Statement on Monetary Policy

FEBRUARY 2013

Contents

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Overview

Global economic developments have, on balance, been more positive in recent months after economic conditions weakened earlier in 2012. There have been further signs that the Chinese economy has stabilised, underpinned by public spending and accommodative financial policies. This has provided some additional support for commodity prices and activity in east Asia, outside of Japan. In Japan, the new government has announced plans to boost domestic economic activity and combat deflation. In the United States, the full extent of the large fiscal consolidation that had been legislated to commence at the beginning of 2013 has been avoided, although decisions on spending measures and the debt ceiling were only postponed for a short while. These developments, together with earlier policy measures in the euro area, provided a boost to financial markets and have lessened some of the downside risks to global growth. At the same time, growth in most advanced economies remains subdued, unemployment rates are elevated, and these economies are likely to continue to face headwinds for some time to come; Europe, in particular, is likely to remain a potential source of instability for a while yet.

World GDP is expected to grow at around 3½ per cent in 2013, before picking up to around 4 per cent in 2014. Growth in the US economy is likely to return to a long-run average pace and activity in the euro area is expected to stabilise over the next few quarters before picking up modestly. While, overall, the large advanced economies are forecast to experience only moderate growth in the near term, relatively strong growth in the fast-growing (and increasingly large) Asian economies is expected to make a substantial contribution to global demand.

Iron ore prices have increased significantly over recent months after falling sharply over July and August last year. The price rise has coincided with increased industrial production in China and elsewhere in the region, although expectations are that iron ore prices will not be sustained at current high levels. Coal prices have also increased, but to a much lesser extent and they remain well below their levels of a year ago. Improved global economic conditions have led to a rise in the spot prices for many metals and crude oil over recent months, while rural prices are generally little changed. The terms of trade finished 2012 around 17 per cent below their 2011 peak. The recent rebound in bulk commodity prices is likely to see a small increase in the terms of trade in the early part of this year. Thereafter, bulk commodity prices and Australia's terms of trade are expected to decline gradually as global supply responds to the significant investment in mining infrastructure in Australia and elsewhere in the world.

As noted, conditions in global financial markets have improved further since the previous *Statement*, partly reflecting better economic data as well as the partial resolution of the fiscal situation in the United States, the absence of negative news from Europe and developments in Japan. Accommodative monetary policies, especially in the large advanced economies, have also contributed to increases in many asset prices. Since mid 2012, there has been a marked decline in volatility in financial markets as the perceived risk of extremely adverse outcomes has declined and expectations increased that policy will respond further if required. These favourable market conditions have seen a sizeable portfolio reallocation since the turn of the year, as a number of investors who had adopted a conservative strategy through the second half of 2012 shifted funds into assets with a higher expected return, including shares. Also, with favourable credit market conditions, non-financial corporations have issued a large amount of bonds, in some cases replacing more expensive bank-intermediated credit.

Over the year to the September quarter, Australia's GDP grew at around trend pace. While growth slowed a bit through the year to September, and was 0.5 per cent in that quarter, the available indicators of activity suggest that growth may have picked up in the December quarter.

In the September quarter, the national accounts indicate that public demand fell, which is consistent with the fiscal consolidation currently underway. Household consumption growth slowed in the quarter from the fast pace seen in the first half of 2012, consistent with slower growth in income. Over more recent months, the value of retail sales has declined and retail prices have been flat. On the other hand, sales of motor vehicles to households have grown strongly and measures of consumer sentiment have moved higher to be at or above long-run average levels.

Resource exports have increased strongly in the December quarter, including coal exports following the end of the industrial dispute at the BHP Billiton Mitsubishi Alliance (BMA) mines. The recent heavy rainfall in Queensland is having a noticeable impact on the transport of coal to ports, but at this early stage it appears that the effect on exports will be much less than was the case in 2011.

Growth in mining investment has been strong over the past year. However, with the falls in bulk commodity prices in mid 2012 leading to a reassessment of conditions and the viability of some projects, investment plans were scaled back. This was particularly the case in the coal sector, where price declines have been larger and more persistent. The expectation remains that growth in mining investment will slow and the level of investment will peak sometime over the next few quarters. But with a large amount of investment currently underway, or having been committed to, expenditure on mining investment is still expected to remain at a high level for some time.

Near-term prospects for business investment outside the mining sector continue to be subdued. However, there are signs that the housing market is responding to the series of interest rate cuts over the past 15 months. Since the middle of 2012, residential building approvals have increased, rental yields have moved higher and prices in the established housing market have picked up.

The labour market has remained soft, with the unemployment rate edging higher over recent months and labour force participation edging down. Despite no growth in total hours worked over 2012, the number of employed persons grew moderately. Over the second half of 2012, employment in mining and business services declined, but employment in household services continued to grow strongly and the decline in construction employment abated at least for a time. Forward-looking indicators have continued to soften but are consistent with some employment growth in the months ahead.

Wage growth moderated slightly in the September quarter, in line with the softening in labour market conditions as the year progressed. Over the year, wage growth in the private sector eased in industries more directly tied to consumer demand. Despite the small decline in mining employment of late, wages in that industry continued to record strong growth.

Inflation of consumer prices in the December quarter slowed following the temporary boost to inflation in the September quarter from the introduction of both the carbon price and means testing of private health insurance rebates. Also, inflation of a broad range of food items was modest in the December quarter, with a pronounced fall in the prices of fruit and vegetables.

Prices of tradable items declined in the December quarter, despite the effects of the earlier appreciation of the exchange rate having been largely passed through to measures of import prices. This suggests that the continued decline in the price of tradable items partly reflects the effect of ongoing competitive pressures. Inflation in the prices of non-tradable items (excluding utilities and medical services) increased a little in the December quarter, largely reflecting price rises for a range of market services.

The various measures suggest that underlying inflation was about ½ per cent in the December quarter. Based on the latest data, year-ended underlying inflation has remained around 2¼ per cent since the middle of 2012.

The outlook for the Australian economy is slightly weaker than it appeared at the time of the November *Statement*. GDP growth is now expected to be a little below trend over 2013 before picking up a little in 2014. The revisions to the central forecasts for growth in the near term largely reflect information accumulating late last year suggesting that the outlook for mining and non-mining investment was a little weaker than had previously been thought. The forecasts for growth over the next year or so reflect several factors: the expectation that the mining investment boom will reach its peak; the effect of both fiscal consolidation and the persistently high level of the Australian dollar; and little sign of a near-term pick-up in non-mining business investment. Overall, improving conditions in the housing market are expected to continue to provide support to dwelling investment, while non-mining business investment is forecast to pick up gradually over time.

With growth of economic activity expected to be a little below trend in the near term, employment growth is forecast to remain modest over the course of this year, before rising gradually over 2014. The unemployment rate is expected to edge higher over the next year or so.

The near-term forecasts for inflation are a little lower than published in the November *Statement,* reflecting the lower inflation rate recorded in the December quarter data and the slightly softer outlook for activity and labour demand. Over the next few quarters, the pace of underlying inflation is expected to remain at an annual rate of around 2½ per cent and continue to be consistent with the inflation target for the rest of the forecast period. This is predicated on a further gradual slowing in the growth rate of wages combined with a faster rate of productivity growth than the slow pace that was seen over the 2000s.

Overall, the risks to the international outlook appear to be more balanced than they were late last year. The most obvious downside risks stem from the problems in the euro area, where prospects for a pick-up in growth remain fragile. Risks appear to be more balanced now for both China and the United States than was the case three months ago. Indeed, growth in the United States could well surprise on the upside if there is further timely progress on fiscal consolidation that avoids a sharp near-term fiscal contraction.

For the domestic economy, the forecasts continue to embody a gradual recovery in dwelling investment and non-mining business investment. While many of the drivers of investment support such an outlook, when, and by how much, non-mining business investment might pick up remains particularly uncertain, including because of the high level of the exchange rate. The profile for mining investment will depend on the sensitivity of mining investment plans to commodity prices.

Risks to the outlook for inflation reflect uncertainty about aggregate demand, the labour market, productivity and the exchange rate. While labour market conditions are expected to remain soft over the forecast period, a more pronounced or protracted slowdown in activity could see a larger-than-expected rise in unemployment, which would constrain wage costs and consumer incomes, and limit further the ability of firms to raise prices. The effects of the high exchange rate on inflation may also be longer lasting than expected. On the other hand, inflation could be higher than forecast if wage growth does not edge down as expected or if productivity growth is weaker than anticipated.

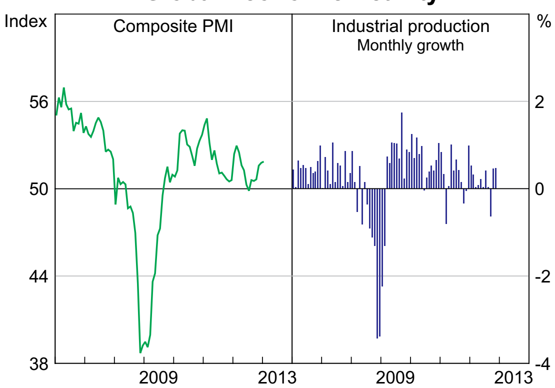
Following the 75 basis point reduction in the cash rate in mid 2012, the Board reduced the cash rate by a further 25 basis points in October in response to weaker global conditions, lower commodity prices and the resulting softer outlook for investment and domestic demand. By the time of the December meeting, there were further indications that the peak in mining investment was approaching, and with public spending expected to weigh on growth, the Board judged that there was more scope for other sources of demand to strengthen. With the near-term outlook for business investment outside the resources sector also remaining subdued, the Board decided to reduce the cash rate by an additional 25 basis points. This reduction brought borrowing interest rates to well below their longer-run averages, and only a bit above the low levels achieved in 2009. The cumulative reduction in interest rates is affecting interest-sensitive parts of the economy, though the full effects will, of course, take more time to become apparent.

By early February, global economic and financial market conditions had improved. Also, expansionary monetary policies had led to a significant rise in asset prices and commodity prices had held up or even moved higher since the last months of 2012. Domestically, growth in economic activity is still expected to be a bit below trend this year, before picking up to around trend through 2014. Inflation, in underlying terms, is expected to remain close to the middle of the inflation target over the next couple of years. Given the significant monetary stimulus already in place, and signs of lower interest rates having some of the expected effects, the Board judged that the stance of monetary policy remained appropriate for the time being. The current inflation outlook would afford scope to ease policy further, should that be necessary to support demand. The Board will adjust the cash rate as appropriate to foster sustainable growth and low inflation.

1. International Economic Developments

Global economic conditions improved a little in the last few months of 2012 (Graph 1.1). There have been further signs that the Chinese economy has stabilised, and economic activity has also shown signs of improvement elsewhere in Asia, with the notable exception of Japan. Overall, economic conditions in the advanced economies also improved a little toward the end of 2012, although growth remains subdued. Recent developments in the United States have been fairly positive, but economic activity in the euro area has continued to contract and conditions in Japan remain weak. Many commodity prices have increased, coinciding with a pick-up in the growth rate of global industrial production.

Graph 1.1
Global Economic Activity



Sources: CEIC; Markit Economics; RBA; Thomson Reuters; United Nations

Forecasts of global growth are broadly unchanged since the November *Statement*; after slowing to 3¼ per cent in 2012, global economic growth is expected to pick up gradually to be around 3½ per cent in 2013, before increasing to an above-average pace in 2014. Growth is expected to remain relatively strong in the developing Asian economies. Reflecting Australia's increasing trade with these faster-growing economies, growth in Australia's major trading partners is forecast to be at, or a little above, its long-run average in each of the next two years. In most countries, inflation is well contained, and monetary policy has remained accommodative, especially so in a number of advanced economies.

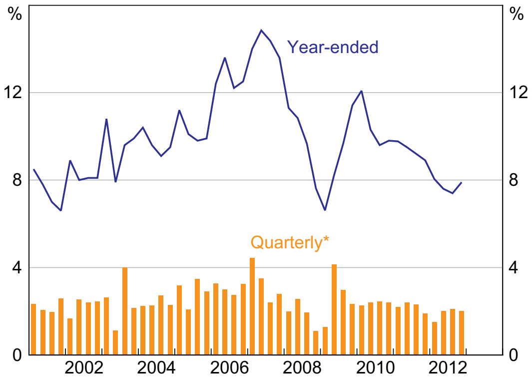
Asia

Economic conditions in China continued to improve in the second half of 2012, with GDP growing at 2.0 per cent in the December quarter to be 7.9 per cent higher over the year (Graph 1.2). The pick-up has been driven by faster growth in investment following a modest expansion in fiscal spending and improvements in the property market (Graph 1.3). Monetary conditions have generally remained accommodative.

Conditions in the real estate sector have continued to recover. Residential property prices have risen at a modest pace since the trough in May 2012. The pick-up in residential sales activity has continued, with sales in the December quarter around 20 per cent higher than in the March quarter 2012, and this has supported a recovery in real estate investment. The government's affordable housing program is also providing support to activity, with a target of 4.6 million completions for 2013 following 6 million units completed in 2012.

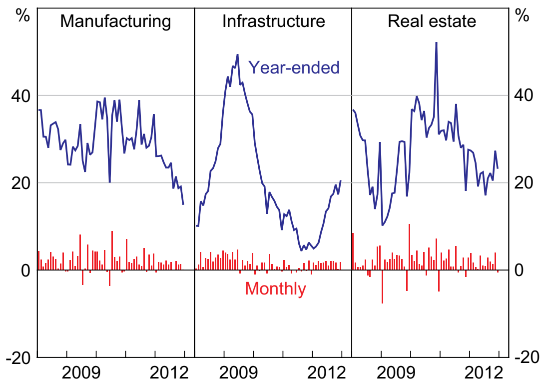
The increase in public spending has supported a strong pick-up in infrastructure investment, including

Graph 1.2
China – GDP Growth



* RBA estimates prior to December quarter 2010
Sources: CEIC; RBA

Graph 1.3
China – Growth in Nominal Investment*

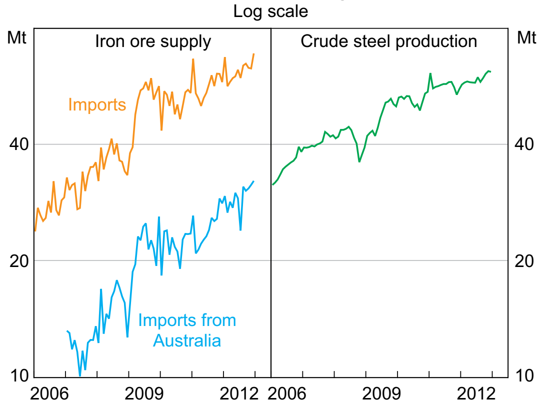


* RBA estimates
Sources: CEIC; RBA

for railways between and within cities. The sizeable pipeline of projects suggests that infrastructure investment will continue to support growth in 2013. However, investment growth in the manufacturing sector has remained lower than in the past few years in line with only moderate growth in external demand.

Industrial production has been boosted by the recovery in the real estate sector and the expansion of infrastructure investment, particularly in heavy industries including steel production (Graph 1.4). This has also seen an improvement in industrial profits in late 2012. Electricity generation has recovered after a period of weak growth in mid 2012. A target of 10 per cent annual growth in industrial production has been announced for 2013, which is consistent with the recovery currently underway, although significantly lower than the average of the past decade. Growth in imports has also accelerated somewhat alongside the pick-up in domestic demand. Iron ore and other resource imports have shown particular strength in line with the recovery in heavy industry.

Graph 1.4
China – Iron Ore Supply and Steel
Log scale



Sources: CEIC; RBA

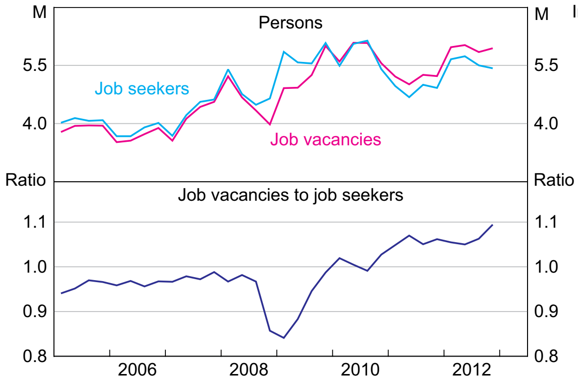
Chinese exports had been fairly subdued over the second half of 2012, but rose sharply in the month of December, partly due to some exports being pulled forward to avoid a scheduled increase in customs inspection fees at the end of 2012. Growth in exports to emerging economies has been substantially stronger than in exports to advanced economies.

Labour market indicators for the Chinese economy suggest that the lower growth of economic activity in 2012 has not translated to a softening in labour market conditions, with the ratio of urban job vacancies to urban job seekers continuing to rise (Graph 1.5).

Inflationary pressures in China remain contained despite a noticeable pick-up in fresh food prices in recent months owing to the effects of harsh weather on supply. Producer prices have stabilised after falling substantially through most of 2012, which suggests that the inflation cycle has passed its trough.

