, but not the only determinant of bank lending rates, which are also affected by other influences such as the level of competition in the financial sector and movements in risk premiums. Since the crisis, the spread between the cash rate and lending rates has increased by 1.20-1.30 percentage points, reversing the downward trend noted between the end of the 1990s and 2007 (Figure 8).

The main reason for the growing spread between banks' lending and cash rates is the increase in funding costs (Debelle, 2012). These costs reflect the higher costs of wholesale funding, the rise in deposit rates caused by heightened competition among banks, and a general shift from short-term to more stable financing sources. At the beginning of 2012, deposits supplied 52% of banks' overall funding, compared with 40% in 2007. Conversely, the share of funding source from short-term international markets dropped from 15% to 12%.

Figure 8. **Spread between the cash and mortgage rates**



Source: RBA.

has become accommodative. Long-term interest rates also fell from mid-2011 and financial asset prices have tended to stabilise since end-2011, which has lessened the impact of the strong dollar on financial conditions.

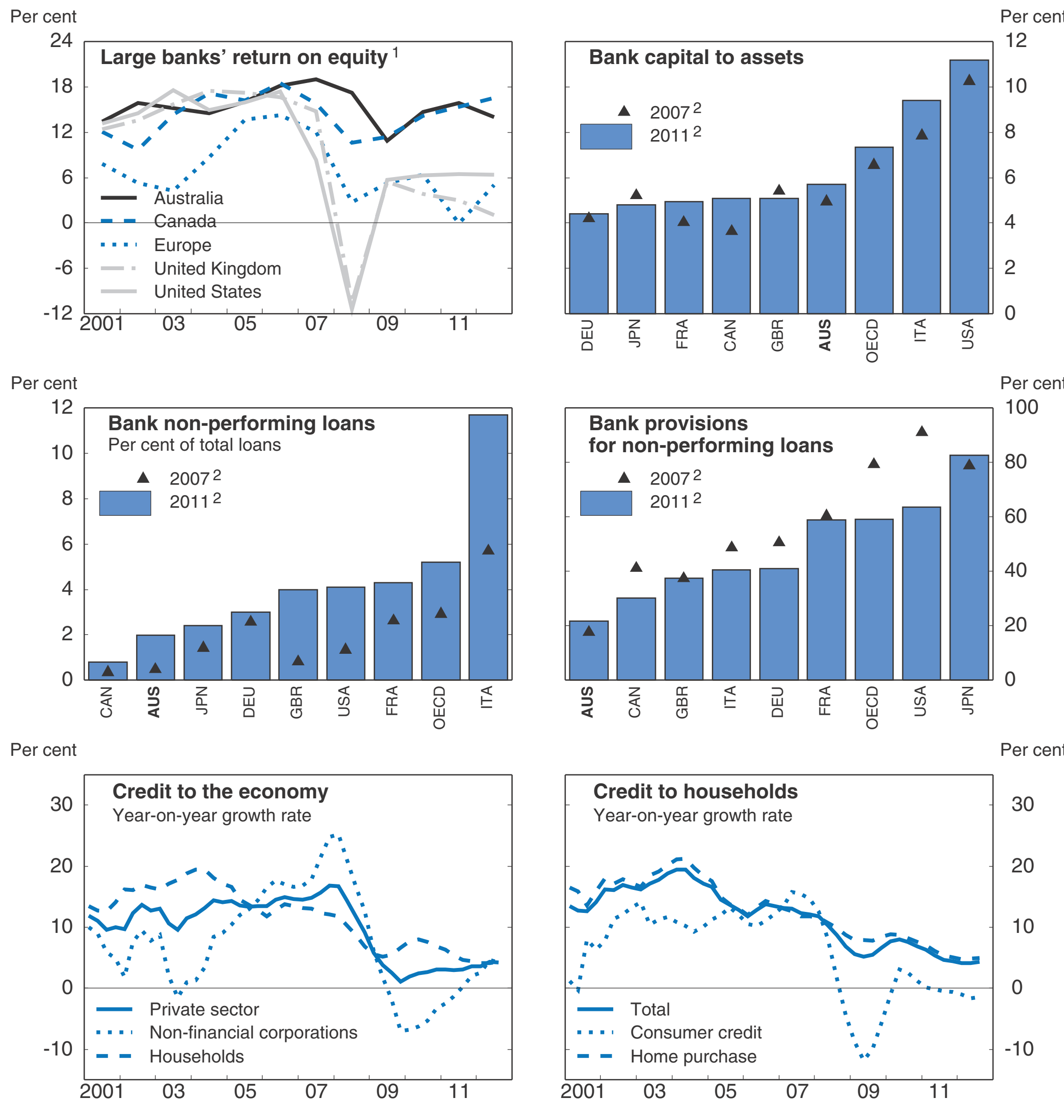
The cut in RBA rates, together with planned fiscal consolidation, is part of a rebalancing of the fiscal-monetary policy mix following the return to more normal times. The rebalancing of the policy mix implies less pressure on interest and exchange rates, thereby alleviating adjustment difficulties for the exposed non-mining sector (Corden, 2012). More broadly, the return to a more medium-term-oriented fiscal management after the events of the crisis, and to the pre-eminence of monetary policy to steer demand, is also appropriate. Despite its limitations, monetary policy is still the best available tool to flexibly manage the current economic situation, which is hard to decode because of the lumpiness of mining investments, uncertain delays concerning the expected pick-up of commodity exports and other structural changes.

Monetary conditions currently seem to be appropriate, but the RBA should be prepared for further loosening if the international environment deteriorates. The conduct of monetary policy needs to cope with the conflicting pressures on the currency. Recently, Australian dollar assets have attracted safe haven flows as sovereign funds and foreign central banks have diversified their portfolios by buying Australian government bonds, bringing their yield down to a 60-year low (Lowe, 2012). Partly reflecting carry trades, the fall in the terms of trade from their 2011 third-quarter peak did not, for example, bring about a drop in the Australian dollar. A lower sensitivity of the currency to falling commodity prices might require stronger cuts in the cash rate to support demand.

Another factor that may complicate monetary policy is shifts in bank funding costs which has been hampering monetary policy transmission mechanisms. Until recently, these developments have not affected monetary policy, as they are taken into account by the RBA when setting the cash rate. New increases in funding costs in the event of renewed turmoil in global financial markets would limit the scope for the Bank to ease monetary conditions through cash rate cuts. Nevertheless, the RBA's room for manoeuvre to cope with potential negative shocks remains substantial in comparison with other main central banks, especially as it has not expanded its balance sheet to ease monetary conditions so far.

The financial sector has continued to perform well. The banking system weathered the 2008-09 crisis well, and the larger banks are now less reliant on wholesale funding as deposit growth substantially exceeds the increase in loans. Australia's leading banks, unlike those in many other countries, have managed to keep profitability close to pre-crisis levels and have maintained a strong financial position, as in Canada (Figure 9). They continue to be viewed relatively favourably by the international rating agencies. Direct exposure to the euro area, especially to those countries facing the strongest financial stress, is low. The banking sector has limited exposure to the mining sector with most major investment projects financed by retained earnings or direct borrowing from capital markets (Connolly and Orsmond, 2011). As discussed in the previous *Survey*, banks' vulnerability to external funding is also mitigated by the fact that almost all these borrowings are hedged back to Australian dollars (d'Arcy *et al.*, 2009; OECD, 2010a). Moreover, overall loan impairment is still limited, especially compared with levels experienced in many other OECD countries, despite some increase in impairment for business loans since the crisis (RBA, 2012). Australian banks, which are adequately capitalised, also issued a sizeable amount of bonds in early 2012 to cover their wholesale funding requirements for the year, which has put them in a solid position to cope with possible renewed funding strains.

Figure 9. **Banking sector indicators**



1. After tax and minority interests.
2. Or nearest available year.

Source: RBA, *Monetary and Credit Statistics* and IMF, *Financial Soundness Indicators*.

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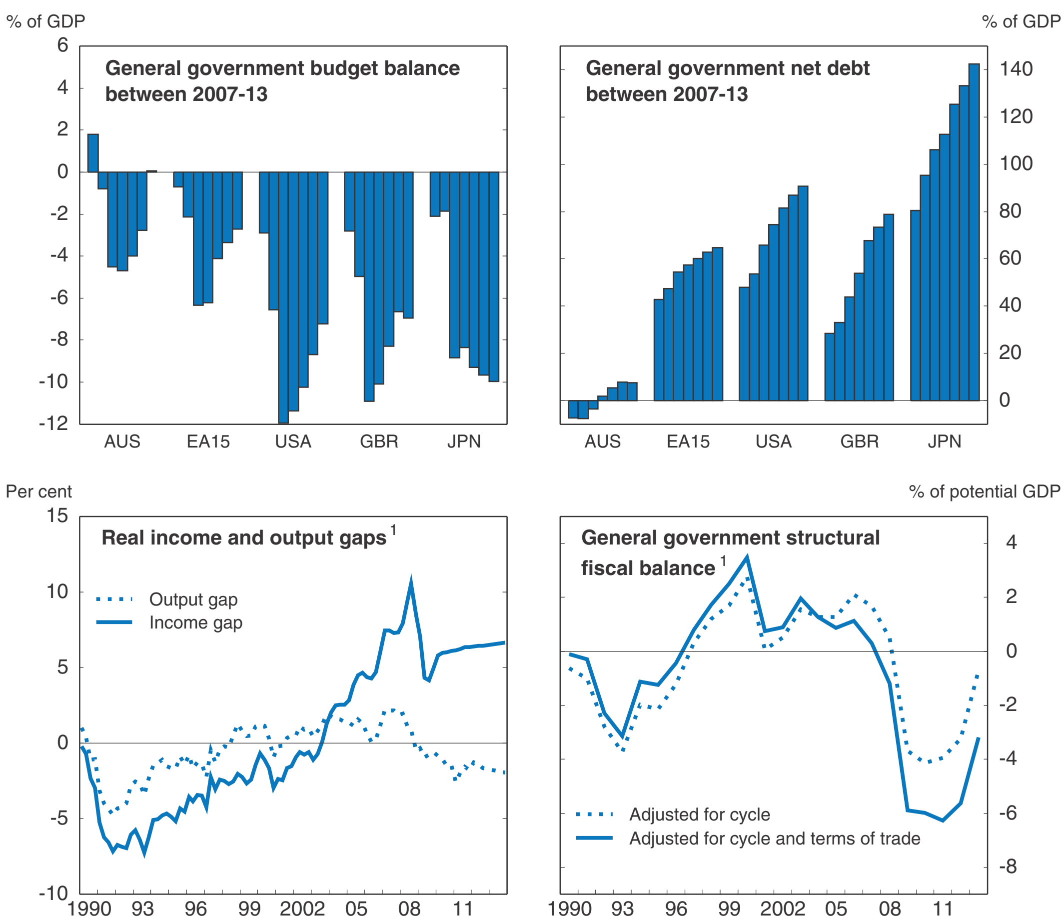
The priority for financial policies is to preserve a strong and stable banking sector. The recent behaviour of banks reflects in part stronger competition to attract deposits, which favours saving and is part of the general trend towards re-evaluating financial risks, which were underestimated before the crisis. Maintaining large, well capitalised and profitable banks also facilitates the access to international capital markets that the country needs. This should not prevent continued efforts to promote an adequate balance between stability and competition in the financial sector, where large banks tend to be favoured relative to smaller ones as a result of the government's implicit or explicit guarantees. To this end, the introduction since February 2012 of a permanent guarantee on deposits up to AUD 250 000 and applying it to all banks, which is relatively generous by international standards, constitutes a useful step to the level playing field for banking competition. The new scheme will fully protect 99% of deposit accounts in Australian banks. However, the problem associated with the risk of failure of systemically important financial institutions remains. This needs to be addressed by continued tight supervision. Moreover, as suggested by a recent Treasury discussion paper (Australian Government, 2012a), there might be a need to review the power of the Australian Prudential Regulation Authority to intervene pre-emptively in financial institutions facing material deterioration of their performance that could put depositors' money at risk.