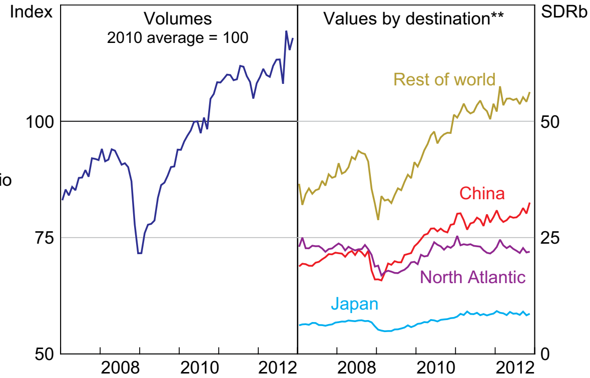
In terms of monetary policy, the People's Bank of China has not adjusted reserve requirements

Graph 1.5
China – Urban Job Seekers and Vacancies



Sources: CEIC; RBA

Graph 1.6
East Asia* – Merchandise Exports



* Hong Kong, Indonesia, Malaysia, Philippines, Singapore, South Korea, Taiwan and Thailand

** North Atlantic includes the European Union and US; 'Rest of world' includes intra-regional exports

Sources: CEIC; IMF; RBA; Thomson Reuters

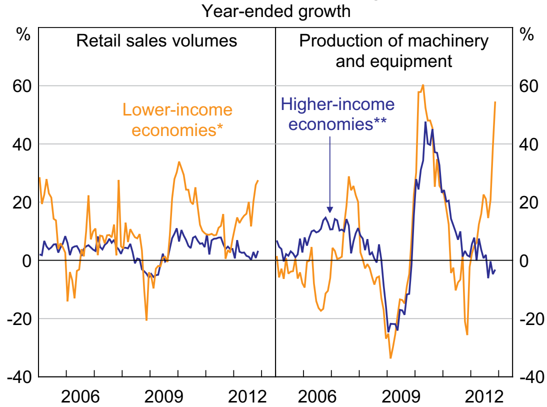
or benchmark interest rates since the previous *Statement*. There has been a modest increase in household credit growth consistent with improved conditions in the residential property market. Growth in business credit has moderated slightly, but strong growth in non-credit finance has meant that overall financing conditions in the business sector remain positive. As a result of the pick-up in non-intermediated finance – especially in off-balance sheet lending and corporate bond issuance – the government's target for total social financing for 2012 was exceeded.

While the slowdown in the advanced economies weighed on growth in east Asia in 2012, the pick-up in activity in China appears to have supported export growth in a number of east Asian economies (Graph 1.6). Growth in industrial production increased in the region during the December quarter after easing earlier in the year. Some of that recovery has been in the electronics and transport industries, which had been particularly weak around the middle of the year.

Domestic demand conditions continue to be weaker in the higher-income economies of the region than in the lower-income economies. The difference is particularly pronounced for investment, which contracted in some higher-income economies in the second half of 2012 but continued to expand in the lower-income economies. Consumption growth also slowed over the year in the higher-income economies, where growth in retail sales has been modest, consumer confidence has remained at relatively low levels, and softer employment growth appears to be weighing on income growth (Graph 1.7).

In Japan, growth has declined over the year with waning impetus from the reconstruction effort following the March 2011 earthquake (Graph 1.8). Exports also declined, with the territorial dispute with China a contributing factor to export weakness more recently. Private demand appears to have

Graph 1.7
East Asia – Domestic Activity Indicators
Year-ended growth

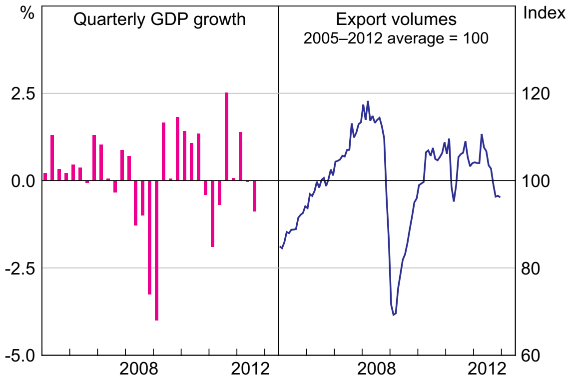


* Indonesia and Thailand for retail sales; Malaysia, Philippines and Thailand for production

** Hong Kong, Singapore, South Korea and Taiwan; excluding Hong Kong for production

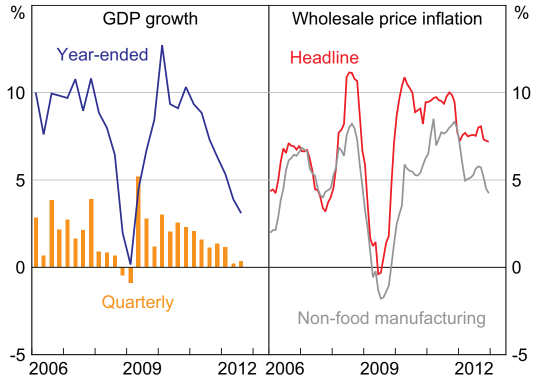
Sources: CEIC; IMF; RBA

Graph 1.8
Japan – GDP and Exports



Sources: CEIC; Thomson Reuters

Graph 1.9
India – Economic Indicators



Sources: CEIC; RBA

contracted further in the December quarter, with some indicators suggesting that there was no growth in consumption and a further contraction in business investment. However, the core measure of machinery orders has rebounded more recently, pointing to some improvement in investment in early 2013. Rebuilding efforts continued to support activity in some sectors in the second half of 2012 and public investment remained at a high level.

In January, the new Japanese Government announced a large supplementary budget aimed at stimulating economic growth. The package includes new expenditure on earthquake reconstruction and measures to support small businesses. The Bank of Japan also announced that it was adopting a 2 per cent inflation target and would implement some additional asset purchases from 2014 (see the 'International and Foreign Exchange Markets' chapter for more detail).

As in China, inflationary pressures in east Asia, including Japan, eased during the year. Notwithstanding this, recent cold weather is likely to see higher food prices in coming months.

In India, GDP growth slowed over the past year (Graph 1.9). The soft growth reflected ongoing weakness in investment, stagnant exports and slower household consumption growth. However, indicators point to a modest pick-up in growth in the December quarter; industrial production rose over October and November, and conditions in the services sector remain relatively favourable with the services PMI pointing to continued expansion. Exports and production of iron ore are still affected by legal and environmental constraints in some states.

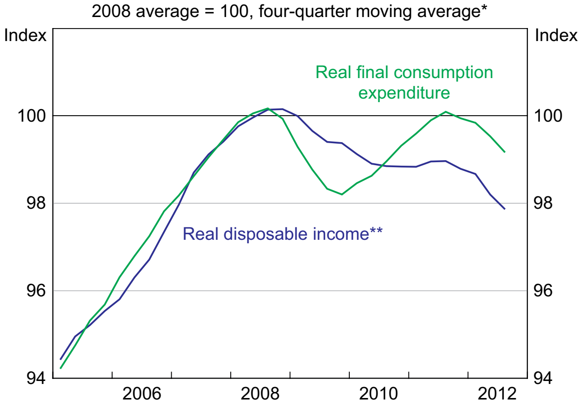
Wholesale price inflation in India has eased slightly over the three months to December, although inflation over the year remained high. Core (non-food manufacturing) wholesale price inflation has eased somewhat but food price inflation has remained elevated with higher rice, corn and tea prices driving an increase in food inflation in December. The slight easing of inflation provided space for the Reserve Bank of India to assist weak growth by cutting both the policy rate and the cash reserve ratio by 25 basis points at its January meeting.

Europe

The euro area economy contracted further over 2012. Although economic conditions remain weakest in southern Europe, growth in Germany, France and other non-crisis economies has also moderated. Timely survey indicators suggest that economic activity in the December quarter remained weak. Fiscal consolidation in a number of countries is continuing to weigh on economic activity, and the underlying structural problems in several euro area economies will take time to resolve. Nonetheless, measures taken by policymakers in the region have led to improved sentiment in financial markets and some indicators, such as survey indicators of export orders, have increased from low levels.

Consumption in the euro area has declined, in part reflecting lower real household disposable income as employment has fallen (Graph 1.10). Both retail sales and survey data suggest that consumption has remained weak in recent months. Consumer sentiment has remained below its long-term average, albeit improving in some countries more recently.

Graph 1.10
Euro Area – Household Sector
2008 average = 100, four-quarter moving average*

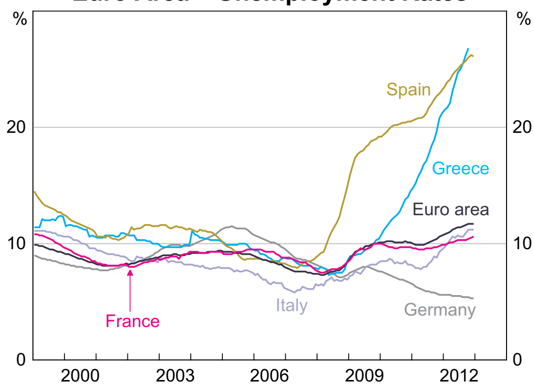


* Deflated using the final consumption expenditure deflator
** Gross, adjusted for the change in net equity of households and pension funds
Sources: European Central Bank; Eurostat; RBA

Labour market conditions have continued to deteriorate in most of the euro area; employment has contracted further and the unemployment rate has increased to historically high levels, reflecting the weak domestic demand and slower growth in world trade (Graph 1.11). There are, however, substantial differences between countries; unemployment remains low in Germany, while it is very high in the crisis economies.

Euro area inflation moderated toward the end of 2012 as energy price pressures eased. In an environment of weak economic activity in the region and well-anchored long-term inflation expectations, price pressures are expected to remain subdued.

Graph 1.11
Euro Area – Unemployment Rates



Source: Thomson Reuters

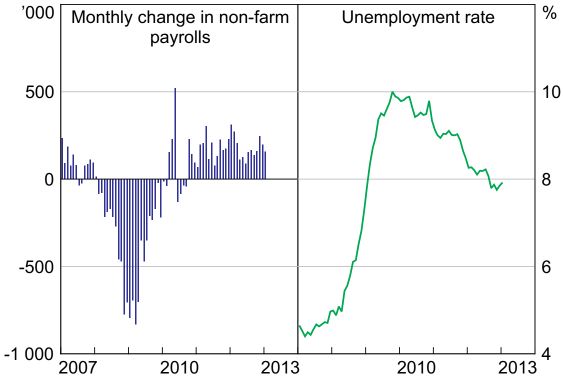
United States

Economic conditions in the United States have generally improved in recent months. While GDP was unchanged in the December quarter, private demand grew strongly; temporary factors such as a large fall in defence spending, a run-down of inventories and Hurricane Sandy subtracted from growth in the quarter. Although private non-farm employment has increased at a slightly stronger pace over recent months, the unemployment rate has remained elevated (Graph 1.12). Furthermore, the labour force participation rate has remained near its lowest level in three decades, although this partly reflects the effects of population ageing on participation.

In December, the Federal Open Market Committee (FOMC) indicated that the highly accommodative level of interest rates would continue to be appropriate as long as the unemployment rate remained above 6½ per cent and inflation was projected to be no more than ½ percentage point above the Committee's 2 per cent goal (see the 'International and Foreign Exchange Markets' chapter for more detail).

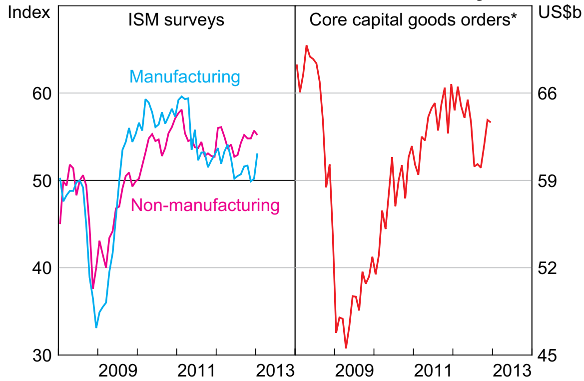
In early January, legislation was passed to avoid the full effects of the large legislated fiscal contraction known as the 'fiscal cliff'. However, there has not been complete resolution of fiscal issues, with decisions about expenditure cuts and changes to the debt ceiling delayed for several months.

Graph 1.12
United States – Labour Market



Source: Thomson Reuters

Graph 1.13
United States – Business Activity



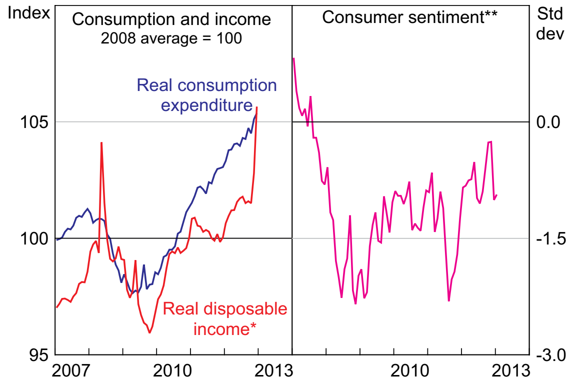
* Non-defence capital goods orders excluding aircraft
Source: Thomson Reuters

Industrial activity rebounded sharply in November and December following the disruptions caused by Hurricane Sandy in October along the US east coast. Broad indicators of factory output, such as the manufacturing and non-manufacturing ISM surveys and core capital goods orders, have improved after slowing through the middle of 2012 (Graph 1.13).

Household consumption has remained resilient and growth has picked up since the first half of 2012 (Graph 1.14). Purchases of motor vehicles and other durables have remained relatively strong. While real disposable income increased, the strong rise in the December quarter was partly due to payments being brought forward ahead of impending tax changes and growth in nominal wages remained low. The recent increase in the payroll tax rate may weigh on consumption in the months ahead. Household net worth has increased as a result of higher equity and housing values; nominal household net worth is now approaching levels seen before the financial crisis.

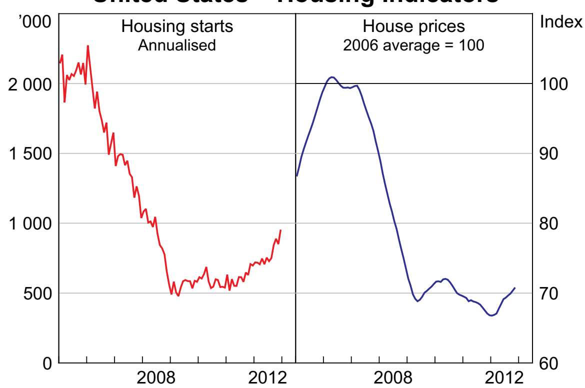
Conditions in the housing market have continued to improve gradually, with housing starts increasing since mid 2012 and house prices also rising (Graph 1.15). However, construction activity is still at a low level, with the stock of foreclosed and distressed homes still high and credit standards for mortgages remaining tight, particularly for borrowers with low credit ratings.

Graph 1.14
United States – Household Indicators



* After tax, before the deduction of interest payments
** Standard deviation from long-run average
Source: Thomson Reuters

Graph 1.15
United States – Housing Indicators



Sources: Standard & Poor’s; Thomson Reuters

Inflation has slowed over the past six months as consumer energy costs fell, while measures of longer-run inflation expectations have remained stable. Core measures of inflation have also remained modest. In year-ended terms, both core and headline inflation remain well below the FOMC's 2 per cent goal.

Commodity Prices

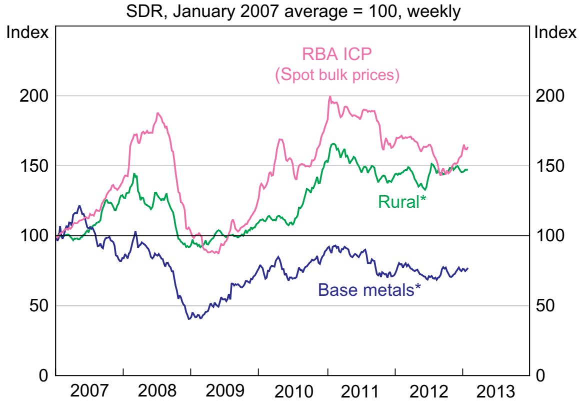
Commodity prices have generally increased since the November *Statement*. The RBA Index of Commodity Prices, based on spot prices for the bulk commodities, has increased by 10 per cent in SDR terms. The rise was broadly based, with the exception of rural commodities (Table 1.1, Graph 1.16).

Table 1.1 Commodity Price Growth[(a)]
SDR, per cent

	Change since previous *Statement*	Change over the past year
Bulk commodities		
– Iron ore	31	7
– Coking coal	7	–22
– Thermal coal	14	–18
Rural	–2	1
– Beef	–1	0
– Cotton	11	–14
– Wheat	–11	15
– Wool	11	–8
Base metals	10	–2
– Aluminium	8	–4
– Copper	8	–2
– Lead	12	15
– Nickel	16	–13
– Zinc	15	3
Gold	–4	–2
Brent oil[(b)]	6	1
RBA ICP	7	–6
– using spot prices for bulk commodities	10	–4

(a) Components of RBA Index of Commodity Prices (ICP), except oil and bulk commodities prices, which are spot prices; latest available
(b) US dollar terms
Sources: Bloomberg; RBA

Graph 1.16
Commodity Prices
SDR, January 2007 average = 100, weekly

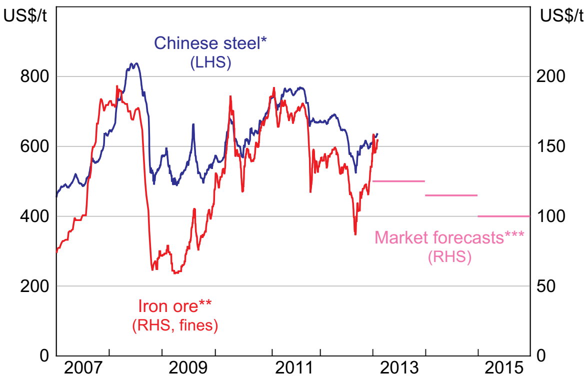


* RBA Index of Commodity Prices (ICP) sub-indices
Source: RBA

The spot price for iron ore continues to be volatile, and the average price in the past two months has been 25 per cent higher than the average price in the preceding two months. This increase has more than unwound the sharp falls in July and August, with the price currently around 86 per cent higher than its trough in September last year (Graph 1.17). The recent rise appears to have partly reflected an effort by Chinese iron ore users to restock inventories, which had fallen to a low level relative to steel production (Graph 1.18).[1] Chinese steel prices have also increased, consistent with some pick-up in steel demand. However, growth in steel prices has been more modest than the rise in spot prices for iron ore, suggesting that iron ore prices may not be sustained at current high levels. Indeed, most forecasters are expecting the iron ore price to drop back over 2013, to levels more in line with estimates of the marginal cost of global supply. The spot price for coking coal – which is predominantly used in steel production – has increased a little since the November *Statement*, but remains more than 20 per cent lower than a year ago. The March quarter benchmark contract price for premium hard coking coal has reportedly been settled at US$165 per tonne, US$5 lower than the December quarter contract.

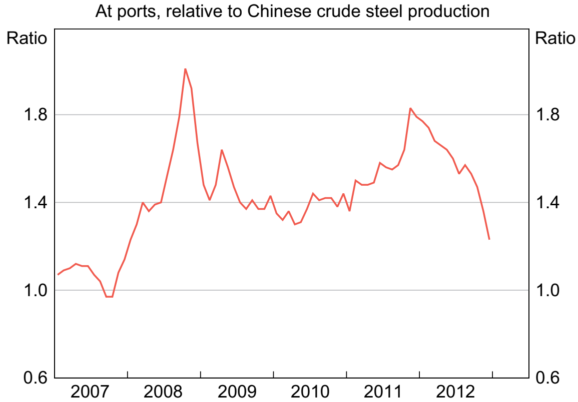
1 See RBA (2012), 'Box A: China's Steel and Iron Ore Sector', *Statement on Monetary Policy*, November, pp 14–16.

Graph 1.17
Chinese Steel and Iron Ore Spot Prices



* Average of hot rolled steel sheet and steel rebar prices
** Includes cost of freight to China
*** Calendar year; median of market analyst forecasts for iron ore, based on 2013 Reuters survey
Sources: Bloomberg; RBA; Thomson Reuters

Graph 1.18
Chinese Iron Ore Inventories
At ports, relative to Chinese crude steel production



Sources: Bloomberg; CEIC; RBA

Energy prices have generally increased since the November *Statement*. Crude oil prices are higher and global spot prices for thermal coal have also risen, after falling over much of 2012. As discussed in 'Box A: Thermal Coal Prices', the fall in thermal coal prices in 2012 in part reflected increased coal exports from the United States as it shifted to using cheaper natural gas. The announcement of cuts to coal production in the United States, together with US natural gas prices rising since their trough in April last year, may have contributed to the stabilisation in thermal coal prices toward the end of 2012. The current level of the spot price for Newcastle thermal coal, however, remains lower than the existing Japanese financial year contract price of US$115 per tonne, which is typically renegotiated in the March quarter. This is likely to lead to lower contract prices in 2013.

Base metals prices have risen in recent months in line with more encouraging signs that infrastructure and real estate investment in China is picking up and tentative signs of improvement in industrial production in other Asian economies. Despite a recent increase in aluminium prices, they remain low by historical standards, with inventories at a high level and continued growth in Chinese capacity expected to outweigh production cuts elsewhere.

Rural prices overall have remained broadly unchanged over recent months, with rising wool and cotton prices offset by falling wheat prices. Although drought conditions in the United States have persisted, wheat prices have been weighed down by expectations of increased production in Canada and China, and by India becoming a significant exporter of wheat for the first time in five years. Nevertheless, wheat prices remain high relative to their decade average. Prices of some other crops, such as soya beans and corn, have also fallen. The strengthening in wool prices unwinds the fall in the September quarter, reflecting stronger demand from China.

Box A

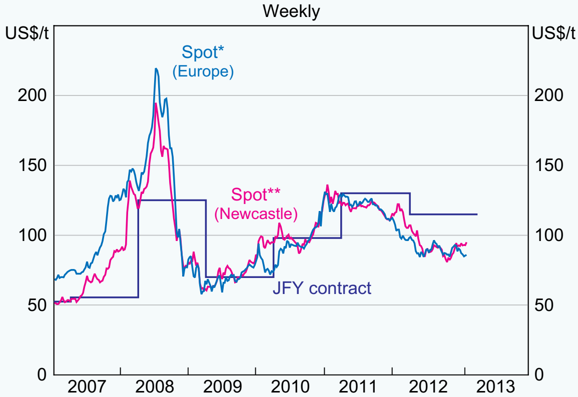
Thermal Coal Prices

Thermal coal is Australia's third largest commodity export by value, accounting for around 6 per cent of total export income in 2011/12. The majority of Australia's thermal coal exports go to Japan, while Korea and China are also important export destinations. China's importance has increased significantly since 2009, accounting for around one-fifth of thermal coal exports in 2011/12 up from only 2 per cent at the end of 2008.

The pricing arrangements for thermal coal vary between different source and destination countries due to heterogeneity in the quality of thermal coal and variation in historical practices. Australia's coal exports to Japan and Korea are largely based on long-term contracts with annual pricing (an example is the Japanese financial year (JFY) contract price). For exports to other destinations, including China, transactions tend to occur on spot markets. The Newcastle thermal coal spot price is the benchmark price for most Australian thermal coal sold on shorter-term contracts.

The Newcastle spot price for thermal coal has declined over the past two years, with a particularly sharp fall in the first half of 2012, broadly in line with falls in other global benchmark prices for traded thermal coal (Graph A1). Falls in global thermal coal prices reflected both subdued demand for thermal coal from importing countries and an increase in the volume of traded coal. The Newcastle spot price for thermal coal is now noticeably below the 2012 JFY annual contract price, which is likely to lead to lower JFY contract prices in 2013.

Graph A1
Thermal Coal Prices
Weekly



* Includes cost of freight to Amsterdam, Rotterdam or Antwerp
** Free on board
Sources: globalCOAL; RBA

Markets for Thermal Coal

Thermal coal is used to generate around 40 per cent of the world's electricity, with this share having remained relatively stable over the past three decades. Coal's share in global electricity generation is nearly double that of the second most important source, natural gas. The use of coal in electricity generation varies significantly across countries. For example, the share of electricity generated by coal is relatively high in China and India and relatively low in France, Japan and Russia.

Globally, most thermal coal is used in the country where it is produced, with traded thermal coal accounting for a small share of global consumption. Indonesia and Australia are the largest exporters, reflecting the small size of their domestic energy requirements relative to production, while China and the European Union are the biggest importers of thermal coal (Table A1). The market for traded

Table A1: The Global Thermal Coal Market – 2011
Top five exporters and importers; share of global market

Exporters	Per cent	Importers	Per cent
Indonesia	36	European Union	19
Australia	17	China	17
Russia	13	Japan	14
Colombia	9	South Korea	11
South Africa	8	India	10

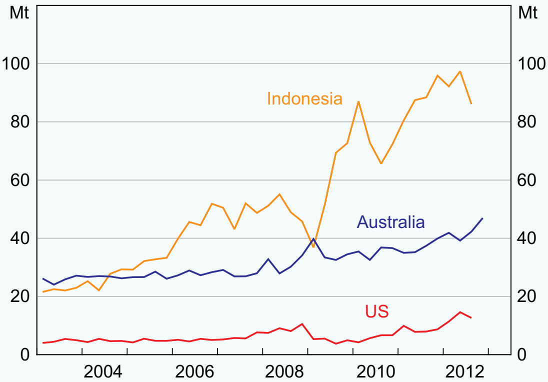
Source: Bureau of Resource and Energy Economics

thermal coal can be viewed as consisting of two broad geographical markets, which have been somewhat separate because of the effect of transport costs. The Atlantic market consists of exports from the Americas and Russia to countries in Europe, while the Pacific market largely consists of coal trade from Australia and Indonesia to China, Japan and Korea. These two large markets used to be quite separate, with only Russia and South Africa tending to supply both depending on price differentials across the markets. More recently, lower costs of freight, subdued demand from importers and an increase in the volume of traded coal from both traditional and non-traditional suppliers have all worked to increase the links between these two markets.

Increased Volume of Traded Coal

A key driver of the fall in thermal coal prices over 2011 and 2012 was an increase in the volume of exports from the Americas. Exports from the United States rose by over 50 per cent in the first half of 2012, after almost doubling over the previous two years from low levels (Graph A2). US coal exports increased as domestic energy demand shifted to gas. This followed a decline in US natural gas prices over 2011 and into 2012 as production of unconventional gas from shale rock increased. While some US coal producers responded by reducing production, others took advantage of low global freight rates to increase their exports of coal to Asia and Europe. The reduction in demand for coal in the United States also meant that US imports of coal declined. In response, countries that exported to the United States, such as Colombia (which had supplied around 80 per cent of US thermal coal imports in 2011), have increased their exports to other countries.

Graph A2
Thermal Coal Exports
Quarterly



Sources: ABS; CEIC; RBA; US Energy Information Administration

Increased production of thermal coal by the large exporters of coal has also weighed on prices. The rapid expansion in Indonesian coal exports over the past few years has been driven by high rates of investment in resource extraction. In Australia, large-scale expansions to infrastructure, predominantly at the Port of Newcastle, have supported the growth of exports. Further, shipments from major exporters such as Russia and South Africa, which supply both the Atlantic and the Pacific markets, have also increased over the past couple of years.

Subdued Global Demand

Demand for thermal coal outside of the United States has also been subdued, especially in Asia and Europe. Coal imports to Europe were flat in the first half of 2012, remaining below their level prior to the global financial crisis, consistent with weakness in industrial production. Growth in industrial production and electricity generation have also been weak in Japan and Korea, with flow-on effects to thermal coal imports. Despite the loss of nuclear energy from the shutdown of Japan's nuclear reactors after the earthquake in March 2011, imports of thermal coal by Japan did not pick up noticeably in 2011–2012. This is because electricity generated from liquefied natural gas rather than coal has largely offset the reduction in nuclear electricity generation in Japan.

Conditions in China have also had noticeable effects on coal prices. After moving from being a net exporter to a net importer of thermal coal in 2009, China's demand has largely supported growth in the internationally traded market. However, growth in imports of thermal coal into China eased in the first half of 2012, in line with a fall in thermal electricity production. This reflected a slowing in growth in industrial production, particularly in electricity-intensive heavy industries. Thermal electricity production was further dampened by an increase in hydro-electricity.

In contrast, increases in Indian demand for thermal coal are likely to have provided some support to the traded market in recent years. This reflects the fact that growth in thermal electricity generating capacity has been stronger than the growth of domestic Indian coal production. Growth in demand from India has largely been met by exports from Indonesia and South Africa.

Demand conditions are expected to improve gradually in line with the forecast of a pick-up in global economic activity. Supply is also expected to increase as a result of investment in coal production in a range of countries. Uncertainty about the balance between these forces means that there is a wide range of plausible paths for thermal coal prices over the medium term.

2. International and Foreign Exchange Markets

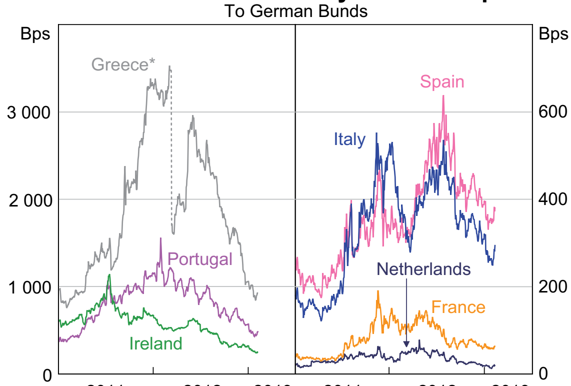
Global market sentiment has improved markedly since the middle of 2012, underpinned by policy actions by major central banks and other policy actions which have served to avoid possible very adverse outcomes in Europe. More recently, better economic data and the partial resolution of the fiscal situation in the United States have boosted asset prices, with some investors shifting from the conservative positions they held through the second half of last year to investments with higher expected returns. Volatility in many markets also declined significantly through the second half of 2012 (see 'Box B: Financial Market Volatility').

European Sovereign Debt Markets

Spreads between yields on long-term euro area periphery government bonds and German Bunds have narrowed considerably since the middle of 2012 (Graph 2.1). Bond yields in euro area periphery countries fell markedly after European Central Bank (ECB) President Draghi indicated in July that the ECB was prepared to take decisive action to preserve the euro, and then fell further following the ECB's announcement of its Outright Monetary Transactions (OMT) program in September 2012. Although the ECB is yet to purchase bonds under the OMT, the implicit support provided by the program has underpinned the decline in yields. In addition, the provision of further official financial assistance to Greece and some political progress in other areas, such as pan-European banking supervision, has helped bolster the market.

After protracted negotiations between Greece and the 'troika' of official agencies – the European Union (EU), ECB and International Monetary Fund (IMF) – an adjusted assistance program for Greece was agreed upon in November 2012. The program is designed to reduce Greece's debt-to-GDP ratio to 124 per cent by 2020, and to 'substantially lower' than 110 per cent by 2022. Adjustments to the package were required because of a sharp deterioration in Greece's debt position since the bailout agreement in March last year, primarily because of weaker-than-forecast economic growth. The troika has noted that significant implementation and economic risks remain.

Graph 2.1
Euro Area Government 10-year Bond Spreads
To German Bunds



* Data from 12 March 2012 are yields on Greek bonds post first private sector debt swap
Source: Bloomberg

Greece completed a buyback of €32 billion of government debt held by the private sector in mid December. Only around one-fifth of Greek government debt outstanding is now privately held. The assistance program also features an extension of the maturities of European public sector loans to

Greece and a reduction in the interest payments due on these loans. Euro area finance ministers approved €49 billion of funding for Greece, the majority of which had been delayed from earlier in the year and has now been disbursed. The IMF completed its review of Greece's assistance package in mid January and approved the disbursement of two delayed funding instalments, worth around €3 billion.

Spanish Prime Minister Rajoy has reiterated that he does not believe it is necessary 'at this time' for Spain to request a precautionary financial assistance program, which is a prerequisite for the ECB to purchase Spanish government bonds under its OMT program. Despite Spain not having requested assistance, Spanish yields have fallen further over recent months. The decline in yields since July 2012 has been particularly pronounced at the shorter end of the yield curve, where any ECB purchases would be concentrated. Yields on 2-year bonds are around 380 basis points lower than their peak in July (Graph 2.2). The recapitalisation of Spain's banking sector by the public sector is underway, with €39 billion in public capital having been provided to eight Spanish banks.

Italian Prime Minister Monti announced his resignation in early December and national elections will be held in late February. Despite this, Italian government bond yields have fallen over recent months, with 2-year yields approaching their previous historic lows recorded in 2010.

Elsewhere in Europe, Ireland issued €2.5 billion of 5-year bonds, which was the country's first issue since mid last year and potentially a step closer to the 'full market access' that is a precondition for the ECB to purchase sovereign debt of countries with assistance packages under its OMT program. Portugal received €2.5 billion in funding from the EU and IMF following the successful completion of the sixth review of the nation's assistance program but also returned to bond markets for the first time since it received its bailout in 2011, issuing €2.5 billion of 5-year bonds in January. Euro area finance ministers have agreed on a draft memorandum of understanding for an assistance package for Cyprus. Reports suggest that a package could be worth around €17 billion, equivalent to 100 per cent of Cypriot GDP, with much of it for the purpose of recapitalising the country's banking sector. A package is not expected to be finalised before the presidential election in Cyprus in late February.

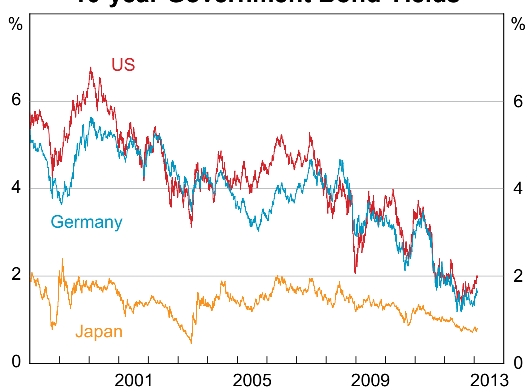
Other Sovereign Debt Markets

Major market government bond yields have increased over recent months but remain at historically low levels (Graph 2.3). Yields on 10-year German and US government bonds have increased by around 50 basis points since July. Short-term yields in Germany have increased to low positive levels, after being negative for much of the second half of 2012.

Graph 2.2
2-year Government Bond Yields

Source: Bloomberg

Graph 2.3
10-year Government Bond Yields



Source: Bloomberg

In the United States, a partial resolution of the fiscal situation was reached around the turn of the year, with expiring income tax cuts for lower and middle income earners made permanent. No agreement was reached on reductions in federal spending, with compulsory spending cuts that were due to commence deferred until 1 March 2013. Uncertainty about whether any deal would be reached led to some volatility in Treasury yields, but had little lasting impact. The United States officially reached its 'debt ceiling' in late December but Congress subsequently suspended the debt ceiling until May.

In Japan, the Liberal Democratic Party was elected in mid December, pledging to boost economic output and address deflation. Prime Minister Abe has announced a fiscal stimulus package of around 2 per cent of GDP and also suggested that the Bank of Japan pursue more stimulatory monetary policy (see 'Central Bank Policy'). Notwithstanding this, Japanese government bond yields have been little changed.

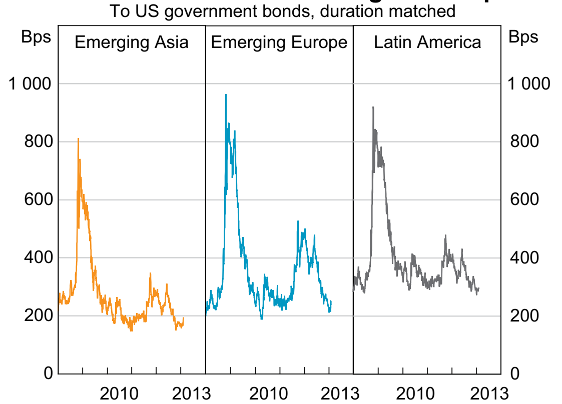
Spreads on US dollar-denominated debt issued by emerging market sovereigns narrowed considerably over the second half of last year, to be around their lowest levels in several years (Graph 2.4). Argentine bonds were one exception, with yields increasing in response to US Court rulings that the sovereign must pay remaining holders of previously defaulted securities, issued under New York law, whenever it makes payments on its restructured debt. Argentina has appealed the court decisions and another hearing is to be held in late February.