Short-term fiscal policy is appropriate but should be ready to react to the substantial risks to the outlook

Australia's public finances are in much better shape than those of many OECD countries. The general government deficit, at around 4% of GDP in 2011, is less than half the level in the United States, Japan or the United Kingdom (Figure 10). Above all, net public debt, at around 5% of GDP in 2011, was 50 to 100 percentage points below the level

Figure 10. **Fiscal policy indicators**



1. The structural indicator adjusted for the terms of trade takes into account the cyclical fluctuations of the budget on the basis of the gap in real income rather than the gap in real output by including the impact in the terms of trade relative to their long-term level (Turner, 2006). It assumes that the terms of trade would eventually stabilise to their average value between FY 1985/86 and FY 2010/11.

Source: OECD, *OECD Economic Outlook 92 Database;* Turner, D. (2006), "Should Measures of Fiscal Stance be Adjusted for Terms of Trade Effects?", *OECD Economics Department Working Papers,* No. 519, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888932736889

in these countries and in the euro zone, in part due to the Future Fund (valued at AUD 77 billion or 5¼ per cent of GDP in March 2012), which is to offset public sector employee pensions from 2020 onwards. Australia is also well prepared to cope with the consequences of population ageing, thanks to its compulsory funded private pension system. Pressure on public finances in the coming decades will however arise from growth in health outlays, essentially for non-demographic reasons. Even so, net debt is projected to rise to only 20% of GDP in 2050, which should be easily sustainable (Intergenerational Report, 2010).

The underlying health of the public finances has however significantly weakened in recent years. OECD estimates the structural deficit at about 3½ per cent of GDP in 2011, at a time when the terms of trade were close to their historical peak. However, the high terms of trade raise income and tax revenues, especially in the resource sector where profits have soared and in the mining states. Adjusting for these effects, and assuming a terms of trade equal to its average between 1985 and 2010 widen the underlying fiscal deficit to 6% of GDP in 2011 (Figure 10). This deterioration reflects not only the impact of the crisis-induced fiscal stimulus, but spending of a large part of the pre-crisis mining-related revenues through permanent tax cuts and expenditure increases. To deal with this adverse trend, several savings measures have been introduced that will steadily build over time, providing ongoing improvements to the budget position. These measures include increasing the pension age, means testing the private health insurance rebate, reforms to family tax benefits, and reducing superannuation concessions for high income earners.

The federal government aims to return to a surplus as of FY 2012/13. This implies a sharp tightening of 3% of GDP in one year. It would strengthen the national savings rate, thereby limiting the country's dependence on foreign capital to meet its high investment needs. This strategy should help retain the top (AAA) grade awarded to Australia by the credit rating agencies, and to keep down the costs of banks' access to international financial markets. Above all, a low unemployment rate, growth prospects close to potential and still-high terms of trade constitute favourable conditions for restoring fiscal space. Therefore, now is an opportune time for fiscal consolidation. Maintaining a solid government balance sheet offers valuable protection against large-scale shocks, as the 2008-09 crisis demonstrated.

Measures have been chosen to reduce the impact of the consolidation on GDP, including small shifts in the timing of outlays and rescheduling of tax cuts, with little impact on the economy. Expenditure cuts in defence and international aid are predominantly spent abroad or stimulate imports. Some measures are designed to redistribute resources in favour of lower-income social groups with a high propensity to consume, thereby cushioning the negative effect of the measures on demand (Parkinson 2012). Moreover, the economy will be supported by the monetary easing underway. Eslake (2012) estimates that the 3% of GDP deficit cut will reduce growth by less than 1%.

However, flexibility is required if negative risks to the outlook materialise. Given the traditional medium-term focus of fiscal policy, the authorities should let automatic stabilisers work in case of a sharper-than-expected cyclical weakening, even if this postpones the return to a budgetary surplus. While monetary policy should be the first line of defence, if a new full-scale global crisis were to break out, the authorities should be ready to intervene in a prompt manner to support activity, as they did in 2008-09.

The medium-term fiscal strategy should take better account of structural changes and be more cautious

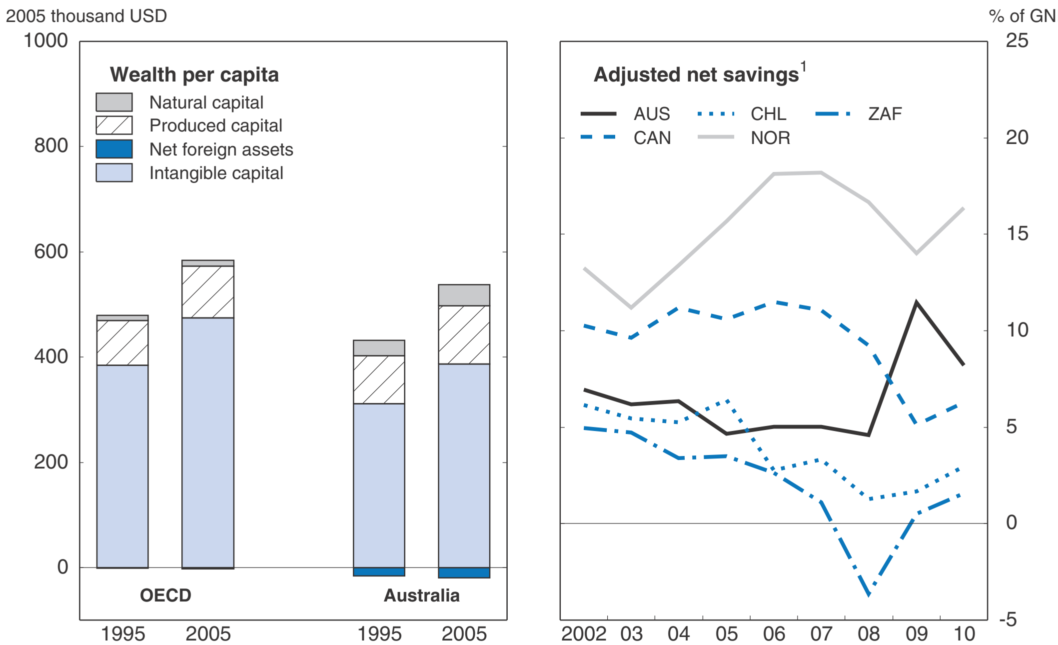
The medium-term fiscal plan is to achieve a small increase in the surplus by 2015 (from 0.1% to 0.3% of GDP between FY 2012/13 and FY 2014/15). The authorities have committed to restrict the real increase in public spending to below 2% per annum until a surplus of 1% of GDP is reached and while the economy is growing at/or above trend. This is consistent with the Australian medium-term fiscal framework which seeks to maintain a small surplus on average over the medium term, without increasing the tax-to-GDP ratio above its FY 2007/08 level, on average, and thereby improving the government's net financial worth over the medium term. However, the plan presumes that the terms of trade will remain relatively high, although it assumes a cumulative medium-term decline of around 10%. Should the terms of trade return to their lower longer-term average value (estimated on the basis of the average level over the 1985-2011 or 1985-2003 period), this would imply instead a 40% to 50% fall. In this case, the slight federal budget surplus as of FY 2012/13 could turn into a deficit of 2% to 3% of GDP, counting only the direct effect of lower fiscal receipts induced by lower commodity prices. A sharper fiscal deterioration might occur if the fall in the terms of trade resulted in a cyclical downturn as well.

In this perspective, it would be prudent to consider building a larger buffer against the risks of future commodity price declines. Having to reverse higher permanent spending commitments because of falling revenues would be costly, and could entail a pro-cyclical fiscal contraction. As discussed in the 2008 *Survey,* during the first phase of the mining boom, between FY 2002/03 and FY 2007/08, the federal government redistributed the bulk of the incremental tax revenue derived from terms-of-trade gains, even though a comfortable budget surplus of 2% of GDP was maintained (OECD, 2008). The creation of a stabilisation fund would help insulate the budget from swings in resource-based revenues and thereby protect the economy from increasing volatility as it shifts to a greater dependence on the resource sector. Such a fund would be a useful device to accumulate public revenues from mining taxes when they are unusually high. It would de-link public spending decisions from revenue changes caused by shifting terms of trade, which would be consistent with the rationale underlying the current budgetary strategy. The issue is not only to use the unusual revenue windfall to raise national savings, but also to mobilise these resources promptly in a downturn.

The pace at which the revenues accruing to the public sector from mining exploitation are recycled into the economy deserves an open and transparent debate to take into account society's risk tolerance given the volatility of these revenues and society's preference for the timing of their use (Kearns and Lowe, 2011). According to the authorities, this question does not need to be settled urgently, since the targeted budget surplus should first be reached and the net debt wiped out. Also, the current medium-term fiscal framework has worked well so far. Moreover, the difficulties in establishing such a fund with an appropriate fiscal rule should not be underestimated.

In contrast to other countries such as Norway however, Australia does not need to permanently accumulate assets in a reserve fund (Gruen and Garton, 2012). Despite depletion of subsoil assets, Australia's natural resource wealth has continued to increase, including as a result of new discoveries and relative price changes. Net savings data adjusted for the depletion of natural assets from the World Bank suggest that gross savings in Australia along with investments in human capital have been sufficiently large to increase national wealth over time (Figure 11).

Figure 11. **Expanded wealth measures**



1. Adjusted net savings take into account gross savings for investments in human capital, for the consumption of physical capital and the depletion of natural capital, including estimates of damage generated as a result of carbon dioxide and particulate emissions.
Adjusted net savings = Gross national saving + education expenditure - consumption of fixed capital - energy depletion - mineral depletion - net forest depletion - damage from carbon dioxide emissions - damage from particulate emissions.

Source: World Bank (2010), *World Development Indicators* and *Global Development Finance*.

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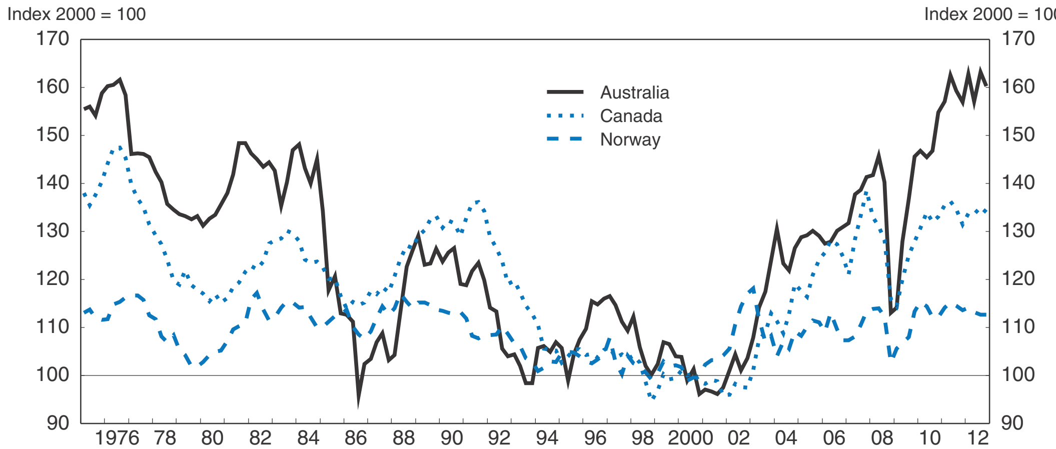
Box 3. **Recommendations for macroeconomic policies**

- The current shift in the policy mix is appropriate. If the cycle weakens, ease monetary policy and let the automatic stabilisers work. While monetary policy should be the first line of defence, if a full-scale global crisis of similar magnitude as in 2008-09 erupts, be ready to adopt prompt fiscal expansion.
- Consider creating a stabilisation fund to better insulate public spending decisions from revenue changes caused by volatile terms of trade.

Renewed structural adjustment to foster economic performance

China's sustained strong growth opens new opportunities for Australia, but will impose significant strains. Adjustment to the mining boom so far has produced favourable results, thanks to the robust macroeconomic policy framework and the largely decentralised wage setting system (Battellino, 2010; Parkinson, 2012). The country's approach to coping with the shock however contrasts with the experience of Norway which has saved a large part of the additional demand generated by its terms-of-trade gains and has broadly stabilised its real exchange rate (Figure 12). Australia remains potentially well placed to continue benefiting from robust Chinese growth due to complementarities between the two economies. It produces a broad range of goods and services in agriculture, mining, education and tourism for which Chinese and Asian demand is strong and likely

Figure 12. **Real effective exchange rates**



Source: OECD, *OECD Economic Outlook Database.*

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to grow. More broadly, Australia is likely to share in the benefits from the gradual shift of the world economy's centre of gravity towards Asia. While the cost represented by the country's remoteness from major markets as measured by per capita GDP was estimated at more than 10% in 2005 (Boulhol and de Serres, 2008), that handicap could drop by 3 percentage points by 2050, according to OECD estimates.

A smooth reallocation of resources within the economy is needed to take full advantage of the new opportunities

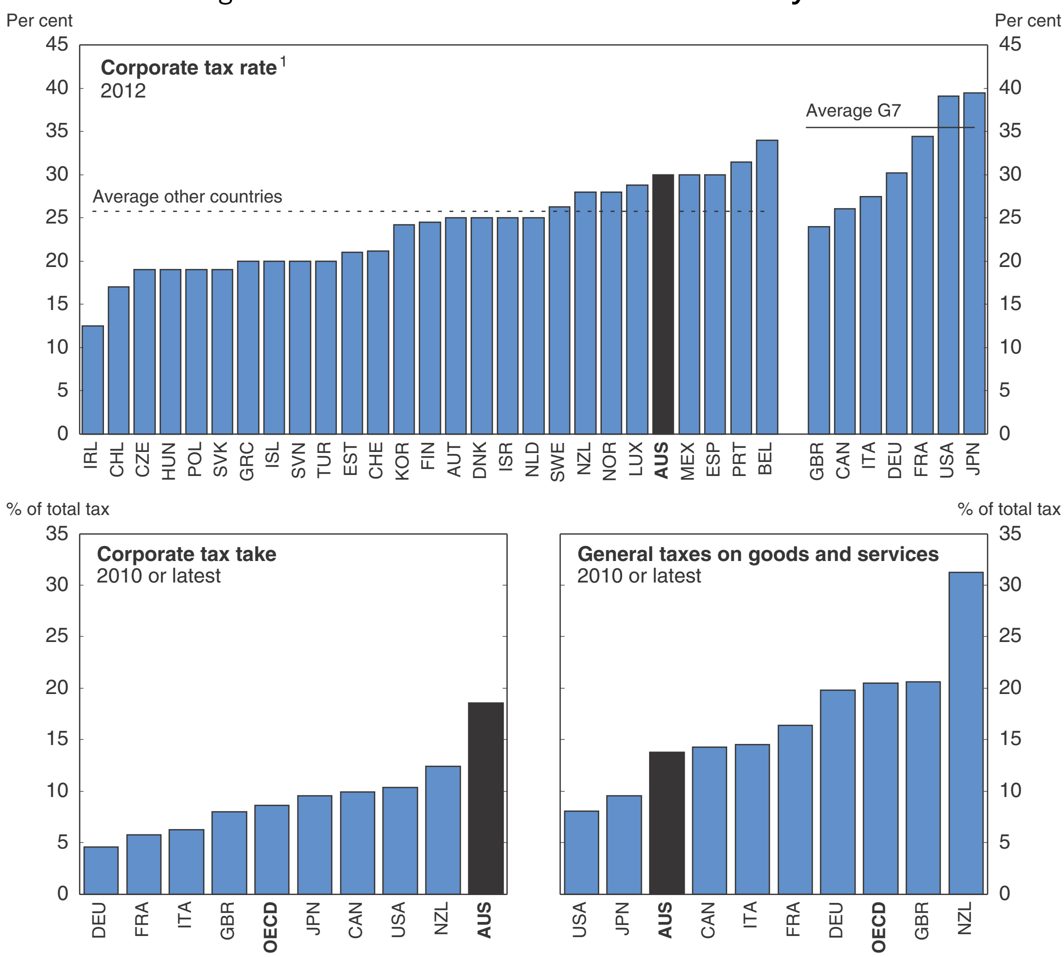
Beyond measures needed to guarantee macroeconomic stability, the best economic policy response in present circumstances would be to maintain and, if possible, reinforce the economy's flexibility. From this perspective, the authorities' efforts to improve public information on the implications that Asia's development holds for Australia are welcome and should be pursued. The many ramifications of the adjustments that the country is bound to face should be explored and explained so that society will accept them more readily.

Australia should not try to resist the changes imposed by this transformed environment. These changes are the result of a mutation of the world economy, which is probably not a temporary phenomenon and is more likely the source of a permanent shift in Australia's comparative advantage, rather than an example of "Dutch disease" (Gruen, 2011). It would be inappropriate then to try to preserve an industrial structure that has in fact been constantly evolving. Using public subsidies to keep resources in sectors adversely affected by such changes, such as the automotive industry, would likely prove futile and expensive and imply lost opportunities elsewhere. It will force stiffer adjustments on sectors that do not benefit from such special support, and over time become a drag on living standards. It is also important not to procrastinate in making these adjustments, for they are easier to undertake in current circumstances, when the economy is growing strongly and resources are available to ease the transition and to compensate the "losers" from the adjustment process. As underlined by the authorities, there is a case for help to smooth the transition, but not preventing it, when its pace and scale make it difficult to absorb, for instance at the regional level.

Tax reforms have a useful role to play in facilitating ongoing structural adjustment

The mineral resource rent tax (MRRT) and tax cuts for SMEs aim to distribute mining boom proceeds more fairly and help firms adapt to the changes underway. Shifting the tax burden from capital, the most mobile factor of production, towards non-renewable resources is justified on efficiency grounds, particularly because the corporate tax rate is relatively high for a "small", capital-importing country like Australia (Figure 13). These reforms go in the right direction, but could usefully be refined in some instances as in the case of the MRRT, even if there is currently little political support for modifying the design of this tax.

Figure 13. **Selected characteristics of the tax system**



1. The use of effective rather than statutory tax rate would provide a more accurate international comparison of corporate tax rates. However, the calculation of homogeneous effective corporate tax rates, taking into account the large diversity of tax deductions in the various tax systems, is not readily available.

Source: OECD (2012), *Tax Database.*

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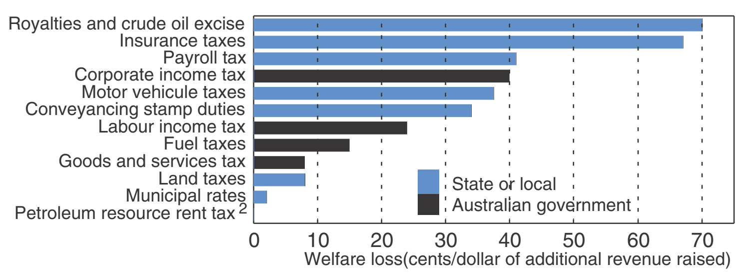
The MRRT in its current form will not eliminate distortions caused by state-levied mining royalties, especially for low-return projects where they are heaviest. Consideration should be given to replacing the royalties with a mining rent tax modelled on the federal approach, leaving the states with the option of setting their own tax rate. This change should be accompanied by broader MRRT coverage, which is limited to iron and coal mining and excludes small firms. Once lessons have been drawn from this new scheme, mineral resource levies could be raised further if, as appears likely, they remain low on the private rent extracted.

There have also been some welcome steps to ease the tax burden on businesses, and on SMEs in particular, including through simplified and more generous amortisation rules and the possibility to "carry back" losses to offset past taxable income. This latter measure reduces the asymmetry of current taxation rules concerning corporate profits and losses and should not only boost the level and quality of investments but may also reinforce the economy's relatively weak automatic stabilisers. To enhance the benefits of this measure, the authorities might consider expanding its coverage, which is currently confined to incorporated firms, which accounts for only 28% of all small- and medium-sized enterprises (SMEs). The benefits of a possible extension of this provision to unincorporated entrepreneurs are, however, likely to be lower than for corporate firms, since individual entrepreneurs can already set their business losses against incomes from other activity.

The authorities' goal of reducing company taxation by cutting the corporate tax rate, which at 30% is around 5 percentage points above the OECD weighted average, is welcome to help firms adjust their business models to the ongoing structural changes. Promoting new investment, including from abroad, is needed especially in the exposed non-mining sector to boost productivity and competitiveness in a high exchange rate environment. In addition, a lower corporate tax rate would reduce the impact of the significant distortions generated by this tax (Figure 14).

Figure 14. **Marginal welfare loss from a 5% increase in selected taxes**[1]



1. Based on the KPMG Econtech MM900 general equilibrium model of the Australian economy, the welfare loss is defined as the loss in consumer welfare per dollar of revenue raised for a small (5%) increase in each tax, simulated individually. It is measured as a satisfaction (utility) at its original level, once the revenue raised by the tax has been returned to the consumer as a lump sum transfer. The extent of such compensation reflects the distorting effect of the tax in the economy.
2. The petroleum resource rent tax is modelled as a pure rent tax giving rise to a zero welfare loss. In practice, a small increase in this tax could be expected to induce some welfare loss because it is not a pure resource rent tax with full loss offset. However, it would be expected to rank as one of the most efficient taxes in the chart.

Source: KPMG (2009), *Econtech*.

StatLink *http://dx.doi.org/10.1787/888932736965*

However, the potential room for lowering this tax could be restrained by the plan to fund it from within the business tax system, as suggested by a report released by a Business Tax Working Group in November 2012. The authorities should instead consider corporate tax reform in a broader context, which would both foster the structural adjustments and bring in budgetary savings. This includes cuts in subsidies for the automotive sector and irrigation infrastructure in rural areas, which are a costly alternative to government repurchase of water user rights. Budgetary room can also be found by eliminating inefficient fossil fuel subsidies as agreed by the G20. With carbon pricing for large industrial emitters now in place, Australia should review the fuel tax credits and exemptions provided to fuel used in sectors like agriculture, forestry and fishing to ensure that an effective carbon price also reaches these sectors. Austria and the Netherlands, for example, have announced that as of 2013 they will eliminate tax reductions for fuel used in agriculture.