Central Bank Policy

In the United States, the Federal Reserve announced a further program of longer-term US Treasury purchases, initially at a pace of US$45 billion per month, to replace the expiring Maturity Extension Program. Together with the program of additional agency mortgage-backed securities (MBS) purchases that was announced in September 2012, the Fed will purchase around US$85 billion of longer-term securities per month (in net terms) on an ongoing basis. Purchases will continue until the outlook for the labour market 'improves substantially'. The Fed currently holds around US$1.7 trillion in US Treasuries and around US$1.1 trillion in agency MBS, or close to 20 per cent of the total outstanding in each market (Graph 2.5).

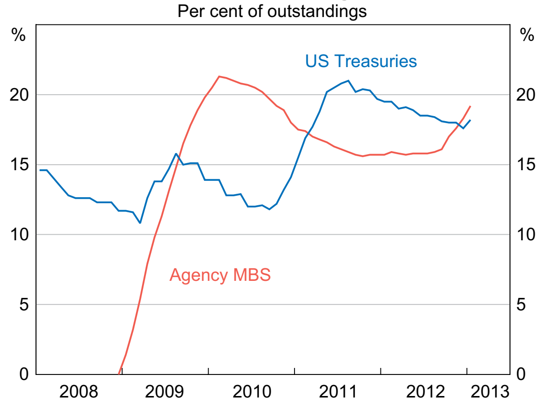
In addition to its guidance regarding asset purchases, the Fed announced changes to its guidance on policy rates: it is now specified in terms of economic thresholds rather than being date based. The Fed anticipates that its exceptionally low policy rate will be appropriate at least as long as the unemployment rate remains above 6½ per cent, inflation between one and two years ahead is projected to be no more than 2½ per cent, and longer-term inflation expectations remain well anchored.

Graph 2.4
US Dollar-denominated Sovereign Debt Spreads
To US government bonds, duration matched



Source: Thomson Reuters

Graph 2.5
US Federal Reserve Holdings of Securities
Per cent of outstandings



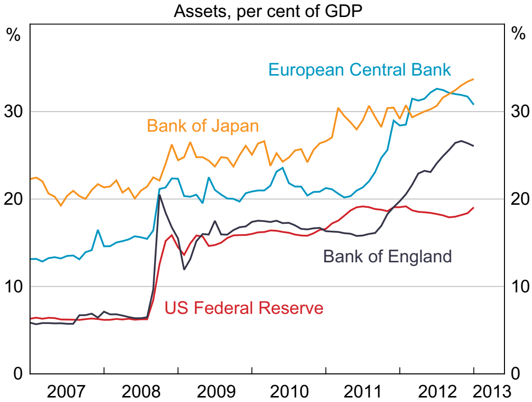
Sources: Board of Governors of the Federal Reserve System; RBA; SIFMA; Thomson Reuters

At its January meeting, the Bank of Japan (BoJ) adopted a price stability target of 2 per cent for consumer price inflation. This replaced the previous price stability 'goal' of 2 per cent or lower in the medium to long term and 1 per cent in the near term. The BoJ aims to achieve this target at the 'earliest possible time' through 'aggressive monetary easing'. From January 2014, the BoJ will commence an open-ended version of its Asset Purchase Program (APP). The BoJ will purchase around ¥13 trillion (around 2½ per cent of GDP) of assets each month in gross terms, including ¥10 trillion of treasury bills and ¥2 trillion of Japanese government bonds, for as long as appropriate. In net terms, these purchases will increase the size of the BoJ's securities holdings by ¥10 trillion over 2014, as most of the gross purchases will be offset by maturities.

The open-ended purchases will follow the completion by the end of 2013 of the previously planned net increase in the APP to ¥101 trillion (around US$1.1 trillion). Together with the Stimulating Bank Lending Facility that was announced in late 2012, the BoJ estimates that it will provide new funds of around ¥50 trillion (around US$550 billion) over 2013. This would increase the size of its balance sheet to the equivalent of more than 40 per cent of GDP, from 34 per cent currently (Graph 2.6).

ECB lending to banks for monetary policy purposes has fallen by around 15 per cent since August, to be

Graph 2.6
Central Bank Balance Sheets
Assets, per cent of GDP



Sources: RBA; Thomson Reuters

around €1 trillion. A large part of the decline is due to the early repayment of funds borrowed from the ECB's first three-year lending operation conducted in December 2011. Funds borrowed via the ECB's second three-year lending operation will be eligible for early repayment from late February. Data to December, which predate the early repayments, indicate that lending via the Bank of Spain had declined by around 15 per cent since August 2012.

Since the previous *Statement*, the central banks of Sweden and Israel have cut their policy rates by 25 basis points, while the central bank of India has cut both its policy rate and cash reserve ratio by 25 basis points (Table 2.1).

Financial Policy

In January, the Basel Committee on Banking Supervision (BCBS) issued its revised Liquidity Coverage Ratio (LCR) regulations. The range of collateral eligible to be included in 'high-quality liquid assets' was expanded. All investment grade non-financial corporate debt securities will now be eligible, as will certain stocks and highly rated residential mortgage-backed securities. In addition, 'run-off rates' for several categories of liabilities and off-balance sheet commitments of banks were reduced. The LCR regime will be introduced as planned on 1 January 2015, though the minimum requirement for the ratio will begin at 60 per cent (rather than 100 per cent), increasing annually by 10 percentage points to reach 100 per cent on 1 January 2019.

In December 2012, European finance ministers agreed on the ECB's role within the single supervisory mechanism (SSM). In general, the ECB will supervise the three largest banks in each country and any other euro area bank with total assets larger than €30 billion (or greater than 20 per cent of the bank's home country's GDP), as well as those considered domestically or regionally significant by national supervisors or the ECB. Supervision of other banks will remain with national authorities. The ECB will assume its supervisory role on the later of 1 March 2014 or

Table 2.1: Policy Rates

	Current level Per cent		Most recent change	Change from 2011 peak Basis points
Euro area	0.75	↓	Jul 12	–75
Japan	0.05	↓	Oct 10	–
United States	0.125	↓	Dec 08	–
Australia	3.00	↓	Dec 12	–175
Brazil	7.25	↓	Oct 12	–525
Canada	1.00	↑	Sep 10	–
China	6.00	↓	Jul 12	–56
India	7.75	↓	Jan 13	–75
Indonesia	5.75	↓	Feb 12	–100
Israel	1.75	↓	Dec 12	–150
Malaysia	3.00	↑	May 11	–
Mexico	4.50	↓	Jul 09	–
New Zealand	2.50	↓	Mar 11	–50
Norway	1.50	↓	Mar 12	–75
Russia	8.25	↑	Sep 12	–
South Africa	5.00	↓	Jul 12	–50
South Korea	2.75	↓	Oct 12	–50
Sweden	1.00	↓	Dec 12	–100
Switzerland	0.00	↓	Aug 11	–25
Taiwan	1.875	↑	Jun 11	–
Thailand	2.75	↓	Oct 12	–75
United Kingdom	0.50	↓	Mar 09	–

Source: central banks

12 months after the proposals are adopted by the EU. Countries that are part of the European Union but not the euro area may participate in the SSM by entering into 'close cooperation arrangements' with the ECB.

The French and Belgian Governments injected a further €5.5 billion of capital into troubled bank Dexia, the third injection since the bank first sought aid in 2008. The recapitalisation plan also reduced the size and cost of funding guarantees provided by the governments of France, Belgium and Luxembourg, limiting the size to €85 billion (down from €90 billion).

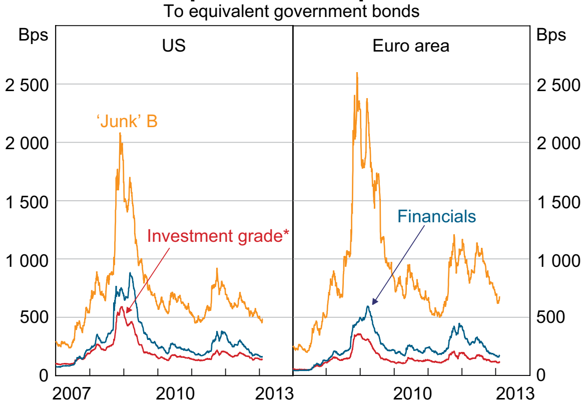
In the United States, the US Treasury sold its remaining share of AIG common stock for US$7.6 billion. The US Government has now made a return of over US$20 billion on its US$180 billion commitment to the bailout of AIG.

Credit Markets

Credit market conditions for non-financial corporates have been very favourable since the middle of 2012, as investors have sought higher yielding investments in the face of historic lows in sovereign bond yields and the actions of major central banks. Corporate bond yields fell to record lows across a number of market segments, while spreads are at the lower end of the ranges recorded over the past five years (Graph 2.7).

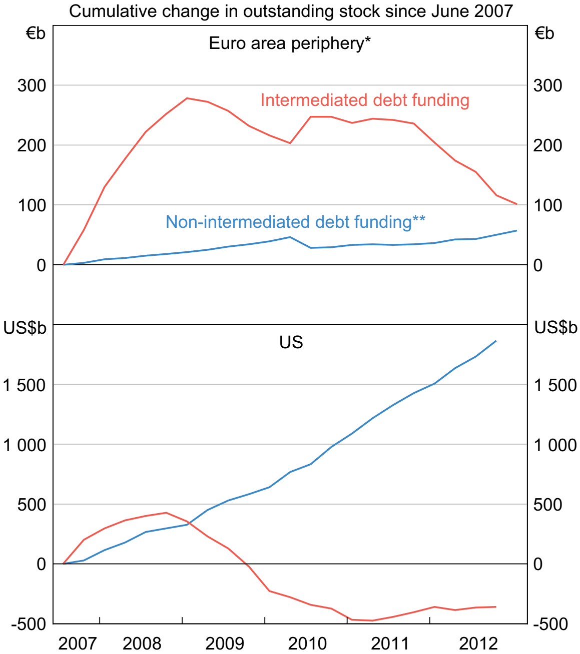
Non-financial corporates in developed and emerging markets have responded to the favourable conditions by issuing a large volume of bonds, with issuance in 2012 the largest on record (both in absolute terms and as a share of GDP). Some of the funds raised have been used in place of intermediated credit, helping corporates to retain access to funding amid bank deleveraging (Graph 2.8). Bond issuance has remained firm so far in 2013.

Graph 2.7
Corporate Bond Spreads
To equivalent government bonds



* Non-financial corporates
Sources: Bank of America Merrill Lynch; Bloomberg; RBA

Graph 2.8
Non-financial Corporates' Debt Funding
Cumulative change in outstanding stock since June 2007



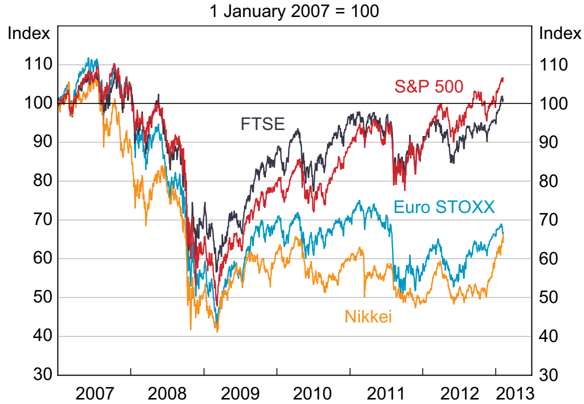
* Greece, Italy, Portugal and Spain; data up to November 2012
** Includes corporate bonds and commercial paper
Sources: Board of Governors of the Federal Reserve System; ECB

Consistent with the improvement in euro area sovereign debt markets, market access for euro area banks has also improved in recent months. Euro area banks, including those in the periphery, raised around €50 billion of term wholesale funding in January, compared with an average of €28 billion per month in the second half of 2012. Differences in the borrowing rates faced by individual banks have narrowed but peripheral banks, to the extent they have market access, are still issuing at a sizeable premium relative to other banks in the region. Bond issuance by financial institutions in other developed markets was subdued in 2012, with maturities exceeding new issuance in the United States, but has picked up more recently.

Equities

Global equity prices rose by 13 per cent over 2012, with broad-based gains across major and emerging markets (Table 2.2). Most of the increase occurred in the second half of the year following the actions by major central banks that helped to stabilise global market sentiment. US share prices are at their highest level for over five years and are only just below pre-crisis peaks (Graph 2.9). Share prices in the euro area remain well below pre-crisis levels but have risen by around 20 per cent since late July. Measures of US and euro area equity market volatility fell considerably in the second half of 2012, as did volatility in a range of other markets.

Graph 2.9
Share Price Indices
1 January 2007 = 100



Source: Bloomberg

Table 2.2: Changes in International Share Prices
Per cent

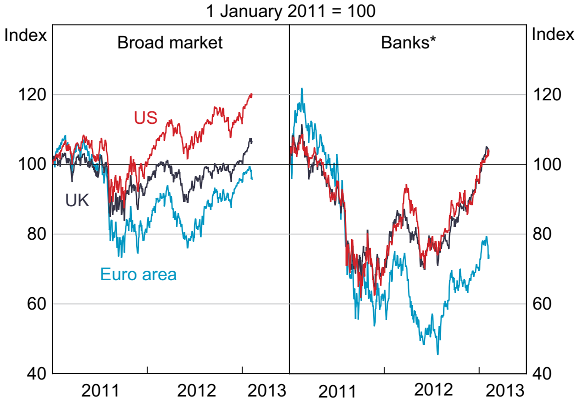
	Over 2012	Since late July	Since pre-crisis peak
United States			
– Dow Jones	7	11	–1
– S&P 500	13	13	–3
– NASDAQ	16	11	11
Euro area			
– STOXX	16	21	–41
United Kingdom			
– FTSE	6	14	–6
Japan			
– Nikkei	24	35	–37
Canada			
– TSE 300	4	11	–15
Australia			
– ASX 200	15	19	–28
China			
– China A	3	13	–60
MSCI indices			
– Emerging Asia	15	15	–16
– Latin America	9	9	–12
– Emerging Europe	13	15	–37
– World	**13**	**16**	**–17**

Source: Bloomberg

Equity markets have continued to rise in 2013, following some better-than-expected economic data and the partial resolution of the US fiscal situation. Japanese equities have risen faster than other major equity markets in recent months, increasing by around 30 per cent since the election was announced in mid November, reflecting the depreciation of the yen and expectations of further policy easing. Chinese share prices have also risen rapidly in recent months, by around 25 per cent since the trough in December, mainly reflecting generally positive economic data and growing confidence in the reform agenda of the new Chinese leadership.

Banking sector share prices rose by more than broader indices over 2012 in most major markets, and have continued to do so in 2013 (Graph 2.10). After declining markedly in the first half of 2012, the euro area banking index has risen by around 60 per cent since its trough in July. The largest US banks reported generally better-than-expected earnings for the December quarter, though several expenses, including legal provisions, affected headline earnings. Some of these legal expenses are expected to continue to reduce earnings, with several large US banks entering into settlements with regulators to resolve mortgage-related claims. Profits were supported by improvements in wealth management and investment banking revenues. Concerns about net interest margin compression weighed on some banks' share prices.

Graph 2.10
Share Price Indices
1 January 2011 = 100

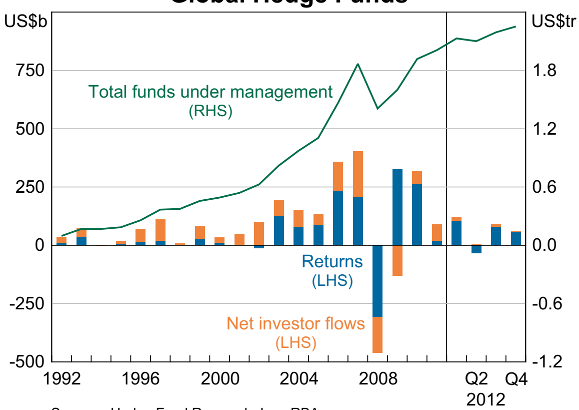


* US index is diversified financials
Source: Bloomberg

Hedge Funds

Global hedge funds recorded an average return on investments of 6 per cent over 2012 (Graph 2.11). This was less than the total return from equity markets (which include dividends) over the year. Funds under management increased slightly over the December quarter to US$2.3 trillion. This was largely as a result of a positive average investment return; net investor inflows were modest.

Graph 2.11
Global Hedge Funds

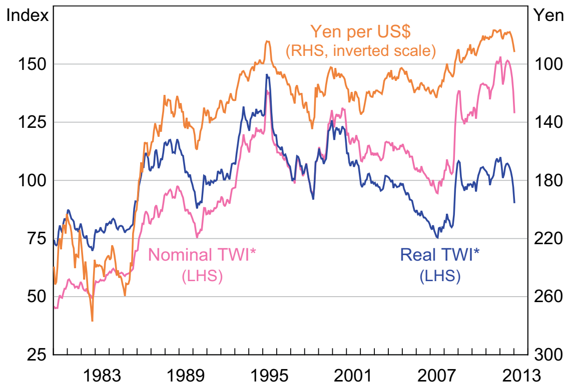


Sources: Hedge Fund Research, Inc.; RBA

Foreign Exchange

The authorities in an increasing number of countries have expressed concerns about the strength of their currencies in recent months. Most notably, expectations of policy actions that weaken the Japanese yen have caused it to depreciate by 13 per cent against the US dollar since the Japanese election was announced in mid November (Graph 2.12). In nominal terms, the trade-weighted yen exchange rate remains at a relatively high level despite depreciating by 20 per cent since the beginning of 2012; however, in real terms the trade-weighted yen is now below its average of the past 30 years.