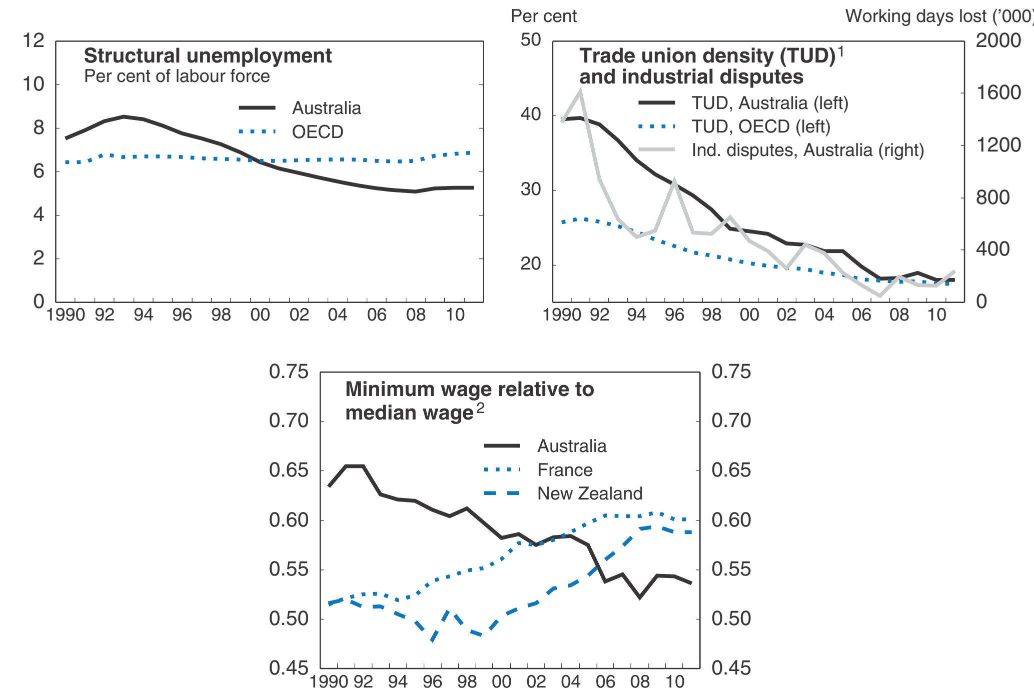
As stressed in the last *Survey*, longer-term tax reform efforts should also be pursued along the lines suggested in the Henry report to stimulate productivity and enhance the economy's capacity to adapt to its changing environment (OECD, 2010a; AFTS, 2010). New steps have recently been taken in this direction, including the raising of the personal income tax threshold in the FY 2012/13 budget as a counterpart to the introduction of carbon pricing in July 2012. One priority should be to rationalise the tax systems of the states, which rely on too many inefficient taxes with high administrative costs, imposed on housing in particular (Figure 14). A cut in conveyance duties, as was recently decided by the Australia Capital Territory, would reduce property transaction costs and encourage labour mobility. The progressive nature of the state land tax, which places a particular burden on large property developers, should also be eliminated to boost the rental of apartment buildings, which is currently low in Australian cities (OECD, 2010a). Such changes could be financed by a hike in the 10% GST rate, which is low in international comparison, by cuts in subsidies for first-home buyers or by broadening the state land tax base through the suppression of the exemption for owner-occupiers. Alternatively, there are also some significant tax expenditures that could be reduced or eliminated, such as exemptions from GST, including on fresh food, medical services and school supplies (OECD, 2010a).

A flexible labour market, taking account of equity concerns, remains essential for adjustment

Australia's labour market has performed remarkably well compared to most other OECD countries. The implementation of a new industrial relations system in 2009 via the *2009 Fair Work Act* strengthened bargaining at the enterprise level, widened the minimum conditions safety net and restored protection against unfair dismissal for employees in SMEs. A recently completed independent review of the Fair Work Act found that since the Act came into force important economic outcomes (*e.g.* wages growth, employment growth, industrial disputation) have been favourable to Australia's continuing prosperity (Australian Government, 2012b). The Fair Work Act has made the system more employee-friendly – in terms for example of a slightly higher relative minimum wage and unionisation rate – with little effect so far on labour market performance and productivity (Borland, 2012) (Figure 15). Nevertheless, business has been concerned that the Act impedes productivity growth by eliminating individual statutory agreements, increasing the scope of matters that can be included in enterprise agreements and restoring the requirement for agreements for genuinely new businesses (greenfield agreements) to be negotiated with a union (a requirement which has on some occasions made it difficult to reach agreement within a reasonable time frame).

The development of labour market institutions since 1990, together with other factors, including rising demand for skilled workers resulting from technological change, have widened income inequalities among the working age population (OECD, 2011a) (Figure 16). While income inequality may be better addressed with tax and transfer policies, a fair industrial relations framework that the Fair Work Act reform has aimed to put in place, can play a role. The objectives of the Act include providing "a balanced framework for co-operative and productive workplace relations that promote national economic prosperity and social inclusion for all Australians". The recently completed Fair Work Act Review

Figure 15. **Structural labour market indicators**



1. Number of wage and salary earners that are trade union members, divided by the total number of wage and salary earners.
2. Of full-time workers.

Source: OECD, *Trade Union Density Database; Minimum Wages database; OECD Economic Outlook Database.*

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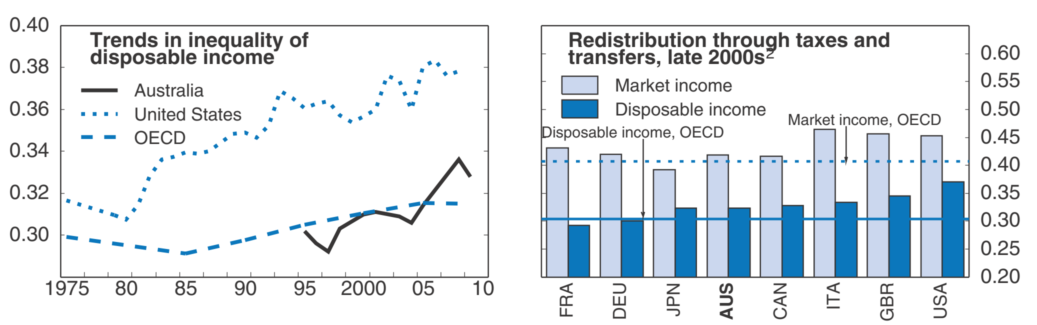
Figure 16. **Income inequality**

Gini coefficient[1]



1. The Gini coefficient ranges from 0 (when all people have identical incomes) to 1 (when the richest person has all the income). Market incomes are labour earnings, capital incomes and savings. Disposable income is market income plus social transfers less income taxes. Incomes are adjusted for household size. Data refer to the working-age population.
2. Late 2000s refer to a year between 2006 and 2009.

Source: OECD (2011), *Divided We Stand: Why Inequality Keeps Rising*, OECD Publishing, Paris.

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found that the effects of the legislation have been broadly consistent with this objective (Australian Government, 2012b). A review of modern awards (which set minimum terms and conditions of employment in particular industries or occupations) by Fair Work Australia (FWA) is currently underway and is due to be completed by 31 May 2013.

As suggested by the Fair Work Act Review, major changes do not seem warranted at this stage. The Review found that existing framework of direct and decentralised bargaining between employers and employees still seems to be yielding good results. The costs of adjusting to frequent regulatory changes both for workers and employers also militate against frequent major reforms in the absence of evidence of a problem (Borland, 2012). Consequently, this independent review did not suggest any fundamental modification to the legislation but proposed some technical amendments to further encourage flexibility and the equity within the system.

These amendments would, for instance, promote easier use of individual flexible arrangements and reduce the risks of improper recourse to unfair dismissal procedures. In addition to these welcome proposals, the distribution of litigation costs of unfair dismissal claims borne (mostly) by the employers could be somewhat rebalanced to reduce the financial incentives to abuse them, while avoiding creating a barrier to industrial justice for workers. Moreover, to facilitate the agreements in the case of negotiations for new businesses (greenfield agreements), the authorities could consider allowing non-union rather than only union to bargain with employers (as is possible for all other agreements), rather than extending the arbitration role of FWA, as is suggested by the review.

The ongoing confrontational debate opposing the business sector and unions on the functioning of the industrial relations system may eventually undermine industrial peace in a period of important structural adjustment. More co-operative approaches to industrial relations in firms would favour employment-driven innovation based on workers' experience and human capital, which would stimulate productivity and competitiveness. To support a more co-operative climate, the Fair Work Act Review has suggested that FWA plays a more active role, for example, by identifying best practices productivity enhancing provisions in agreements and making them more widely known. In addition, encouraging a more collaborative approach might be helped by investigating sector-specific working conditions that influence negotiated flexibility and equity issues. The Productivity Commission recently performed such an investigation for the retail sector. Improving information on particular flexibility needs and equity issues in other sectors might help move forward the efficiency fairness debate by focusing it on practical questions, which can be solved through negotiations.

A well-functioning employment service can play an important role in mitigating the social costs of adjusting to structural changes. Employment services (Job Service Australia, JSA) compare favourably with those in other OECD countries, and the authorities do not intend to reform JSA in the near future, as it depends on private providers financed by the federal government with the current contracts running until 2015. Nevertheless, the delivery of these services is fraught with excessive bureaucracy and incentive problems. To improve effectiveness the funding of employment services could be more closely linked to job seekers, possibly by introducing a voucher system, letting them, at least to some extent, shop among competing providers for services that meet their needs. It may also be useful for many disadvantaged job seekers to take an active role in preparing themselves to integrate the labour market, even though they should continue to comply with strict job-search requirements and not be allowed to arbitrarily change providers. Consideration should be given to further reducing *ex ante* control on service providers' activity and more tightly linking their remuneration to the "Star Rating" (which the Employment Department uses to assess the relative performance of service providers), which requires a close monitoring to minimise risks of statistical bias. In particular, achieving employment outcomes for less disadvantaged workers should not be given a too low weight within the performance management system.

Employment services could also be reorganised to offer standardised employment services for job seekers with no particular disadvantage, and separate individualized services for the currently or potentially long-term unemployed. Such a system, which would encourage more specialisation among service providers, could mean greater efficiency.

Box 4. **Recommendations for facilitating the structural adjustment to the mining boom and Asian development**

Tax reform

- Pursue business tax reforms including reducing the corporate tax rate and a possible extension of the carry back loss scheme to unincorporated firms.
- In pursuing tax reform promote the use of less-distorting untapped fiscal resources, including cuts in subsidies to irrigation infrastructure and the automotive sector. Review tax credit for business for excise taxes on fossil fuels in sectors not covered by the new carbon tax.
- Broaden the mineral resource rent tax (MRRT) coverage. Consider replacing state royalties by a mining rent tax modelled on the federal approach, allowing states to set their tax rates.
- Rationalise other state taxes: reduce or remove conveyance duties and the progressivity of the state land tax; broaden the state land tax base by eliminating exemptions for owner-occupiers; cut subsidies to first-home buyers; broaden the base of the GST and consider increasing its relatively low rate.

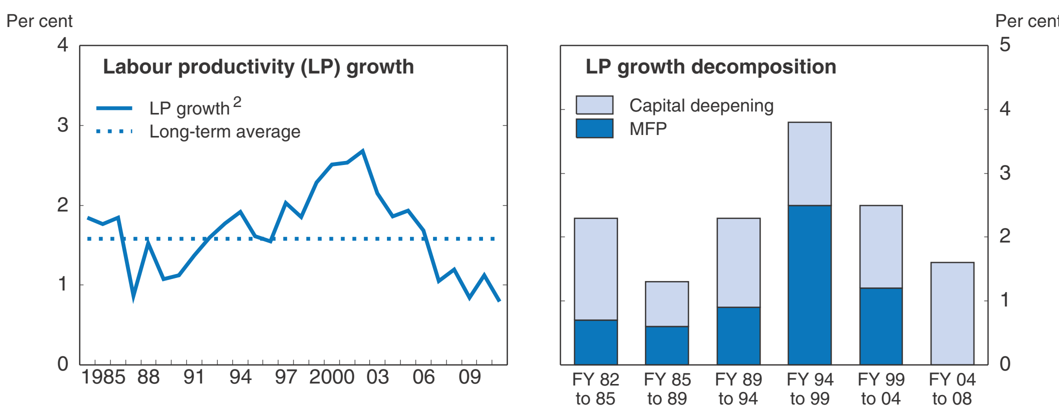
Labour market reform

- Preserve the existing framework of direct and decentralised bargaining as it has yielded good results so far. Avoid substantive changes to the framework to minimise the costs of adjusting to frequent regulatory changes.
- Consider minor changes to the industrial relations framework including allowing employers commencing a genuinely new business to negotiate collective agreements both directly with potential future employees and/or unions.
- Rebalance the distribution of litigation costs of unfair dismissal procedures between employees and employers to reduce incentives to abuse them.
- Investigate sector-specific working conditions affecting the flexibility and equity issues negotiated between employers and employees to help move the efficiency/fairness debate forward and focusing it on practical questions that are potentially easier to solve through negotiations and compromises.
- To improve the effectiveness of employment service, link funding of employment services more closely to job seekers, possibly by introducing a voucher system. Consider linking the remuneration of service providers more tightly to their outcomes measured by the “Star Rating” performance evaluation system.
- Specialise Job Service Australia, with standardised services for job seekers with no particular disadvantage, and individualised services for the currently or potentially long-term unemployed.

Enhancing productivity is critical for boosting future living standards

Australia's labour and multifactor productivity growth has slowed from the record levels achieved in the 1990s (Figure 17), and this weakening has been more pronounced in Australia than elsewhere, although it is very broadly in line with the experience of some other resource-rich countries (Figure 18). There is no single explanation for the decline in productivity, which seems to reflect a combination of factors ranging from special developments in a few key industries to more systemic factors. Regardless of the reasons explaining the slowdown, lifting productivity is crucial for maintaining Australia's trend growth of living standards of the past two decades.

Figure 17. **Productivity trends**[1]



1. Whole economy for left panel and twelve-industry market sector for the right panel. Only complete productivity cycles are shown.
2. Five-year moving average.

Source: ABS, Cat. Nos. 5204.0 and 5206.0.55.002.

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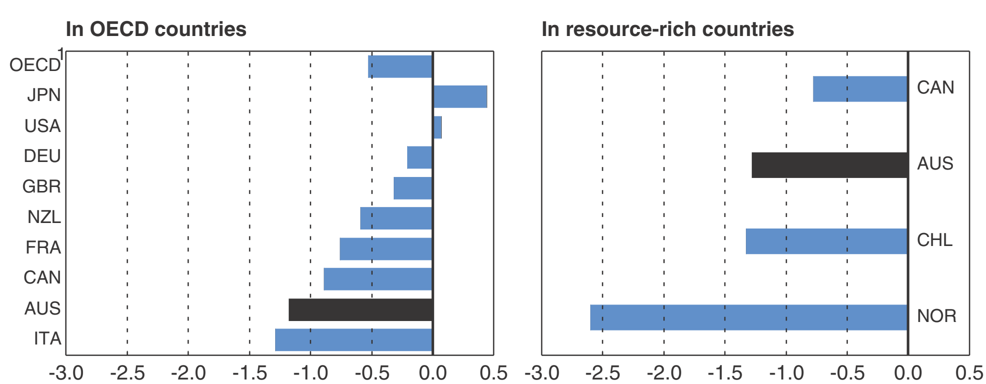
Figure 18. **MFP growth slowdown**

Difference of MFP average growth between the 1990s and the 2000s



1. The OECD aggregate includes only 18 members for which data are available.

Source: OECD, *Productivity Database* and The Conference Board, *Total Economy Database*, January 2012, *www.conference-board.org/data/economydatabase/*.

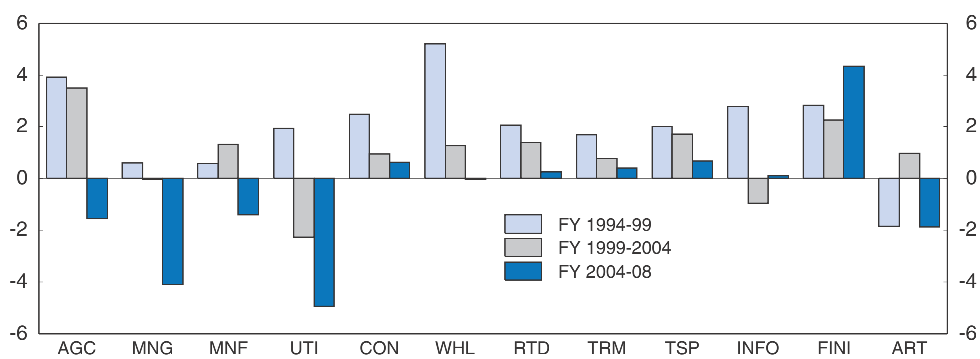
StatLink http://dx.doi.org/10.1787/888932737041

Much of the multifactor productivity (MFP) decline is explained by the mining boom and concomitant structural adjustment of the economy

Productivity was affected by special circumstances in some sectors (Figure 19). In mining, soaring profits have led to massive investment. However, due to often long lags between investment in new capacity and full production, the strong input growth has led to a sharp decline in productivity. As production comes fully on line it could be expected to have a positive impact on productivity. The exploitation of more marginal resource deposits made possible by higher commodity prices is an additional explanation. Productivity in agriculture and utilities (electricity, gas, water and waste services) has been influenced by drought. At the same time, a growing demand for energy has induced major investments to increase capacity, but again lags between installation of new capacity and full production show up in lower productivity. OECD estimates suggest that the contribution of these three sectors accounted for about half of the productivity slump over the past decade.

Figure 19. **MFP growth by industry**[1]

Annual average growth in log changes



1. Twelve-industry market sector. AGC: agriculture; MNG: mining; MNF: manufacturing; UTI: utilities; CON: construction; WHL: wholesale trade; RTD: retail trade; TRM: accommodation & food services; TSP: transport; INFO: information and technology; FINI: finance and insurance; ART: art & recreational services. Only complete productivity cycles are shown.

Source: ABS, Cat. Nos. 5204.0 and 5206.0.55.002 and unpublished ABS data.

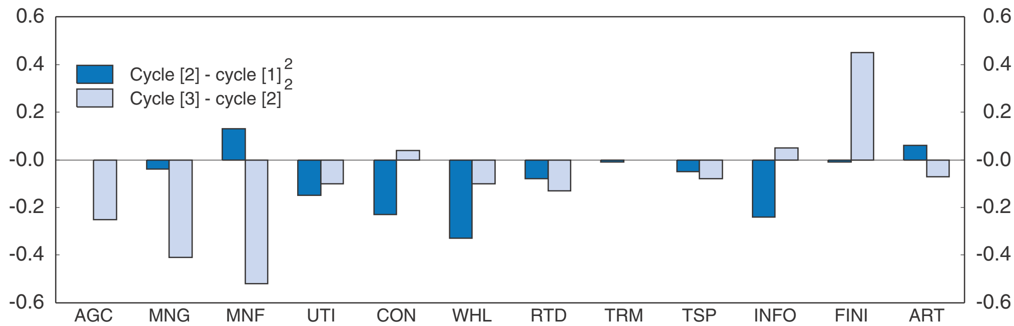
StatLink *http://dx.doi.org/10.1787/888932737060*

The manufacturing sector contributed about a third of the MFP slowdown between the last two complete productivity cycles, following the appreciation of the dollar, which has affected competitiveness (Figure 19, Figure 20). Manufacturing output has remained broadly unchanged since the onset of the mining boom in 2003, while the inputs, specifically productive capital stock, have increased, resulting in a decline in MFP growth.

However, other factors apart from the resource boom also appear to be at work. The impact of the comprehensive structural reforms in the 1980s and 1990s may have faded, and/or incentives for productivity-enhancing reforms may have fallen with increased complacency with the economic success. This is reflected in the deteriorating ranking in OECD product market regulation (PMR) between 2003 and 2008. Australia also faces capacity constraints due to long lasting economic expansion (Dolman, 2009; Eslake, 2011). Productivity developments may also reflect policy settings or the need for reform in certain areas, including in relation to the regulation of roads, water and electricity. In addition, longer-term drivers of productivity, namely skills, innovation, and infrastructure spending

Figure 20. **Industry contributions to MFP slowdown**[1]

Annual average growth in log changes



1. Twelve-industry market sector. AGC: agriculture; MNG: mining; MNF: manufacturing; UTI: utilities; CON: construction; WHL: wholesale trade; RTD: retail trade; TRM: accommodation & food services; TSP: transport; INFO: information and technology; FINI: finance and insurance; ART: art & recreational services. Only complete productivity cycles are shown.
2. Cycle [1]: FY 1994-99; cycle [2]: FY 1999-2004; cycle [3]: FY 2004-08.

Source: ABS, Cat. Nos. 5204.0 and 5206.0.55.002 and unpublished ABS data.

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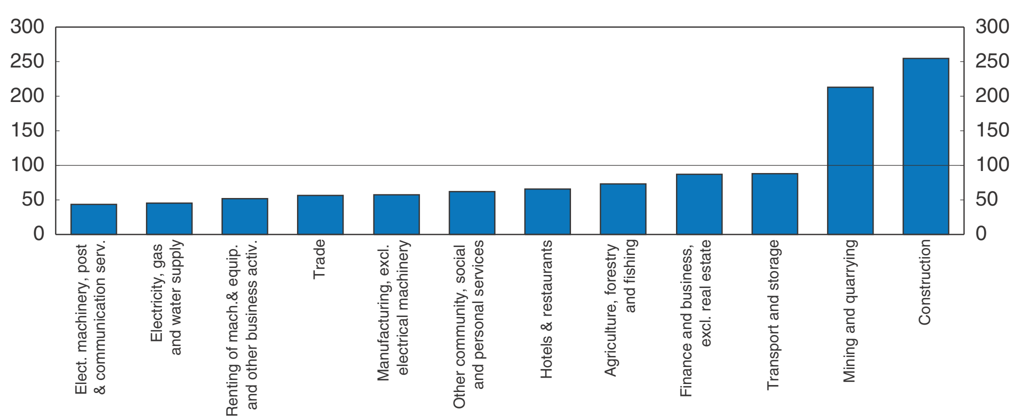
have received attention more recently, as they will be important for future productivity growth.

Boosting long-term drivers of productivity to sustain future living standards

Even if part of the slowdown is temporary, efforts are needed to raise productivity above its long-term trend if living standards are to continue to grow strongly as in the past two decades, especially if the strong terms-of-trade decline over time. Ultimately, lifting overall productivity performance hinges upon the performance of individual firms. Policies could influence such performance through initiatives to enhance "capabilities" and "incentives", in addition to increasing flexibility in responding to the structural adjustment underway (PC, 2009). There is scope for Australia to approach best practices in several sectors (Figure 21).

Figure 21. **MFP gap relative to the United States**

2007 data, USA = 100



Source: EU KLEMS, *Growth and Productivity Accounts*: November 2009 Release, updated March 2011; Groningen Growth and Development Centre, *GGDC Productivity Level Database*; OECD calculations.

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Enhancing human capital is at the core of productivity growth

To boost productivity and sustain growth, education and training systems need to provide the skills required for the rapidly changing economy, although the impact of reforms in this area might take some time to materialise. Previous *Surveys* highlighted the scope to increase the capacity and responsiveness of the vocational education and training system (VET). Current VET completion rates are low with a potential adverse impact on the overall supply of qualifications, in addition to waste of public funds. Better approaches to training content and delivery are critical in this regard (PC, 2012). A more flexible apprenticeship system hinges upon effective implementation of competency-based apprenticeships, and less cumbersome and more frequently updated training packages (Hoeckel *et al.*, 2008; Expert Panel, 2011). Recent steps in this direction are welcome.