Graph 2.12
Japanese Exchange Rates



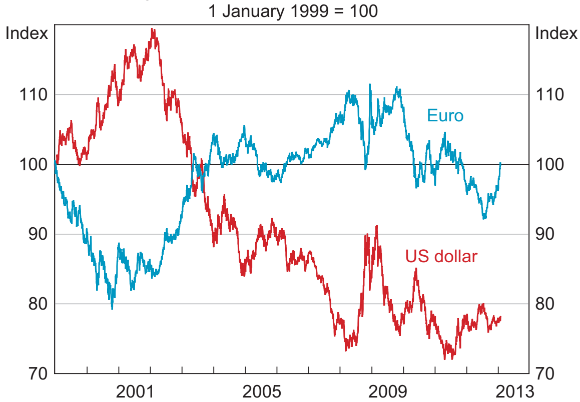
* Average since January 1980 = 100
Sources: BIS; Bloomberg; RBA

Developments in other currencies have been broadly consistent with the continued improvement in market sentiment, with volatility in foreign exchange markets also remaining relatively low by the standards of recent years despite rising somewhat in January. On a trade-weighted basis, the euro has appreciated by 9 per cent from its 10-year low in July, and is now slightly higher than it was at the beginning of 2012 (Graph 2.13).

Safe-haven flows into the Swiss franc also appear to have decreased substantially, with the Swiss franc depreciating by 2 per cent against the euro since early January (Graph 2.14). In contrast to the heavy intervention undertaken in mid 2012, it appears that the Swiss National Bank did not purchase additional foreign exchange to defend the Swiss franc's ceiling against the euro in the December quarter.

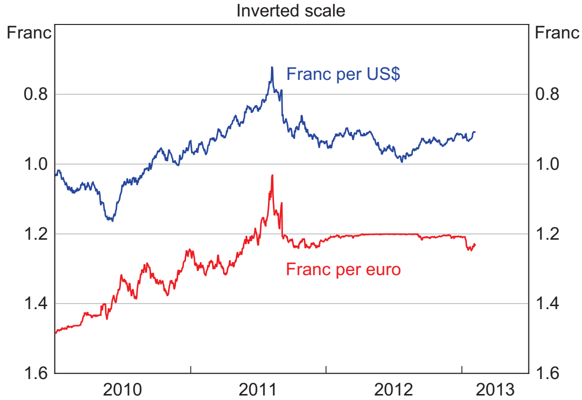
The US dollar has been little changed on a trade-weighted basis since early November, with modest

Graph 2.13
Major Currencies' Nominal TWI
1 January 1999 = 100



Sources: Bloomberg; RBA

Graph 2.14
Swiss Franc
Inverted scale



Source: Bloomberg

Table 2.3: Changes in the US Dollar against Selected Currencies
Per cent

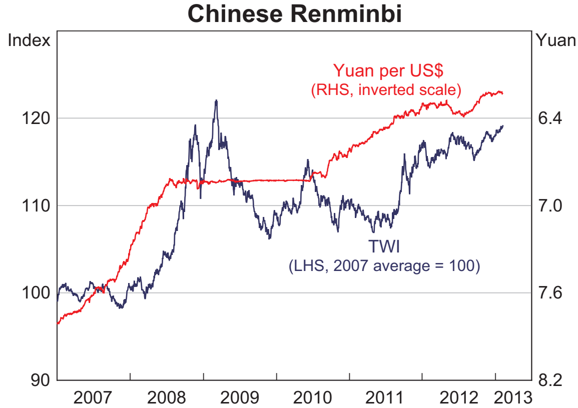
	Over 2012	Since end 2012
Japanese yen	13	8
South African rand	5	5
UK pound sterling	–4	4
South Korean won	–8	2
New Taiwan dollar	–4	2
Singapore dollar	–6	1
Malaysian ringgit	–3	1
Australian dollar	–2	1
Canadian dollar	–3	0
Chinese renminbi	–1	0
Swiss franc	–2	–1
Philippine peso	–6	–1
Indonesian rupiah	8	–1
Mexican peso	–8	–1
New Zealand dollar	–6	–2
Swedish krona	–6	–2
European euro	–2	–2
Thai baht	–3	–3
Indian rupee	3	–3
Brazilian real	10	–3
Majors TWI	**0**	**1**
Broad TWI	**–1**	**0**

Sources: Bloomberg; Board of Governors of the Federal Reserve System

depreciations against a range of currencies offset by a 16 per cent appreciation against the Japanese yen (Table 2.3). Over 2012, the US dollar was also broadly unchanged on a trade-weighted basis.

The Chinese renminbi (RMB) has been little changed against the US dollar since late November and continues to trade close to the upper bound of its +/-1 per cent daily trading band. More broadly, the RMB has appreciated by around 3 per cent against the US dollar since its trough in late July and by 4 per cent on a trade-weighted basis since mid September, consistent with the improved economic outlook for China (Graph 2.15). Chinese foreign exchange reserves rose by US$26 billion (around

Graph 2.15
Chinese Renminbi



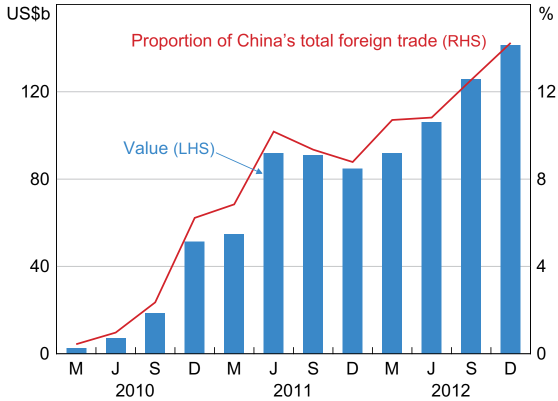
Sources: BIS; Bloomberg; RBA

1 per cent) over the December quarter (Table 2.4). Official data suggest there were relatively modest net purchases of foreign currency, consistent with modest ongoing appreciation pressures on the RMB.

Other central banks have also generally accumulated foreign exchange reserves (in US dollar terms) over recent months. This is consistent with reports of intervention in foreign exchange markets – particularly in Asia – to offset appreciation pressure on local currencies, although valuation effects will have also played some role. The Hong Kong Monetary Authority has continued to intervene in the foreign exchange market to prevent the Hong Kong dollar from breaching the upper bound of its tight trading band against the US dollar, purchasing a total of around US$14 billion in foreign exchange since mid October.

RMB-denominated trade settlement increased further in the December quarter 2012, reportedly accounting for 14 per cent of China's total foreign trade compared with 9 per cent a year earlier (Graph 2.16). The Chinese authorities have also announced further measures to promote the use of RMB in cross-border transactions, including the approval of a cross-border RMB loan program, which will allow companies registered in the Qianhai pilot zone to borrow RMB directly from authorised Hong Kong institutions. In addition, restrictions governing the Qualified Foreign Institutional Investors (QFII) scheme were relaxed further, with the removal of quotas on investments by individual sovereign wealth funds and central banks.

Graph 2.16
RMB Trade Settlement



Sources: Bloomberg; CEIC

Other Asian currencies have generally been little changed against the US dollar since late October, but have appreciated significantly against the Japanese

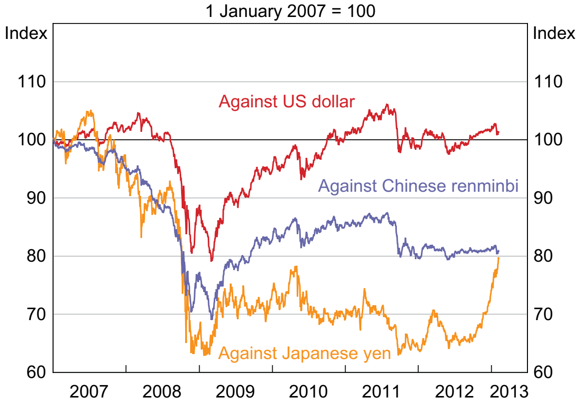
Table 2.4: Foreign Currency Reserves
As at end December 2012

	Three-month-ended change		Level
	US$ equivalent (billions)	Per cent	US$ equivalent (billions)
China[(a)]	26	1	3 312
Japan	–5	0	1 193
Russia	18	4	472
Switzerland	10	2	467
Taiwan[(a), (b)]	7	2	407
Brazil[(b), (c)]	–4	–1	362
South Korea[(b)]	5	1	320
Hong Kong[(a)]	16	5	317
India[(b)]	1	1	262
Thailand	–2	–1	171

(a) Foreign exchange reserves (includes foreign currency and other reserve assets)
(b) End January 2013
(c) Excludes intervention using currency swaps
Sources: Bloomberg; CEIC; IMF; RBA; Thomson Reuters; central banks

yen (Graph 2.17). On average, Asian currencies have appreciated by 20 per cent against the yen since end September, prompting the authorities in some countries to express concerns over their resulting loss of trade competitiveness.

Graph 2.17
Other Asian Currencies*
1 January 2007 = 100



* Weighted by GDP at PPP exchange rates
Sources: Bloomberg; IMF; RBA

Latin American currencies have appreciated against the US dollar since their troughs in early June. In Brazil, the authorities have recently implemented a range of measures to support the Brazilian real, including foreign exchange market intervention, relaxing taxation rules for capital inflows and easing reserve requirements for local banks' foreign exchange derivative positions. This is in contrast to the period between August and October, when the Brazilian authorities had been intervening in the foreign exchange market to counter appreciation pressures on the Brazilian real.

Australian Dollar

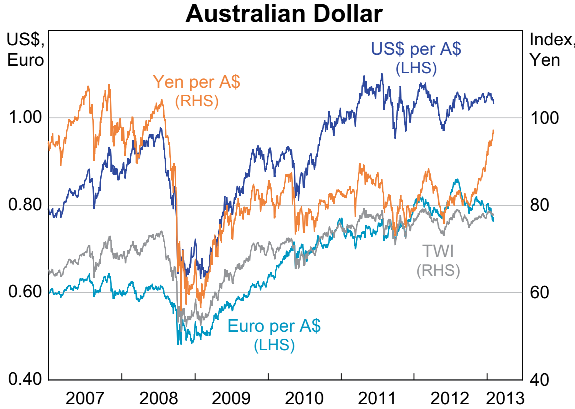
The Australian dollar has appreciated by 1 per cent against the US dollar and by 3 per cent on a trade-weighted basis since the beginning of 2012, and remains at a high level by historical standards despite the decline in Australia's terms of trade and some softening in the domestic economic outlook (Table 2.5, Graph 2.18). Consistent with developments in other currencies, the Australian dollar has appreciated by 15 per cent against the yen since the Japanese general election was announced in mid November, to be currently around its highest level since August 2008. Also consistent with other currencies and asset markets, intraday volatility in the Australian dollar has declined to a low level in recent months.

Table 2.5: Changes in the Australian Dollar against Selected TWI Currencies
Per cent

	Over 2012	Since end 2012
Japanese yen	15	7
South African rand	7	4
UK pound sterling	–3	3
South Korean won	–7	1
Singapore dollar	–4	1
Malaysian ringgit	–2	1
Canadian dollar	–1	0
Chinese renminbi	1	–1
US dollar	2	–1
Swiss franc	–1	–1
Indonesian rupiah	10	–2
New Zealand dollar	–4	–2
European euro	0	–3
Thai baht	–1	–3
Indian rupee	5	–4
TWI	**2**	**1**

Sources: Bloomberg; Thomson Reuters; WM/Reuters

Graph 2.18
Australian Dollar

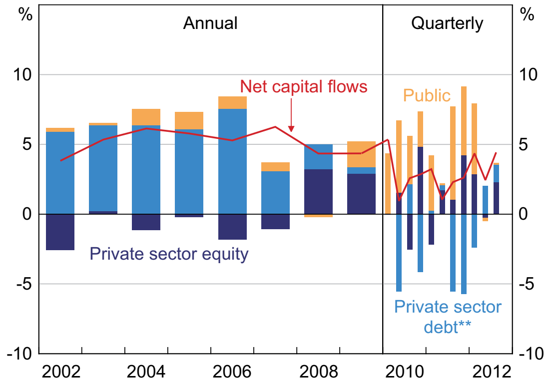


Sources: Bloomberg; RBA; Thomson Reuters; WM/Reuters

Capital Flows

For the second consecutive quarter, net capital inflows to the Australian economy in the September quarter were directed largely to the private sector (Graph 2.19). The net inflow primarily reflected inflows of debt and equity to private non-financial corporates – including the mining sector. The banking sector also recorded a small net inflow in the form of increased foreign investment in equity and long-term debt, though this was partially offset by a decline in foreign investment in short-term debt. There was a small net capital inflow to the public sector in the September quarter, following a small net outflow in the June quarter. This is in contrast to the trend over the past few years, when net capital inflows have been directed primarily towards the public sector. Accordingly, the foreign ownership share of Commonwealth Government securities declined to 72 per cent in the September quarter from 77 per cent in the June quarter, though it remains at a high level by historical standards.

Graph 2.19
Australian Capital Flows*
Net inflows, per cent of GDP



* Excludes official and other RBA flows
** Adjusted for the US dollar swap facility in 2008 and 2009
Sources: ABS; RBA

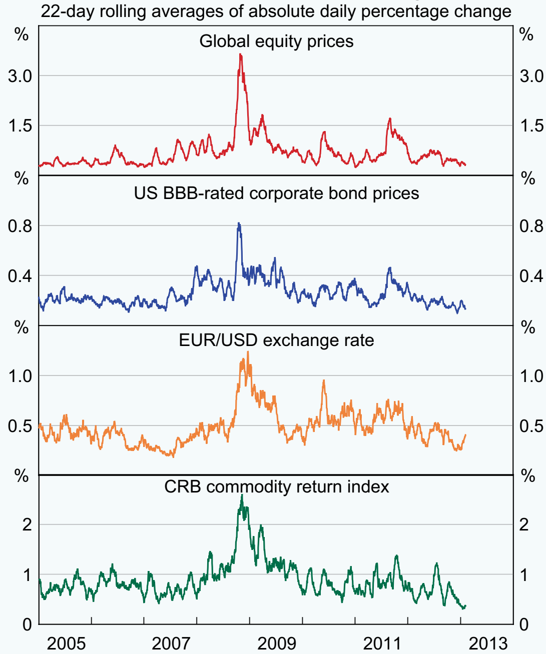
Box B
Financial Market Volatility

Volatility in global financial markets declined markedly over the second half of 2012, to around levels not seen on a consistent basis since before the financial crisis. For example, absolute daily changes in global equity prices have averaged 0.4 per cent per day over the past six months, compared with 0.8 per cent over the preceding year. The recent low levels of market volatility have occurred against the backdrop of ongoing uncertainty surrounding the health of the global economy, US fiscal policy and the situation in Europe.

A notable feature of the current period of relatively low volatility is that it has been evident across a range of financial markets, including equity, fixed income, currency and commodity markets (Graph B1). In some cases, such as major equity markets, measures of historical (or realised) volatility are around levels that were typical of the years immediately preceding the financial crisis. In other cases, realised volatility has recently reached its lowest level in quite some time – over the past month or so volatility in the CRB commodity return index was as low as it has been since the mid 1990s. More forward-looking measures of volatility implied by options prices have also fallen to around their lowest levels in a number of years, suggesting that investors are expecting markets to remain relatively stable in the near future (Graph B2). For example, in December 2012, option-implied volatility reached its lowest level since 2007 for a range of major exchange rates, including the Australian dollar/US dollar currency pair.

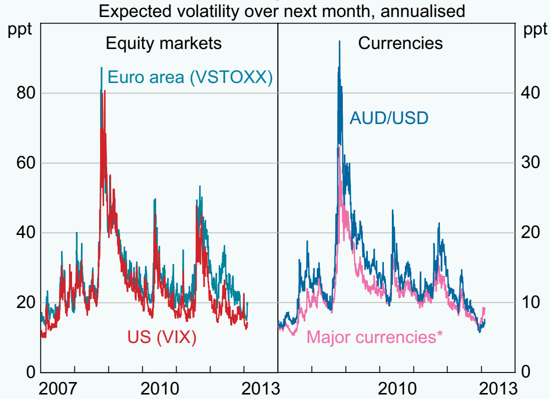
Another feature of financial markets in the second half of 2012 was that trading volumes were low in some markets compared with recent history. This was most notable in the equity market, where volumes have been declining since 2009 (Graph B3).

Graph B1
Financial Market Volatility
22-day rolling averages of absolute daily percentage change



Sources: Bank of America Merrill Lynch; Bloomberg; MSCI; RBA

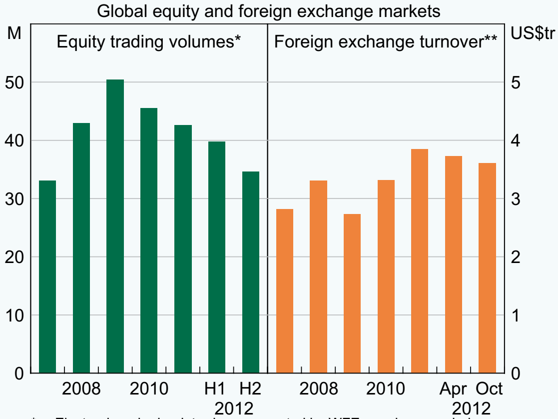
Graph B2
Volatility Indices
Expected volatility over next month, annualised



* CVIX index constructed from EUR/USD, USD/JPY, GBP/USD, AUD/USD, CAD/USD, USD/CHF, EUR/JPY, EUR/GBP, EUR/CHF weighted by turnover

Sources: Bloomberg; Deutsche Bank

Graph B3
Average Daily Trading Activity
Global equity and foreign exchange markets



* Electronic order book trades as reported by WFE members; excludes negotiated deals and trades reported through a Trade Reporting Facility
** Aggregate of Australia, Canada, Japan, Singapore, UK and US markets; annual observations are average daily turnover in April and October
Sources: RBA; World Federation of Exchanges (WFE); foreign exchange committees

During the second half of 2012, trading in the shares of large US and European companies was 30 per cent lower than over the same period a year earlier. While reduced volumes could be associated with higher volatility – for example, if volumes are low, a small number of trades could move the market – it has been more common historically for equity market volatility and volumes to move in the same direction. In equity markets, volatility has also tended to be lower in a rising market than when share prices are falling, and global share prices have risen by around 15 per cent since late July 2012. There was also a decline in trading activity in major foreign exchange markets, with average daily turnover in October 2012 around 7 per cent lower than a year earlier. While activity for a number of fixed income securities has declined recently, there has been less evidence of a decline in activity in some segments of the market, such as US corporate bonds.