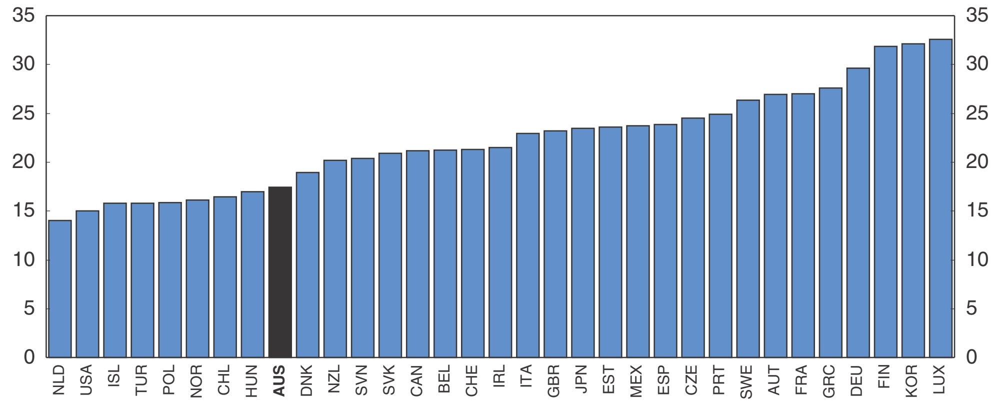
The skill reform agenda agreed in April 2011 by the Council of Australian Governments (COAG) paves the way for a more competitive and client-driven VET, with important potential productivity gains from the increase in the pool of skilled workers (PC, 2012). Enabling public providers to compete more effectively in the new environment would increase the responsiveness of the training system. Efforts to improve the quality of VET, including through an independent national regulator for the sector and the development and piloting of independent validation of assessment, are welcome and should continue. Better information flows for prospective students on the quality and outcomes of courses is also essential. The development of the *MySkills* website is a right step forward. The reskilling of the labour force and improvements in foundation skills would add to productivity gains, allowing workers to adjust better to ongoing structural changes, and current policy efforts towards this direction are welcome.

Australia's higher education system has a target that 40% of young adults hold university degrees or above by 2025. To achieve this, the cap on undergraduate student numbers was lifted in 2012. A critical challenge in the new demand-driven system, following the uncapping of places, is to maintain high quality outcomes. This increases higher education opportunities, but there is a risk that retention and completion levels may decline, raising concerns about the quality of learning outcomes. The establishment in mid-2011 of the Tertiary Education Quality and Standards Agency (TEQSA), with powers to register and evaluate the performance of higher education providers against national standards, is an important step toward quality assurance. The additional funding for universities to improve access to courses and enhance completion rates for students from less advantaged backgrounds, who tend to have lower entry scores, is also welcome. Better information for students is indispensable for the quality and efficiency of a demand-driven system and initiatives to this end are welcome.

Providing the right skills required by a rapidly changing economy is another key challenge facing the higher education sector. The cost of course delivery would need to match the funding more closely to ensure an effective supply of student places in the new demand-driven system (Lomax-Smith *et al.*, 2011). A more responsive price setting mechanism based, for example, on more frequent funding reviews or a university-driven increase in tuition fees above their current maximum level set by the government, while closely monitoring participation effects, could be considered (The University of Melbourne, 2011; Norton, 2012). It is too early to assess the potential impact of the new system on skills outcomes but some areas of under-supply, especially in science and engineering, raise concerns given their important role in boosting innovation capacity (Figure 22). Recent budget measures to address the issue are welcome (Australian Government, 2012c).

Figure 22. **Science and engineering degrees**

As a percentage of total new degrees, 2010[1]



1. Or latest available year.

Source: OECD, *Education Database*.

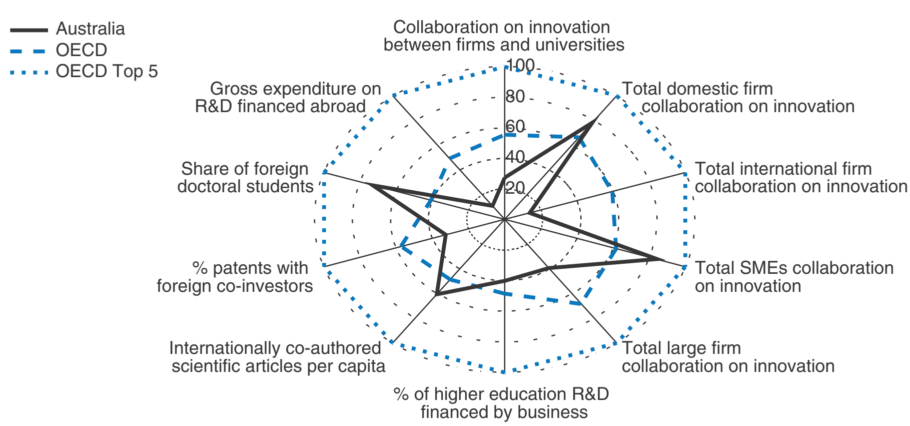
StatLink http://dx.doi.org/10.1787/888932737117

Better innovation performance is key for productivity

Australia's framework conditions for innovation, including the functioning of capital markets and market competition, rank high internationally. The innovation system compares well with other OECD countries on a number of indicators, but falls short of best practice on critical dimensions, such as investment in intangibles and "new to the market innovations". Although the low rates of "creative" innovation can partly be explained by Australia's distance from major markets and scarcity of seed/start-up venture capital, a critical weakness of the innovation system is low collaboration among large firms and firms and universities, and on an international scale (Figure 23). The former reflects the lack of a collaboration culture in Australian industry, but also shortcomings within universities. The tight links, for example, between promotion opportunities, teaching and publications can reduce incentives to do university research on industry needs (AIG, 2010).

Figure 23. **Collaboration and networks on innovation**

2010 or latest available data



Source: OECD (2012), *Main Science and Technology Indicators*; OECD (2010), *Measuring Innovation: A New Perspective* and *Science, Technology and Industry Outlook*; OECD (2009), *OECD Science, Technology and Industry Scoreboard*.

StatLink http://dx.doi.org/10.1787/888932737136

The low level of collaboration, by weakening knowledge sharing and dissemination, may contribute to the low patenting rates in Australia compared to other OECD countries. This could also be partly attributed to the large size of the services sector, where trademarks are more important (OECD, 2010b). It can also reflect the management of intellectual property (IP) by universities with a large variety of arrangements for transferring IP to firms, often within the same university, that raise transaction costs especially for SMEs (PC, 2007).

The government has set a target to double the level of collaboration between researchers and business over the next decade, supported by a number of policy initiatives. Boosting the demand side capacity of SMEs to apply and commercialise more research, is a focal point. To be effective, collaboration-enhancing initiatives need to be simple and flexible in governance and management (Commonwealth of Australia, 2008). The authorities could also consider, fiscal needs allowing, further measures to increase collaboration, such as well-designed innovation vouchers in academic contracting, as a complement to their comprehensive approach to facilitate effective connections and outcomes. To be successful, innovation vouchers need to be simple and straightforward, effectively advertised and promoted and have efficient brokering (OECD, 2010c).

In an important step forward, in 2011 the government changed the nature of the R&D regime from tax deductions to tax credits. The new system reduces complexity and aims to encourage innovation that would not otherwise occur (additionality) through a better targeting of support. A clear administrative interpretation of the new eligibility criteria and frequent evaluation of the achieved outcomes are crucial for a successful implementation (PKF International, 2011). The adoption of the Clean Energy Futures Plan in 2011, aiming to boost green innovation, is also a welcome initiative towards new commercialisation activity.

The Australian government also supports the development of venture capital which is appropriate given the market failure. The dearth of seed/start-up venture capital remains an important barrier to innovation (ABS, 2012). Obstacles to a well-functioning venture market include the limited scale of the existing venture capital industry and lack of a strong record of attracting international funds (PC, 2007). Ongoing assessment of the effectiveness of current support programmes is welcome. Overall, however, cross-country evidence suggests that there are limits to venture capital in addressing the financing gap for innovation (Hall and Lerner, 2009).

Achieving better outcomes in infrastructure will help productivity and sustainable growth

In addition to increasing the capital stock, private or public infrastructure investment can boost MFP indirectly by acting as a "vector" for the diffusion of new technologies embodied in capital (PC, 2009). Australia faces a shortfall of infrastructure which may get worse with the strong demand generated by the mining boom and expected population growth (OECD, 2010a). Well targeted and efficiently financed infrastructure projects, combined with efficient maintenance and use of existing infrastructure, are essential to meet growing demand and boost productivity. While recent reforms to enhance capacity-building are welcome, the efficiency of infrastructure development and use still have room to be improved.

Governance of the infrastructure sector is complex, with weak inter-governmental co-ordination, especially of planning at the national level (IA, 2008; OECD, 2010a). The recent establishment of Infrastructure Australia is meant to address these issues and to provide advice to governments on nationally significant infrastructure priorities and reforms, on the basis of rigorous cost-benefit analysis. The establishment in 2011 of Infrastructure New South Wales (INSW) and the Tasmanian Infrastructure Advisory Body (TIAB) should help identify and prioritise critical public infrastructure at state level. But the co-ordination and provision of infrastructure projects remain complex (IA, 2011; IA, 2012). Further initiatives at the state level to improve infrastructure frameworks, along the lines of INSW and the TIAB would be welcome. A more effective planning, focusing on strategic issues and better prioritisation of proposed projects are also important.

The need for fiscal consolidation in the coming years will constrain growth of public infrastructure investment, heightening the importance of maximising the pool of potential financing sources. This could also ensure a more efficient sharing of investment risks and promote greater productive efficiencies and innovation (Chan *et al.,* 2009). The Infrastructure Finance Working Group (IFWG) has recently called for a comprehensive approach to address the issue through an overhaul of infrastructure funding, including privatisation of selected public assets, better planning to provide a deep pipeline of infrastructure projects to boost industry certainty, and more flexible and efficient markets that attract private investment, including superannuation funds (IFWG, 2012). Attracting such funds to invest on infrastructure would require removing a number of impediments, including uncertainty with the number and size of upcoming national infrastructure projects and high bid costs (IFWG, 2011). Moreover, certain conditions for privatisation, in particular appropriate regulation, need to be in place to ensure efficiency.

Recent policy initiatives to attract greater private participation with detailed information on upcoming projects are welcome, but further reform efforts are needed. Superannuation funds could give consideration to the establishment of experienced teams of investment professionals to assess opportunities for smaller funds. Finding ways to break down large and illiquid infrastructure projects into more manageable investments could also help. Building investor capability is also essential to create the right incentives for asset managers to better look after the long-term interest (Della Croce *et al.*, 2011).