The step down in volatility since the middle of 2012 followed policy actions by major central banks. Conditions in European sovereign debt markets improved markedly after European Central Bank (ECB) President Draghi indicated in late July 2012 that the ECB was prepared to take decisive action to preserve the euro, and improved further on the subsequent announcement of the ECB's Outright Monetary Transactions program. Together with developments such as the recent commitment to provide further official funding to Greece, this appears to have helped alleviate investor concerns about extreme scenarios such as a break up of the euro area. In the United States, the Fed announced further asset purchases in the second half of 2012 (see section on 'Central Bank Policy' in the 'International and Foreign Exchange Markets' chapter), and has been providing explicit guidance on the expected path of its policy rate since the second half of 2011. This has led to less uncertainty about the future path of short-term interest rates in the United States, which in turn is likely to have influenced volatility in a range of other markets.

In currency markets, policy actions taken by major central banks have also prompted the authorities in a number of other countries to introduce measures designed to counter the resulting appreciation pressures on their exchange rates. These measures, which include (actual or implied) foreign exchange market intervention, may have also contributed to the reduction in volatility in currency markets in the latter half of 2012.

3. Domestic Economic Conditions

The latest national accounts indicate that the Australian economy grew at around trend pace over the year to the September quarter, although growth was lower in that quarter (Graph 3.1, Table 3.1). Public demand weakened, consistent with fiscal consolidation. Growth in consumption spending also slowed somewhat following very strong growth earlier in the year, in line with some moderation in labour income. In contrast, there was a moderate pick-up in housing construction activity. Growth in mining investment remained strong, although it appears to be slowing and the peak in spending is expected to occur within the year. At the same time, investment intentions in the non-mining sector remain subdued.

More timely information suggests that growth in economic activity picked up in the December quarter from the midyear slowdown. Housing construction continued to increase gradually and trade data imply that resource exports increased strongly towards the end of the year.

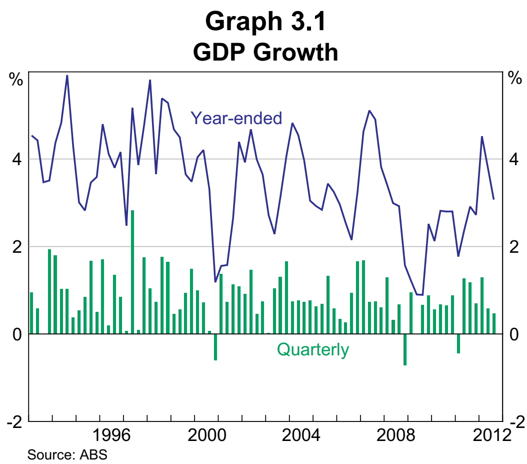


Table 3.1: Demand and Output Growth
Per cent

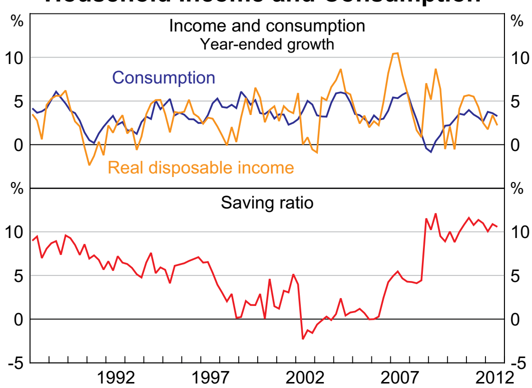
	September quarter 2012	June quarter 2012	Year to September quarter 2012
Domestic final demand	0.2	0.8	3.7
– Private demand	1.7	0.3	4.6
– Public demand	–4.8	2.5	0.6
Change in inventories[(a)]	0.3	–0.3	0.4
Gross national expenditure	0.5	0.4	4.1
Net exports[(a)]	0.1	0.3	0.3
GDP	0.5	0.6	3.1
Nominal GDP	0.2	1.0	1.9
Real gross domestic income	–0.4	0.4	–0.1

(a) Contribution to GDP growth
Source: ABS

Household Sector

Growth in household spending slowed in the second half of 2012 from the strong pace recorded earlier in the year. With household consumption growing broadly in line with income, the household saving ratio has remained relatively steady at around 10 per cent of income, which is similar to the rate of saving in the 1980s and well above the levels prevailing during the 1990s and 2000s (Graph 3.2).

Graph 3.2
Household Income and Consumption*

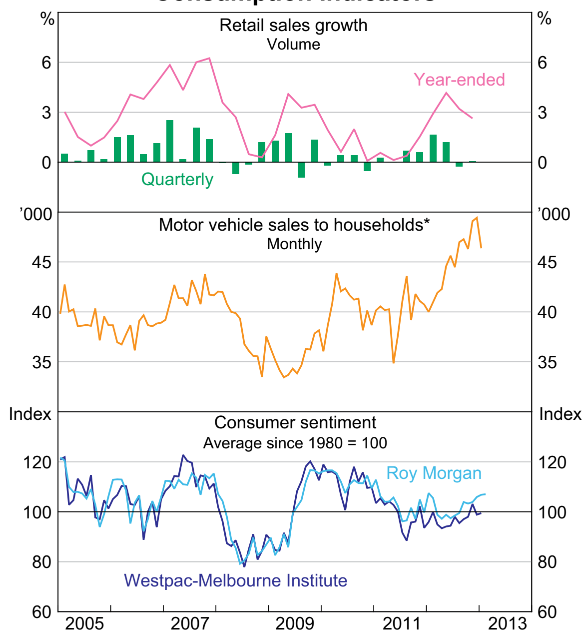


* Household sector includes unincorporated enterprises; disposable income is after tax and interest payments; income level smoothed with a two-quarter moving average between March quarter 2000 and March quarter 2002; saving ratio is net of depreciation

Sources: ABS; RBA

Growth in the volume of retail sales – which primarily captures sales of goods – slowed in the second half of last year (Graph 3.3). Retail sales were little changed in the December quarter, with food and department stores recording sales growth while other retailers experienced falls. In contrast to retail sales, motor vehicle sales to households rose strongly in the December quarter, continuing the strong growth in the previous two quarters. Despite a decline in January, motor vehicle sales were still about 15 per cent higher over the year. The high value of the Australian dollar, along with sales incentives by manufacturers, has kept motor vehicle prices little changed. Measures of consumer sentiment have remained at or even slightly above long-run average levels in recent months.

Graph 3.3
Consumption Indicators



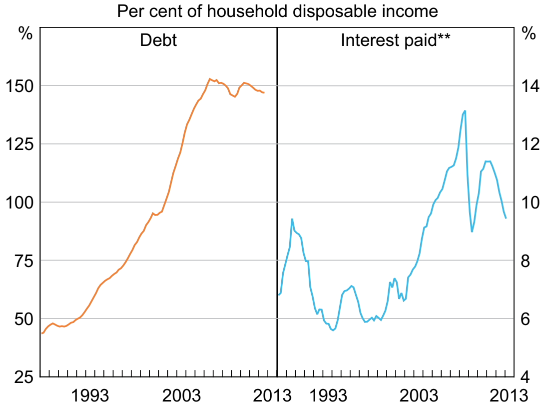
* Seasonally adjusted by the RBA

Sources: ABS; FCAI/VFACTS; Melbourne Institute and Westpac; RBA; Roy Morgan Research

Real household disposable income grew by around 2 per cent over the year to the September quarter, supported by modest growth in wages and salaries. Lower average interest rates reduced households' interest payments to 10 per cent of household income, down from 11¼ per cent a year earlier (Graph 3.4). Interest payments are estimated to have continued to decline in recent months, given reductions in the cash rate in October and December. Household debt has grown at an annual rate of around 4 per cent, broadly in line with growth in nominal income. As a result, debt as a share of household disposable income has remained steady at a little below 150 per cent of income.

After having fallen over much of 2011, household net worth is estimated to have increased by around 10 per cent over 2012 (Graph 3.5). The increase has been driven by strong growth in the value of financial assets and moderate increases in dwelling prices, coupled with relatively subdued growth in household debt.

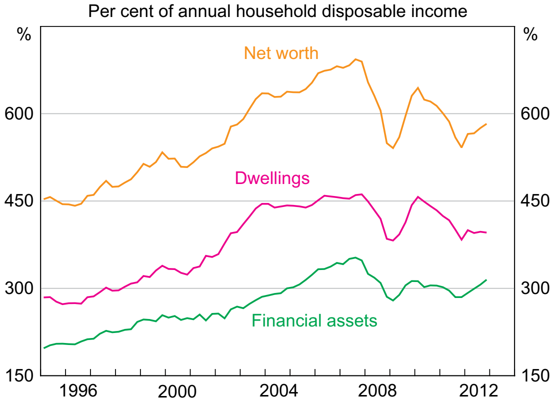
Graph 3.4
Household Finances*
Per cent of household disposable income



* Household sector excludes unincorporated enterprises; disposable income is after tax and before the deduction of interest payments
** RBA estimates for December quarter 2012 and March quarter 2013
Sources: ABS; RBA

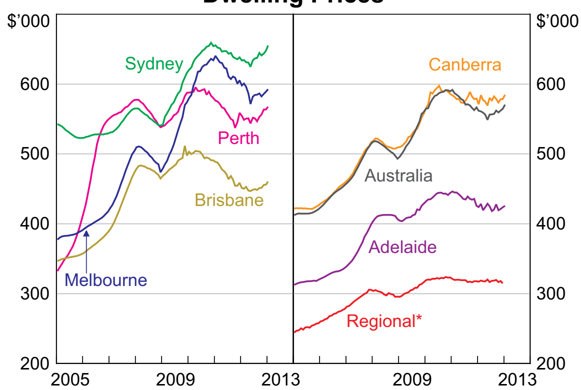
Australian capital city dwelling prices have risen by 4 per cent since their trough in mid 2012 (Graph 3.6, Table 3.2). Recent price rises have been relatively broad based, with all state capitals recording higher prices over the three months to January. Some other indicators also point to a strengthening in the established housing market. Auction clearance rates in Sydney and Melbourne have continued to rise from their lows in late 2011 and early 2012. Private sector surveys indicate that, on balance, households expect house prices to rise further over the year ahead. Housing loan approvals increased moderately over the second half of 2012, underpinned by loans to investors and repeat buyers, although they were little changed relative to the outstanding stock of housing credit.

Graph 3.5
Household Wealth*
Per cent of annual household disposable income



* Household sector includes unincorporated enterprises; disposable income is after tax and before the deduction of interest payments; RBA estimates for December quarter 2012
Sources: ABS; RBA; RP Data-Rismark

Graph 3.6
Dwelling Prices



* Excluding apartments; measured as areas outside of capital cities in mainland states
Sources: RBA; RP Data-Rismark

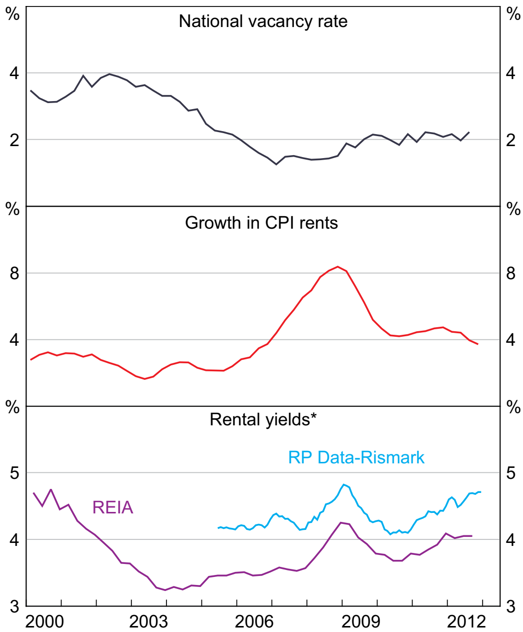
Table 3.2: National Housing Price Growth
Per cent

	3 months to September 2012	3 months to December 2012	Year to December 2012
Capital cities			
ABS[(a), (b)]	–0.1	1.6	2.1
APM[(b)]	–0.5	1.8	2.1
RP Data-Rismark	1.0	0.4	–0.4
Regional areas			
APM[(b)]	–0.3	0.9	1.3
RP Data-Rismark[(a)]	0.9	–1.3	–0.7

(a) Detached houses only
(b) Quarter-on-quarter growth rate
Sources: ABS; APM; RBA; RP Data-Rismark

Residential vacancy rates remain relatively low at around 2 per cent, contributing to rents growing faster than inflation and rising rental yields (Graph 3.7). Nationwide, rents are growing at an annual rate of around 4 per cent. With rents growing faster than dwelling prices over the past year, nationwide gross rental yields have increased to 4¾ per cent (and as high as 5½ per cent in Perth).

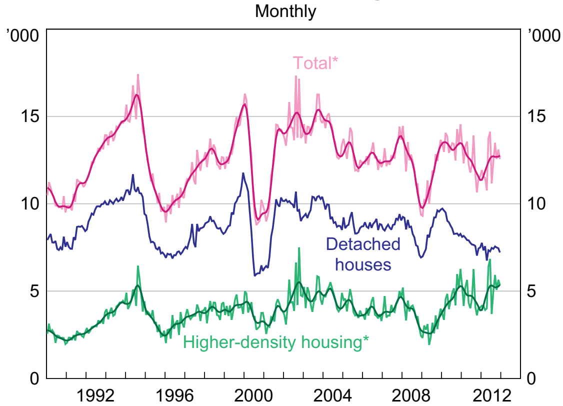
Graph 3.7
Rental Market



* REIA series uses an unmatched sample of rents and prices; RP Data-Rismark series uses a matched sample
Sources: ABS; RBA; REIA; RP Data-Rismark

After falling over 2011/12, residential construction activity is estimated to have picked up in the second half of 2012. As a share of GDP, and relative to population growth, however, investment in new dwellings remains subdued. Forward-looking indicators point to a recovery in dwelling investment over the period ahead. Building approvals and loan approvals for new dwellings rose over 2012, as falls in interest rates, higher rental yields, and improved conditions in the established housing market have increased the attractiveness of new housing investment (Graph 3.8). A number of state governments have changed the nature of their support to first home buyers, emphasising purchases of new homes rather than existing homes. Over the year, first home buyer demand improved noticeably notwithstanding some decline more recently; the number of first home owner grants for new dwellings was almost 20 per cent higher in the three months to January compared with a year earlier.

Graph 3.8
Private Residential Building Approvals
Monthly



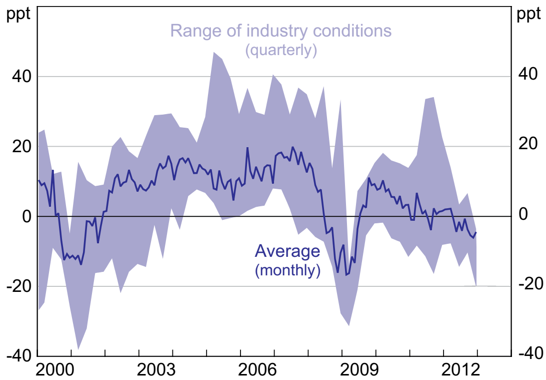
* Smoothed lines are ABS trend measures
Source: ABS

To date, the pick-up in building approvals has been concentrated in higher-density housing. In contrast, detached housing approvals are yet to show clear signs of recovery, but historical experience suggests that it can take some time for more favourable conditions to flow through to increased activity. Consistent with this, there are few reports from liaison of demand for new housing improving apart from in Western Australia.

Business Sector

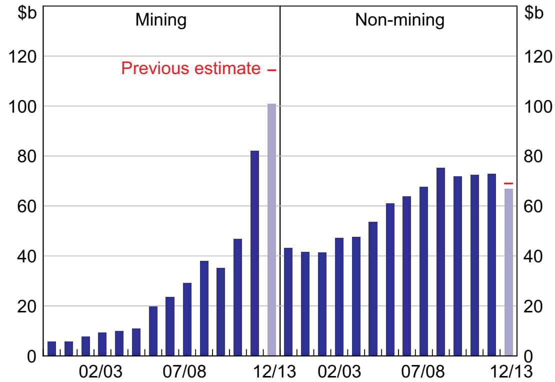
Aggregate survey measures of business conditions are a little below their long-run average levels (Graph 3.9). In contrast to the situation earlier in 2012, surveys of business conditions are now below average across most industries. The decline in conditions has been particularly pronounced in the mining industry, consistent with the falls in commodity prices through much of 2012.

Graph 3.9
Business Conditions by Industry
Net balance, deviation from industry average since 1989



Sources: NAB; RBA

Graph 3.10
Capital Expenditure Intentions
Capital expenditure survey, nominal



Sources: ABS; RBA

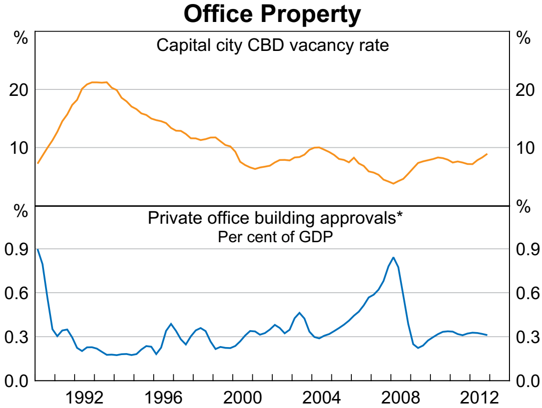
In line with mining firms' reassessment of conditions, their investment plans have been scaled back relative to earlier in 2012. In the latest ABS capital expenditure survey, expectations in the mining sector were revised down sharply for 2012/13, although expenditure is still expected to grow in the year (Graph 3.10). Large downward revisions were made to plans for both machinery & equipment investment and investment in buildings & structures. Liaison and company reports suggest that the largest revisions to investment intentions have been in the coal sector, where price declines have been more persistent and have also led to the closure of some higher-cost mines. Price declines for iron ore through the September quarter of 2012 had also prompted a reassessment of the viability of some projects and affected project financing, which contributed to some uncommitted projects being deferred. The sharp increase in the price of iron ore in recent months does not appear to have materially affected investment plans to date, in part because the general expectation is that prices will not be sustained at these levels. Nonetheless, given the magnitude of resource projects already committed, particularly liquefied natural gas (LNG) projects, mining investment is expected to remain at an elevated level for a couple of years.

Non-mining investment has declined as a share of economic activity over the past five years and the near-term outlook remains subdued, with business surveys indicating that investment intentions are still below average. According to the capital expenditure survey, machinery & equipment investment for 2012/13 is expected to remain at a similar level to investment in the previous two years. While there has been continued strength in motor vehicle sales to businesses, liaison suggests that some firms remain reluctant to invest except to cover depreciation, partly reflecting concerns about the strength of demand and general uncertainty about the economic outlook.

Non-residential building investment intentions also remain subdued, with building approvals declining over recent months. This largely reflects weakness in building approvals in the retail and wholesale sectors. Although the value of approvals for office buildings is largely unchanged over the past year, the outlook for the office market has weakened a little, with office vacancy rates rising modestly over the past six months in line with public sector job cuts and softer conditions across much of the economy (Graph 3.11). However, non-residential building investment is expected to continue to be supported by community-related projects that were approved in 2012, such as healthcare facilities, which are not captured by the capital expenditure survey (Graph 3.12).

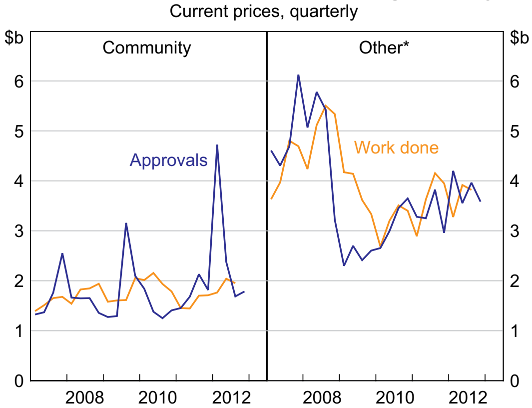
Company profits fell by around 10 per cent over the year to the September quarter, driven by a large fall in mining profits as a result of lower iron ore and coal prices. As discussed in the 'Domestic Financial Markets' chapter, the corresponding reduction in internal funding for the business sector as a whole is being offset by an increase in external funding, particularly non-intermediated funding, so the business sector still has adequate funds available for investment.

Graph 3.11
Office Property



* Trend, quarterly
Sources: ABS; Jones Lang LaSalle Research; RBA

Graph 3.12
Private Non-residential Building Activity
Current prices, quarterly

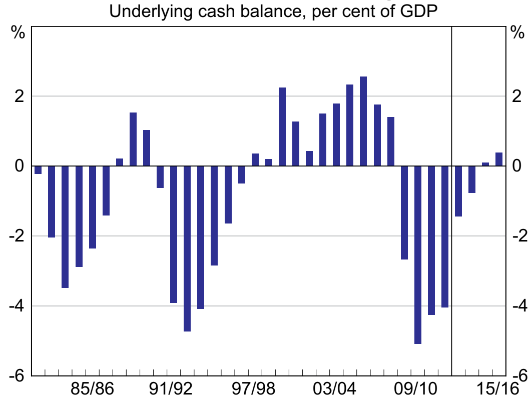


* Offices, other commercial buildings and industrial buildings
Sources: ABS; RBA

Government Sector

State government midyear budget updates suggest a small widening in the combined fiscal deficit of the states this financial year. Together, the latest available federal and state budget outlooks continue to imply a significant fiscal consolidation in the two years to 2013/14, although recent information suggests that the consolidation may not be as large in 2012/13 (Graph 3.13). Consistent with fiscal restraint, public demand declined by 5 per cent in the September quarter, driven by sizeable falls in public investment.

Graph 3.13
Total General Government Budget Balance*
Underlying cash balance, per cent of GDP



* Combined federal and state budget balances based on 2012/13 budgets or midyear reviews as available
Sources: ABS; Australian Treasury; state and territory treasuries

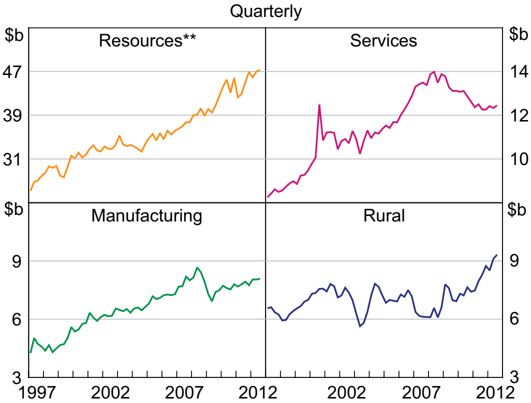
Farm Sector

Following two years with high production levels and high prices, the outlook for the farm sector has softened somewhat. Wheat prices have declined in recent months, but remain high by historical standards. The winter crop (which includes grains and oilseeds) is expected by the Australian Bureau of Agricultural and Resource Economics and Sciences to be around the average of the past decade. This is considerably smaller than the large 2011 crop as a result of below-average rainfall during the winter and spring of 2012 in most cropping regions. Recent flooding in Queensland and northern New South Wales has caused damage to crops and infrastructure in some horticultural regions and may temporarily boost prices for some food items.

External Sector

Export volumes rose in the September quarter, with growth broadly based across all major categories of exports (Graph 3.14). The rise in resource exports was largely driven by mineral fuels exports, including LNG. Iron ore exports also rose, although volumes were disrupted by maintenance and expansion activities at Port Hedland. In contrast, coking coal exports declined, probably reflecting both weak demand and the industrial dispute at BHP Billiton Mitsubishi Alliance (BMA) mines early in the quarter. Services export volumes were supported by strong growth in tourism exports, and transport equipment drove growth in manufactured exports.

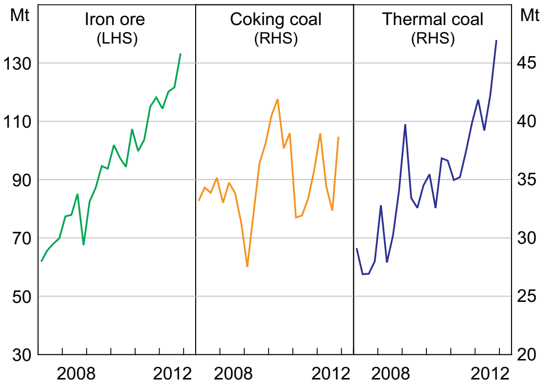
Graph 3.14
Export Volumes*
Quarterly



* 2010/11 prices
** Excludes RBA gold transactions
Sources: ABS; RBA

In the December quarter, indications are that export volumes increased strongly, underpinned by resource exports. Increased demand from China supported exports of iron ore and coking coal, with additional impetus to coking coal exports from the cessation of the BMA industrial dispute early in the September quarter (Graph 3.15). Thermal coal export volumes also increased noticeably in the quarter. Overseas arrivals continued to grow in the quarter, and liaison suggests that education exports have stabilised, after having declined since 2009. In contrast, rural export volumes are estimated to have fallen, owing to falls in wheat exports, which had grown rapidly through much of 2012 as inventories from the previous two large crops were drawn down in response to the high global price for wheat. Imports are estimated to have grown moderately in the December quarter.

Graph 3.15
Bulk Commodity Exports
Quarterly



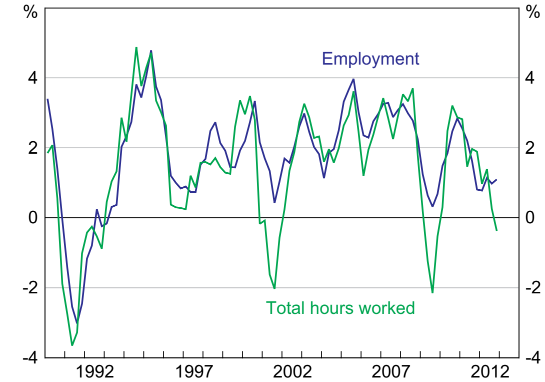
Sources: ABS; RBA

Recent bad weather in Queensland damaged rail infrastructure, which is likely to weigh on coal exports in the March quarter. However, the effect of this event on the State's coal industry is not expected to be as significant as that in 2011.

Labour Market

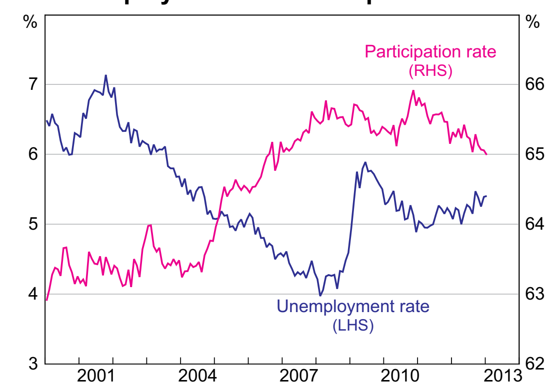
Labour market conditions have remained subdued in the past few months. In year-ended terms, employment growth has remained around 1 per cent since the middle of 2012, while total hours worked have not grown over the year (Graph 3.16). Consistent with this, a range of indicators suggest that there is increased spare capacity in the labour market. The unemployment rate trended gradually higher over the past year, while the participation rate has declined since the end of 2010, reflecting softer labour market conditions and ongoing structural developments in labour supply (Graph 3.17; see 'Box C: The Labour Force Participation Rate').

Graph 3.16
Growth in Labour Input
Year-ended



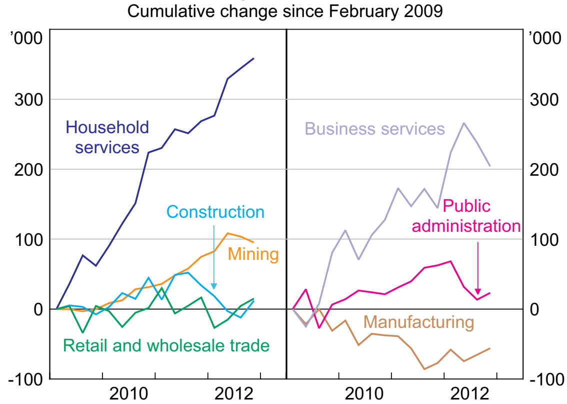
Source: ABS

Graph 3.17
Unemployment and Participation Rates



Source: ABS

Graph 3.18
Employment Growth
Cumulative change since February 2009



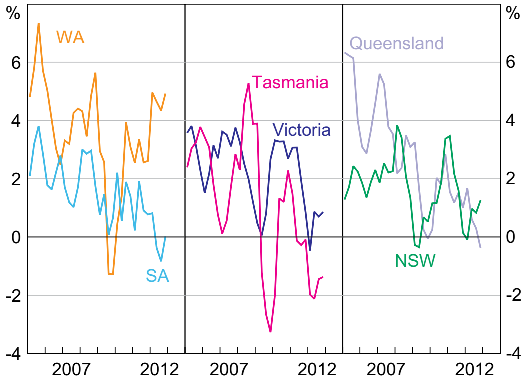
Source: ABS

Employment in the mining industry and the business services sector fell over the six months to November, following a period of strong growth (Graph 3.18). The fall in mining industry employment is consistent with reports in the second half of 2012 of some firms seeking to contain expenditure. In contrast, employment has increased in the manufacturing and retail trade industries in recent months, after falling in 2011. Employment in the construction industry declined over much of the year, consistent with weakness in building activity. Fiscal consolidation by state and federal governments has contributed to a decline in public administration employment over the year. In contrast, the household services sector, including the large healthcare and education industries, has continued to make significant contributions to aggregate employment growth.

Labour market outcomes continued to vary across states. In Western Australia, employment growth remained high (Graph 3.19). New South Wales and Victoria experienced modest employment growth, while employment growth in South Australia recovered somewhat more recently. In contrast, employment has remained subdued in Queensland and Tasmania. Although there is a relatively wide range of employment growth outcomes across states, the dispersion of unemployment rates across states and by region (based on ABS statistical local areas) are near their averages over the past decade. This is consistent with migration to regions with strong employment growth (including from overseas), as well as some adjustment of labour supply to regional labour market conditions.

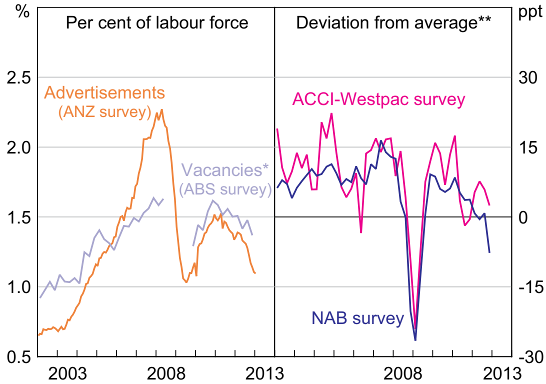
Leading indicators of labour demand have continued to soften and point to only modest employment growth in coming months (Graph 3.20). The ABS measure of job vacancies fell in the three months to November to be around 8 per cent lower over the year. Measures of job advertisements have been weaker, with the ANZ series around 18 per cent lower over the year to January. Business survey measures

Graph 3.19
Employment Growth by State
Year-ended



Source: ABS

Graph 3.20
Labour Market Indicators



* This survey was suspended between May 2008 and November 2009

** Net balance of surveyed hiring intentions for the following quarter; deviation from average since 1989

Sources: ABS; ACCI; ANZ; NAB; RBA; Westpac

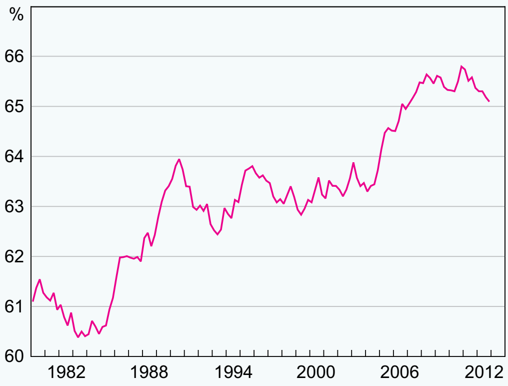
of hiring intentions also declined in the December quarter. Reports from the Bank's liaison suggest that businesses in many industries remain cautious about hiring staff.

Box C

The Labour Force Participation Rate

The participation rate is an important indicator of the supply of labour. It measures the share of the working-age population either working or looking for work. The participation rate has risen over recent decades, peaking in late 2010 (Graph C1). However, over the past two years the participation rate has declined, owing to both structural and cyclical factors.

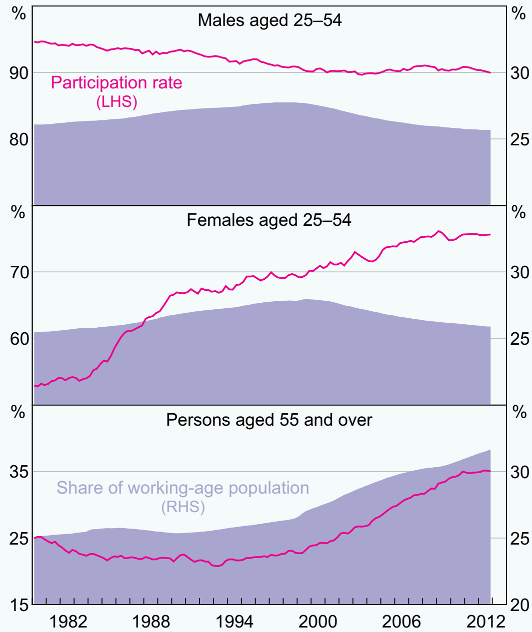
Graph C1
Participation Rate
Quarterly



Source: ABS

The upward trend in the participation rate over the past three decades has primarily reflected increased participation by women and older people in the workforce (Graph C2).[1] Since 1980, the participation rate of females aged 25–54 has increased by over 20 percentage points, reflecting changing social norms, increased educational attainment, improved access to child care and more flexible work arrangements. Over the same period, the participation rate of people aged 55 and over has increased by 10 percentage points, in line with incentives to work longer, improved employment opportunities, and an increased share of employment in the services sector (where roles are typically less physically demanding), as well as better health and greater longevity.

Graph C2
Participation and Population Shares



Sources: ABS; RBA

Over this long period, the increased participation by women and older workers has more than offset the ageing of the population, which acts to reduce the participation rate. Although the participation rate of older workers has increased over time, it remains below that of prime working-age persons. Accordingly, the ageing of the population has, by itself, subtracted from the participation rate over the past decade, as a rising share of the relatively large baby boomer generation has moved into retirement.