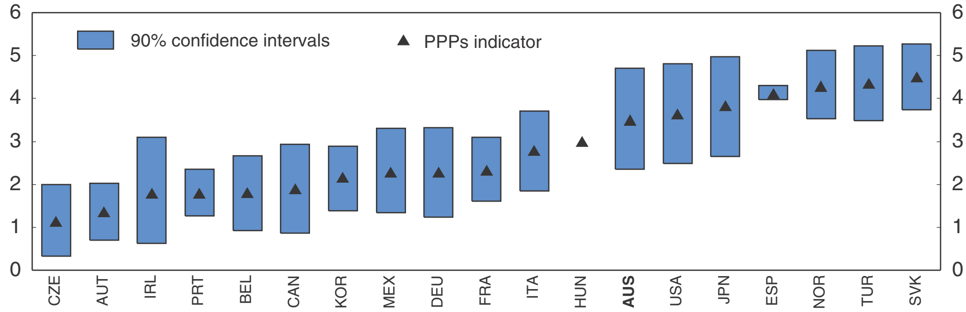
There is also scope for improving policy settings and expanding the use of Public Private Partnerships (PPPs) to finance public infrastructure through improvements in the policy setting (Figure 24). Removing remaining barriers to competition and efficiency in the procurement of PPPs, arising for example from excessive information and documentation requirements, would help (KPMG, 2010). Ongoing reform efforts to enhance the effectiveness of PPP processes (including through standardisation of contractual requirements) and improve approaches to managing forecasting and demand risks should continue. A more flexible approach to the allocation of risk between public and private sectors, as suggested by IFWG, would help in making infrastructure more attractive to the private sector. It needs to make sure, however, that such an approach is balanced and does not simply result in all project risks being ultimately transferred to taxpayers.

Efficient pricing for infrastructure services is essential for boosting competition, productivity and sustainability

The application of user charges in the transport sector should be broadened. The current charging regime for heavy vehicles, which involves registration fees and fuel-based

Figure 24. **Indicator values of PPP policy settings**[1]

Indicator scale index of 0-6 from most to least conductive to efficient investment



1. The indicator is calculated for the 19 countries that provided a sufficient number of answers on PPPs in an *ad hoc* OECD questionnaire on infrastructure investment. The figure gives the average indicator value and 90% confidence intervals, which are calculated using random weights.

Source: Ad hoc OECD Questionnaire on infrastructure investment, cited in OECD (2010), *Economic Policy Reforms: Going for Growth*, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888932737155

charges for road use, inhibits the efficient use and investment in the road network. The charges do not accurately reflect actual road wear arising from the mass, distance travelled or types of roads used by a vehicle (CRRP, 2011a). This results in significant cross-subsidies between various types of vehicles and infrastructures. Findings of a feasibility study for introducing more direct pricing options supports a staged move to charging heavy vehicles for road use, with the initial focus on biggest vehicles (CRRP, 2011b). Progress to introduce location-specific and time-varying congestion charges for road infrastructure has made little progress so far. Reducing the levels of transport congestion in large cities would increase productivity and promote greener growth. Infrastructure Australia suggests that small shifts in traffic levels of around 6-7% could have an appreciable impact on congestion levels (IA, 2011). Critical for the successful implementation of congestion charges is to get the policy accepted. Developing public transport would be important in this regard.

Enhancing the efficiency of the energy market would boost growth, while preserving the environment. Price controls remain an important area of unfinished business in energy reform, with all jurisdictions, apart from Victoria, continuing to cap electricity tariffs for households and SMEs. Faster progress towards removing retail price regulation would encourage consumers to respond to the true production costs, as the effectiveness of any carbon price signal is conditional on its reaching consumers (Hepworth, 2010). Swifter progress towards installing advanced metering infrastructure ("smart meters") is also critical, as it would allow better demand management through time-of-use pricing (CRC, 2011).

A major regulatory issue in the energy sector regards the development of an electricity transmission network capable of facilitating increases in renewable energy. The electricity rules were amended in June 2011 to help potential investors making informed decisions. Some analysts expressed doubts, however, as to whether the new provisions address the shortcomings of the current framework, as high costs of network extension will continue to act as an obstacle to investment (Wright, 2012). It is still too early to evaluate the impact of the new provisions.

Swift implementation of regulatory reforms is required

Regaining momentum with regulatory reforms has also a large potential for boosting productivity. The Council of Australian Governments (COAG) has agreed in 2008 to a wide-ranging regulatory reform to deliver a seamless national economy and increase productivity. Implementation has moved forward with three quarters of the entailed reforms being "on track" by the end of 2011 (CRC, 2011). Some areas of reforms however lag behind, including in the energy sector. Regarding business regulation, much scope for harmonisation across the states remains in areas such as legal professions and occupational licensing. Such reforms could result in significant reductions in the cost of red tape according to Productivity Commission estimates (PC, 2012). In April 2012, COAG announced its priorities for a new regulatory and competition reform agenda to be supported by a national productivity compact between governments and businesses. The aims include streamlining state and federal environmental approval processes as well as major development approvals and further energy market reform. Swift endorsement and implementation of the agreed plan would be desirable. Further improvements to regulatory harmonisation, mutual recognition and institutional co-operation between Australia and New Zealand, under the Closer Economic Relations agreement and the Single Economic Market agenda, could yield additional economic gains (OECD, 2011b). A joint study to be conducted by the Productivity Commissions of the two countries will identify options for further reforms which could boost efficiency, increase competitiveness and strengthen further economic integration.

Box 5. **Recommendations for enhancing productivity performance**

- Implement competency-based apprenticeships in line with the skills strategy. Proceed with efforts towards developing strong quality assurance mechanisms for training.
- Ensure improved information for prospective tertiary students on course quality and outcomes. Monitor completion rates and learning outcomes in higher education following the uncapping of places in universities. The funding arrangements in the new system should ensure an effective supply of student places.
- Programmes to support collaboration and networking between universities and businesses should be simple and flexible to reinforce their impact on innovation.
- Consideration should be given, fiscal savings allowing, to further measures to increase collaboration between researchers and business, such as the provision of well-designed innovation vouchers for contracting academic research as a complement to government's comprehensive approach to facilitate effective connections and outcomes.
- Improve infrastructure outcomes by reducing the complexity of governance and provision of infrastructure investment and ensuring a more effective planning. Remove barriers to private participation in financing investment infrastructure. Continue efforts to increase the effectiveness of public-private partnership processes and improve approaches to managing risks of such projects.
- Broaden the use of road user charges. Introduce location-specific and time-varying congestion charges for road infrastructure in large cities. Move towards more cost reflective prices in the water sector. Install advanced metering infrastructure ("smart meters") for electricity to promote energy-efficient consumption choice.
- Implement fully the agreed reforms under the COAG agenda for a seamless national economy. Move towards a national approach to developing and paying for transmission networks. Harmonise regulation for legal and other professions and occupational licensing. Intensifying the trans-Tasman relationship would reduce spatial transaction costs and facilitate carrying out increasingly complex regulatory functions through greater economies of scale.

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ANNEX A.1

Progress in structural reform

This annex reviews action taken on recommendations from previous *Surveys*. Recommendations that are new in this *Survey* are listed in the relevant chapter.

Recommendations	Action taken since the previous *Survey* (November 2010)
Labour markets	
Raise the participation of second earners, older workers, the disabled and lone parents:	
• Reduce further high effective marginal tax rates for low income families, with a particular focus on addressing "low wage traps". Monitor closely the enforcement of the eligibility and participation requirements.	Reforms have included further reduction of personal income tax for low income earners in the 2012-13 budget, phasing out of tax offsets for dependent spouse since July 2011, changes in income support for single parents as from 2013.
• Introduce tighter eligibility criteria for existing recipients of Disability Support Pension (DSP) and Parenting Payments, in line with those introduced for new applicants in July 2006. Tighten participation requirements for access to Parenting Payments for parents with young children.	Since July 2012, the Government has introduced participation requirement for DSP recipients aged under 35 years with an assessed work capacity of 8 hours or more per week and increase the number of hours recipients can work and remain eligible for DSP. There are also higher wage subsidies for employers hiring people with disability.
• Proceed with the announced introduction of paid parental leave scheme in 2011.	The Paid Parental Leave scheme provides financial support to eligible working parents of children born or adopted from 1 January 2011.
• Make the child care benefit more conditional on employment or job search of parents, except when children face multiple disadvantages.	Child Care Benefit (CCB) is available to families for up to 24 hours' approved care per child per week, without a participation requirement. Providing 24 hours care per child per week without a participation requirement helps low-income and disadvantaged families access care. However, to claim CCB for more than 24 hours of child care per week, the family must be undertaking at least 15 hours of work, study, training or job search activities per week.
• The new system of employment services needs to provide balanced incentives for service providers to place unemployed clients from all streams. The training programmes need to be frequently monitored.	The new employment service system (Job Service Australia), introduced in 2009, identifies needs of the job seekers at the outset and steers them upon their arrival to one of the four level of assistance offered.
• To improve the safety net for the unemployed, consider raising, the Newstart Allowance for a limited-duration, the fiscal situation permitting. Maintain job-search requirements for benefit eligibility, with credible sanction regime in case of non compliance. .	In recent budgets additional assistance has been provided to those on Newstart, including a new Supplementary Allowance, and Clean Energy Advance payments. Recipients with earnings may also benefit from increase in tax-free threshold. There has also been increased support for recipients with children through increased family payments.
Maintain labour market flexibility:	
• Ensure that labour market reforms preserve collective bargaining at the firm level and that the new industrial relations system maintains adequate wage differentiation by not extending collective bargaining beyond the company level.	A review of the Fair Work Act 2009 released in August 2012, did not propose any changes to the level at which collective bargaining occurs. While finding that the Fair Work Act was broadly operating as intended, the Review made a series of recommendations, some of which are aimed at improving workplace productivity and others to increase workplace equity, consistent with the objectives of the legislation. The Government has undertaken to consult widely in developing its response to the Review.

Recommendations	Action taken since the previous *Survey* (November 2010)
• Consider introducing a system of employment-related benefits in parallel with more moderate minimum wage increases to avoid exclusion of vulnerable and low-skilled workers	Minimum wage increases have been moderate. Low income earners have benefited from recent increases in tax-free threshold and there is a new wage subsidy for VLTU.
Address supply constraints through migration:	
• Ensure adequate use of immigrants' human capital. Reduce the complexity of the current assessment and recognition of overseas qualifications.	The marked shift towards demand-driven migration since 2009 seems to have contributed to reducing the incidence of over-qualification of immigrants, especially non-English speaking migrants from OECD countries.
Taxation	
• Lower the high effective marginal tax rate on low-income households by increasing the tax-free threshold. • Proceed with the rationalisation and simplification of the income support system to avoid cascading and cumulating multiple withdrawal rates. • Further reduce the corporate tax rate. • Royalties should be eliminated rather than credited to mineral resource rent tax (MRRT) payers. Broaden the MRRT coverage to all commodities and all companies, irrespective of their size. • Reduce subsidies to the automotive industry and to the farm sector which are ineffective and encourage poor management practices. • Streamline and reform state-federal taxation. Consider either reducing substantially or removing payroll taxes, and insurance levies. Lower conveyance duties to a level that covers registration costs to reduce transaction costs. • Broaden the land tax by ending existing exemptions on owner-occupied housing and. remove its progressivity. • Review the cost effectiveness of the deductibility of mortgage interest payments against income ("negative gearing"), for stimulating rental supply and new constructions • Consider raising the yield for the GST by increasing its rate and broadening its base.	Household income tax threshold has been raised since July 2012 as a counterpart to the introduction of carbon pricing. To ease the tax burden on businesses and SMEs, in particular, the authorities have introduced more generous amortization rules and the possibility to "carry back" losses to offset past taxable income. The authorities have committed to reducing the corporate tax rate. A Business Tax Working Group will release a report by end-2012 concerning the potential room for lowering this tax with proposed offsetting measures to fund it within the business tax system.
Macroeconomic policy framework	
• Proceed with the creation of an independent Parliamentary Budget Office, (PBO) with a clear mandate, adequate resource, access to information and accountability. • Disconnect public spending decisions from fluctuations in tax revenues caused by commodity price movements. Consider creating a reserve fund endowed with all resource tax revenues, which would be used on a sustainable basis.	An independent PBO with a staff of some 25 to 30 persons is operational since July 2012. Its main function is to evaluate the costs of proposals put forward by political parties during elections, put price tags on MPs' suggested reforms outside of electoral periods. The PBO has access to Treasury's information and statistical resources and can publish its own research Provisions have also been made to ensure that the PBO is accountable for its evaluations.
Relax barriers to foreign direct investments	
• Apply to other countries the lighter screening procedures granted to the United States. Involve specialist agencies (*e.g.* national security) in the screening procedure to enhance transparency.	No action taken.
Boost housing supply	
Each State and Territory Government should: • adopt more transparent, harmonized and less restrictive zoning and planning regulations across jurisdictions. Consider adopting special rules to fast-track land-release mechanisms and development assessments in local housing markets with excessive pressures. • rationalise infrastructure charges with nationally consistent principles to improve their transparency. Existing "betterment" taxes should be eliminated. • phase out subsidies to housing demand benefiting first-home buyers.	Some measures have been taken to boost housing supply. Some states (*e.g.* Victoria and South Australia) have accelerated the release of greenfield land in 2010 and 2011. To streamline the land development process Most states have established a centralised authority, which is acting as a coordinator between the multiple government agencies and the infrastructure providers involved. In some areas (*e.g.* Sydney and Brisbane) efforts have been made to cap infrastructure costs financed by developers. Some states (New South Wales and Queensland) have agreed to abolish First Home Owners Grants for the purchase of existing dwellings.

Recommendations	Action taken since the previous *Survey* (November 2010)
Product market competition	
Improve competition and regulation:	
● Address the unfinished business of the National Competition Policy agenda as planned in the National Reform Agenda. ● Speed up the harmonisation of regulations between the states and strengthen mechanisms for mutual recognition of regulatory standards.	According to the COAG Reform Council's assessment of the *National Partnership Agreement to Deliver a Seamless National Economy* reforms for the period 2008-09 to 2010-11, 37 components of the regulatory and competition reforms are on track, but 12 are at risk. In April 2012, COAG announced its priorities for a new regulatory and competition reform agenda, to be supported by a "national productivity compact" between governments and businesses, aiming among other reforms to streamline state and federal environmental approval processes and deliver further energy market reforms.
Expand the supply of freight services and improve co-ordination and use of infrastructure:	
● Further simplify and harmonise the regulation of nationally significant freight infrastructure. Implement uniform state standards for heavy goods vehicles and regimes for access to railway infrastructure.	Single national regulators will be operational for rail safety and investigation, maritime safety and the heavy vehicles by 2013.
● Extend AusLink Nation Building Program to the port sector.	The 2010-11 budget included investments in ports. A national ports strategy released by Infrastructure Australia and has been signed off by COAG in April 2012.
● Implement a road freight pricing scheme that takes into account the intensity of network use and place of use. ● Consider reforming arrangements for managing and funding road infrastructure. Give more financial responsibility and adequate resources to the local jurisdictions to cover the operating costs and investment needs of their road networks. ● Introduce location-specific and time-varying congestion charges in large cities. Use the resources collected to improve public transports	A feasibility study for introducing a new road freight pricing system and on the future funding arrangements for roads was considered by COAG out of session in July 2012.
Promote competition in postal services.	
Develop a nation-wide energy market responsive to environmental objectives:	
● Harmonise safety regulations across states and eliminate legal obstacles to exploration and development of gas deposits.	A review of derogations in energy market legislation is intended by June 2014. The development of a nationally harmonised energy supply industry safety framework is underway.
● Pursue the privatisation of companies still under government control. ● Remove the ceilings on retail electricity prices rapidly.	Legislation that will privatise New South Wales power generators is set to pass through Parliament in 2012.
● Install "smart meters" for electricity more widely to improve demand management.	Smart meters are being rolled out in Victoria, with the installation process expected to be completed by 2013. Trials are also being conducted in most other states. A national framework to support the use of smart meters is under development.
● Clarify the measures to reduce greenhouse gas emissions.	The government introduced a carbon pricing in July 2012, with a fixed price, for three-year period, followed by a flexible one, based on emissions trading system linked to international markets.
Expand and improve the supply of broadband Internet access:	
● Consider a functional separation between the management of broadband access infrastructure and marketing activities.	In February 2012, the Australian Competition and Consumer Commission approved the structural separation of Telstra between the management of its copper network and its other commercial activities.
Improve water management:	
● Continue work aimed at defining homogenously the concept of sustainable exploitation across states. Correct over-allocation of water entitlements. Lift the quantitative restrictions on trades in permanent water rights. Publish transaction prices. Abolish the exit fees limiting trading between districts. Lift barriers to trade between rural and urban areas.	Ongoing water reforms, underpinned by the National Water Initiative (NWI), aim to tackle over-allocation in Murray-Darling Basin (MDB), including through a AUD 3.1 billion buyback of water entitlements. The 4% annual upper limit on out-of-area trade of water entitlements is scheduled to be removed in 2014. Exit fees (tied to entitlement sales) are no longer permitted in MDB.
● Continue the reforms of water charging to ensure full cost recovery, including management and planning costs. Abolish subsidies to infrastructure projects.	The NWI aims to price water efficiently, including through best water pricing, which entails consumption based pricing and full cost recovery for water services. Implementation varies across states.
● Consider putting an end to the public monopolies of urban water management.	Steps were taken to enhance competition in the supply of urban water and related services, including through increased competitive provision of inputs and increased information on service performance.

Recommendations	Action taken since the previous *Survey* (November 2010)
Public infrastructure	
• Further improve infrastructure selection process by: publishing systematically the outcomes of cost/benefit analyses; making independent evaluation mandatory for investment projects exceeding a certain amount; and creating a reference centre able to help agencies involved in the analyses to shore up their works.	The 2011-12 budget requires the publication of IA cost-benefit analyses and the evaluation of projects funded by the federal government after their completion.
• Improve the regulatory framework for private investment through a detailed assessment of the implementation of the national access regime.	COAG agreed in August 2011 on a review of the national access regime, commencing the latest by end-2012.
Education and training	
Early Childhood Education and Care (ECEC):	
• Move towards a more integrated ECEC system. Reform the current staffing regime, bridging the split for pre-school teachers and staff for child care. Proceed swiftly with the development of a more streamlined accreditation system.	A National Quality Framework commenced in January 2012, applying a single set national quality standards for ECEC. It provides a formal base comparable to the other sectors of education, including curriculum development and improved staff to child ratios.
• Enhance access to ECEC services, while ensuring quality. In the longer term, fiscal circumstances allowing, consider extending universal access to three year-olds, focusing initially on disadvantaged groups, and increasing the duration of services.	The government committed to provide access to quality early childhood education program for all children before formal schooling by 2013. This education will be delivered for 15 hours a week, 40 weeks a year. In the longer term, the government also considers expanding early childhood programs to the 3-year olds.
School education:	
• Broaden the secondary school curriculum to reduce the risk of early school leaving and integrate the vocational education and training sector better.	The delivery of the Trade Training Centres in Schools Program is providing more secondary students with access to vocational education and training. The implementation of the National Trade Cadetships program will further integrate vocational education in the school curriculum.
• Develop and implement a national curriculum. Adopt a common final certificate and eliminate differences in the basic structure of schools.	The development of the Australian Curriculum from Foundation to Year 12 is progressing. The 2012-13 budget provided funding over the next four years for the Australian Curriculum, Assessment and Reporting Authority for curriculum development, monitoring and evaluation.
• Continue strategies to counteract disadvantage, including reforming the school funding mechanisms to better take into account the impact of students' socioeconomic background.	The Smarter Schools National Partnerships target additional resources to the most disadvantage schools. The government has also announced the introduction of a new national school funding system that will be phased in between 2014 and 2019. It will be based on individual student needs and be tied to improving standards. Relevant legislation is set to be submitted to Parliament by end-2012.
• Move towards a less centralised management and governance structure for schools.	The National Plan for School Improvement envisages greater powers for principles to set budgets and select staff. This will build on the existing Empowering Local Schools initiative which is supporting increased and more effective local decision-making in 927 government and non-government schools.
• Change the system of teacher career progression to help keep the best teachers. Create appropriate incentives to re-allocate high quality teachers where they are needed most.	The Smarter Schools National Partnerships help to ensure that highly performed teachers are recognised and rewarded in schools in low socioeconomic areas. The Rewards for Great Teachers National Partnership seeks to recognise those teachers who achieve certification at the highest levels of the National Professional Standards for Teachers with a one-off reward payment.
Vocational Education and Training (VET):	
• Update training packages regularly to meet changing skill needs. Lift the completion rates of VET.	Recent reforms of the Australian Apprenticeship System include a restructuring and streamlining of Training Packages.
• Train and upskill persons already in work, particularly older workers.	Steps were taken in the 2011-12 budget to support a greater uptake of competency-based progression in apprenticeships and for mentoring. The National Partnership Agreement on Skills Reform (NPASR), agreed by COAG in 2012, places an increased emphasis on lifting VET completion rates. Skill Connect service links enterprises with a range of skills and workforce programs and funding. The creation of the National Workforce Development Fund will support employers to provide training. Oversight will be provided by the new Australian Workforce and Productivity Agency formed on 1 July 2012, replacing and expanding the role of Skills Australia.

Recommendations	Action taken since the previous *Survey* (November 2010)
• Move towards a more commercial governance model for the institutes of Technical and Further Education (TAFE).	Most of the States are engaged in reviewing public VET governance arrangements.
• Reform the funding mechanism of VET to foster competition among providers.	NPASR, promotes a more competitive and client-driven system by allowing students to enroll to the course or institution of their choice.
Higher education:	
• Remove barriers to higher education for students from disadvantaged socioeconomic backgrounds.	The Higher Education Participation and Partnerships Program provides funding to universities to implement strategies that improve access to higher education for students from low socio-economic backgrounds.
• Make the higher education system more responsive to labour market needs and more demand oriented, with financing following students.	From 2012 Commonwealth support will be available to all domestic undergraduate students accepted into an eligible higher education course at a public university.
• Improve quality of teaching and learning.	The Office for Learning and Teaching aim to enhance academics' teaching skills.
• Reduce the complexity in regulation arising from share responsibilities for the sector of Commonwealth and state governments.	The Tertiary Education Quality and Standards Agency, in operation since July 2011, registers and evaluates the performance of higher education providers against national standards.
Health care, disability and social services	
• Increase resources for preventive medicine. Improve the supply structure for elderly care and care for mental illness. Reduce hospital costs by promoting primary care interventions. Consider bolstering the federal government's monopsony power over hospitals in areas where competition is possible between multiple health care providers.	Initiatives in the 2011-12 budget aim at improving access to primary health care for people with mental illness and increase the accountability and transparency in the mental health system. The 2012-13 budget entailed further funding for mental health care as part of a Ten Year Roadmap for Mental Health Reform.
• Improve disability services, especially for people with mental illness. Reduce the fragmentation and complexity of the system. Develop a national system of quality assessment. Move swiftly to a person-centred approach to disability services	The National Disability Insurance Scheme, announced in the 2012-13 budget, will provide individualised care and support based on a person's need and increase formal care services including in home support and early intervention services.
• Adopt an individualised approach to the provision of services for people with multiple disadvantages. Improve co-ordination among the various groups responsible for the delivery of such services. Engage the disadvantaged groups at an early stage of process to adequately respond to their demand.	
• Continue efforts to reduce homelessness. Shift to a system of market rents and income-related rent-subsidies in public housing. Consider increasing the generosity of rent assistance.	

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