1 See Connolly E, K Davis and G Spence (2011), 'Trends in Labour Supply', RBA *Bulletin*, June, pp 1–8.

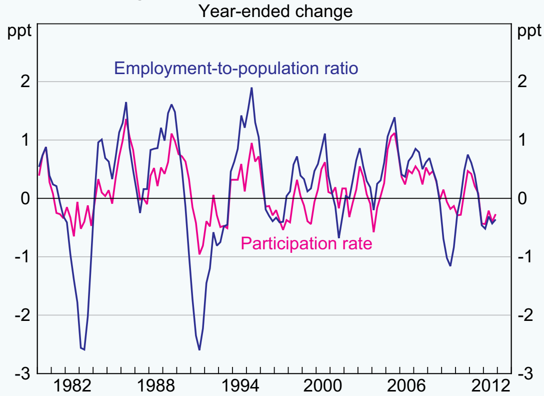
In contrast to these longer-term trends, over the past two years the participation rate has declined by around ¾ percentage point. The long-run forces mentioned above could well have continued to have had a net positive effect on the participation rate were it not for the reduced incentives to participate arising from softer labour market conditions. In periods of soft demand for labour, individuals that are willing and available to work may be less likely to actively search for a job, as they are less likely to be successful or the jobs they can get may be less rewarding. In this case, the participation rate will be lower than otherwise because such individuals do not satisfy the standard definition of unemployment.

Around one-third of the total fall in aggregate participation can be attributed to males aged 25–54, whose participation rate has declined by 1 percentage point since the end of 2010, to be at its lowest level since 2004. At the same time, the trend rise in the participation rates of women and people aged over 55 appears to have reached a plateau – at least temporarily. In addition, a 1¼ percentage point fall in the participation rate of younger workers aged 15–24 has accounted for around 30 per cent of the decline in aggregate participation during this period.

Although some cyclicality in the participation rate is the norm, the participation rate typically varies by less than the ratio of employment to the (working-age) population (Graph C3). This means that a significant part of the cycle in the labour market is usually reflected in the unemployment rate rather than the participation rate. However, over the past two years the participation rate has declined by more than might have been expected, with the change similar to the decline in the employment-to-population ratio.

There are a number of possible reasons why participation may have fallen as much as it has, alongside the softer labour market conditions over the past two years:

Graph C3
Employment and Participation Rates
Year-ended change



Source: ABS

- Some individuals may have been discouraged from searching for a job because of the divergence in conditions across industries, with the skills of those leaving jobs potentially not well matched to the expanding industries. Some of these individuals may be engaged in retraining outside of the workforce to obtain the necessary skills.
- The largest declines in employment over the past year have been in the area of public administration and safety. Reportedly, some of the workers losing public sector jobs received significant redundancy packages, which may have reduced their incentive to look for a job immediately.
- In the construction sector, there has been a sharp decline in self-employed workers, equivalent to over half of the peak-to-trough fall in employment in the industry. It is possible that some of these workers may not be recorded as actively seeking work, and hence they may not be counted in the labour force. To the extent that this is the case, it may help to explain the relatively large decline in the participation rate of male workers over the past couple of years.

- There have also been substantial declines in employment in industries exposed to discretionary spending, such as accommodation & food services and retail trade. These industries have typically employed younger workers, who may have decided to pursue further education rather than search for employment. Improved access to higher education in recent years may have also played a role, with government caps on university enrolments having been relaxed since 2010.

The recent experience stands in marked contrast to that of 2008–2009, during which a large fall in the employment-to-population ratio coincided with a relatively modest decline in the participation rate.[2] One key difference between the two episodes is that the decline in employment during the global financial crisis coincided with large falls in asset values, which prompted a pick-up in the participation rate of older workers, probably due to some of these workers deferring retirement. However, since the beginning of 2011 the trend increase in the participation of older workers has slowed, possibly reflecting the retirement of some of those individuals who chose to defer retirement or re-enter the labour force in 2008–2009.

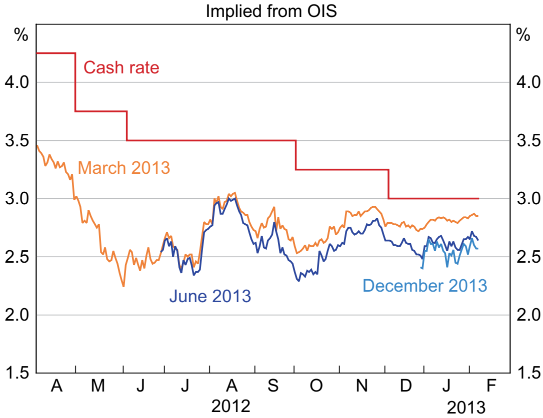
2 See Plumb M, M Baker and G Spence (2010), 'The Labour Market during the 2008–2009 Downturn', RBA *Bulletin*, March, pp 1–6.

4. Domestic Financial Markets

Money Markets and Bond Yields

The Reserve Bank Board lowered its target for the cash rate by 25 basis points in December, to 3 per cent. Financial markets expect some further easing in monetary policy during 2013. Rates on overnight indexed swaps (OIS) currently imply a cash rate target of around 2.50 per cent by the end of the year (Graph 4.1).

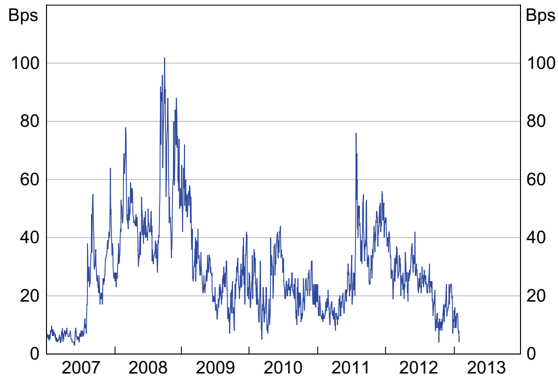
Graph 4.1
Cash Rate Expectations
Implied from OIS



Sources: RBA; Tullett Prebon (Australia) Pty Ltd

Interest rates on 3-month bank bills and certificates of deposit (CDs) have declined by around 30 basis points since the previous *Statement*, to be just below 3 per cent, their lowest level since mid 2009. Spreads of bank bills and CDs over OIS widened somewhat towards the end of 2012 as trading conditions thinned over year end, but with issuance activity remaining subdued and minimal credit concerns, the 3-month spread has since narrowed to less than 10 basis points. This is close to the low level seen prior to the onset of the financial crisis in mid 2007 (Graph 4.2).

Graph 4.2
Spread of 3-month Bank Bills to OIS

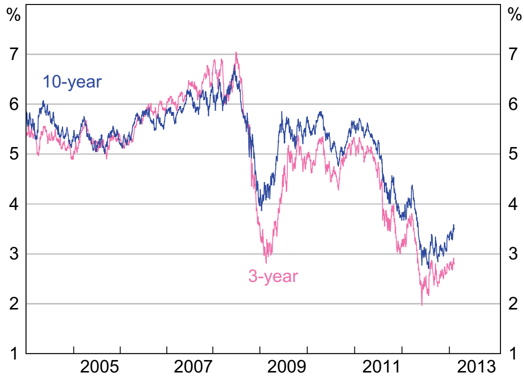


Sources: AFMA; Tullett Prebon (Australia) Pty Ltd

Yields on long-term government bonds have responded to the more positive tone within global markets. As a result, the yield on 10-year Commonwealth Government securities (CGS) has increased by around 40 basis points since the previous *Statement*, to be around 3.5 per cent, still low by historical standards (Graph 4.3). The yield differential between CGS and US Treasuries is around 150 basis points.

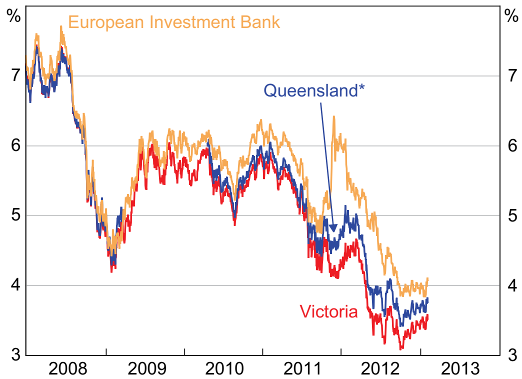
Spreads between yields on 5-year CGS and those on state government debt ('semis') have narrowed by between 10 and 25 basis points since the previous *Statement* and, in absolute terms, semi yields also remain around their historic lows (Graph 4.4). Moody's change to negative of the outlooks on

Graph 4.3
Australian Government Bond Yields



Source: RBA

Graph 4.4
5-year State Government and Supranational Debt Yields



* State guaranteed debt; from March 2009 to April 2010 all debt of this maturity was guaranteed by the Australian Government
Source: Yieldbroker

Queensland's and Western Australia's credit ratings did not have a material impact on the states' ability to access wholesale debt markets, nor the prices at which such debt is issued. Planned borrowing by the states for the current fiscal year is, in aggregate, broadly in line with issuance in the previous year (Table 4.1). In recent years, the most active purchasers of semi-government debt have been domestic banks, who have increased their holdings of liquid assets ahead of the introduction of more stringent prudential requirements in 2015 ('Basel III'). Banks now hold around one-third of the semi-government debt on issue, up from around 5 per cent in 2007.

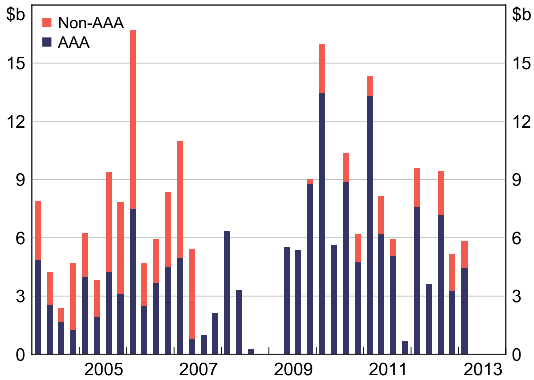
Bond issuance by non-resident entities ('Kangaroos') was strong in 2012, with around $28 billion issued over the year. This was similar to the outcome in 2011. Most of the $8 billion in Kangaroo bonds issued since the previous *Statement* has occurred in the early part of 2013 (Graph 4.5). Kangaroo issuance is typically strong in January, and this year it has been further supported by the return of some European issuers who were largely absent from the market in 2012. Investor appetite for these European names has improved in recent months as concerns about the euro area have eased. Secondary market spreads for Kangaroo bonds trended down towards the end of 2012 and are now at their lowest levels since early 2011.

Table 4.1: Term Borrowing by State Authorities

	2011/12	2012/13	
Issuer	Issuance $ billion	Issuance to date $ billion	Indicative target $ billion
New South Wales	10.6	4.9	6.9
Queensland	14.2	7.7	13.7
South Australia	2.2	2.1	~4
Tasmania	1.4	0.6	1.0
Victoria	6.2	4.6	7.2
Western Australia	4.1	3.2	8.6
Memo: Australian Government	60.3	28.9	47.0

Sources: Australian Office of Financial Management; New South Wales Treasury Corporation; Queensland Treasury Corporation; South Australian Government Financing Authority; Treasury Corporation of Victoria; Western Australian Treasury Corporation; UBS AG, Australia Branch

Graph 4.5
Kangaroo Bond Issuance*



* Latest quarter issuance to date
Source: RBA

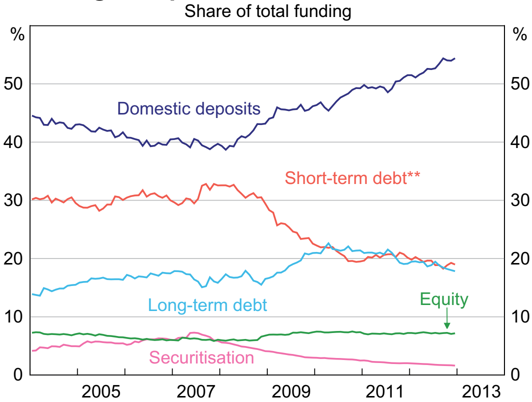
Financial Intermediaries

The composition of banks' funding has been broadly unchanged since the previous *Statement*. Domestic deposits account for about 54 per cent of total bank funding, while the share attributed to wholesale funding has remained less than 40 per cent (Graph 4.6).

Competition for deposits remains strong and deposits continue to be priced at a premium to wholesale benchmark rates. Since the previous *Statement*, the average interest rate on the major banks' at-call deposits – including online savings, bonus saver and cash management accounts – has fallen by around 25 basis points, which is consistent with the movement in the cash rate. The average rate offered on the major banks' term deposit 'specials' has fallen by about 10 basis points since November 2011, which is broadly in line with changes in wholesale benchmark rates (Graph 4.7).

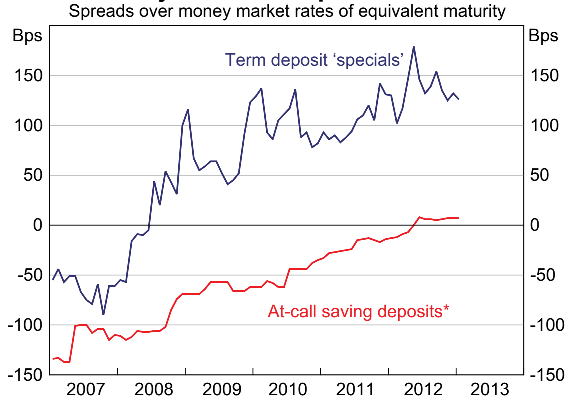
A number of institutions have been offering higher interest rates on bonus saver accounts than on term deposits, which has contributed to the ongoing shift of deposits away from term deposits to at-call savings accounts (Graph 4.8). The rates offered on bonus saver accounts, relative to the cash rate, have increased substantially over recent years, with the

Graph 4.6
Funding Composition of Banks in Australia*
Share of total funding



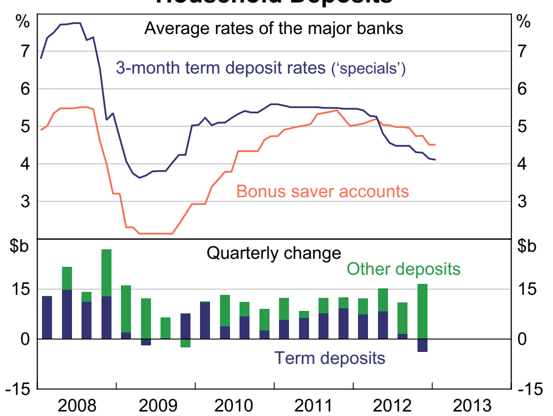
* Adjusted for movements in foreign exchange rates
** Includes deposits and intragroup funding from non-residents
Sources: APRA; RBA; Standard & Poor's

Graph 4.7
Major Banks' Deposit Rates
Spreads over money market rates of equivalent maturity



* Spread to cash rate; existing customers only; excludes temporary bonus rates
Sources: Bloomberg; RBA

Graph 4.8
Household Deposits

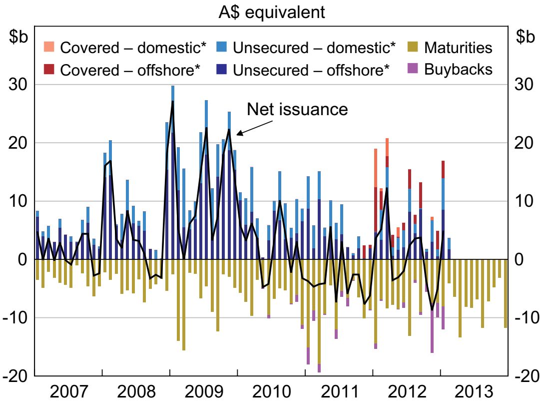


Source: RBA

average bonus saver rate offered by the major banks having increased by almost 250 basis points relative to the cash rate since 2009.

Bond issuance by Australian banks was relatively subdued in the December quarter, mainly reflecting the banks' preference for deposit funding and slow credit growth, though it has picked up more recently. Despite the $31 billion of bonds issued by the banks since the previous *Statement*, outstanding bank bonds have declined by $7 billion (Graph 4.9). In part, the decline reflects a pick-up in buybacks of government guaranteed debt (see 'Box D: Buybacks of Government Guaranteed Securities'). Primary market pricing has continued to tighten since the previous *Statement*, with the banks issuing bonds recently at spreads that are half the levels in early 2012.

Graph 4.9
Banks' Bond Issuance and Maturities
A$ equivalent

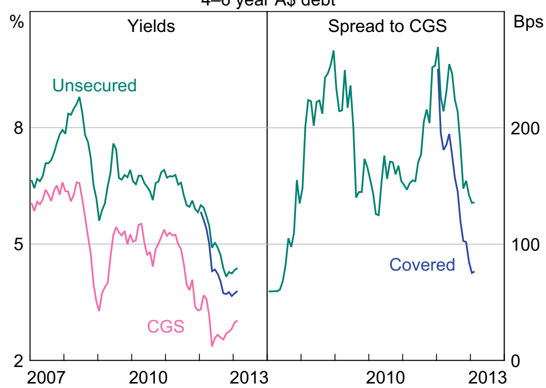


* Latest month issuance to date
Source: RBA

Around two-thirds of the banks' issuance since the previous *Statement* has been in offshore markets, mainly in unsecured form. Covered bonds issuance has totalled $6 billion and was predominantly in US dollars. However, there was a €1 billion issue that took advantage of the ongoing lack of highly rated issuance in the euro market and a £750 million issue in the UK. The major banks have utilised around 20–40 per cent of their covered bond issuance capacity. Recent domestic issuance by the banks has been entirely in unsecured form, including $1.9 billion of subordinated notes (these securities qualify as Tier 2 capital under the Australian Prudential Regulation Authority's capital standards). A further $1.3 billion of Tier 1 hybrid issuance has also been announced

As in primary markets, the ongoing improvement in financial market sentiment since the previous *Statement* has seen spreads on the major banks' unsecured and covered bonds tighten further within secondary markets (Graph 4.10). Relative to CGS, secondary market spreads have fallen by 125 basis points since their most recent highs, which were recorded around the peak in concerns regarding the sovereign debt situation in the euro area. Unsecured bond spreads are now close to their lowest level since the start of the global financial crisis, and covered bond spreads are at their lowest level since the banks started issuing these types of bonds in November 2011.

Graph 4.10
Major Banks' Bonds
4–6 year A$ debt

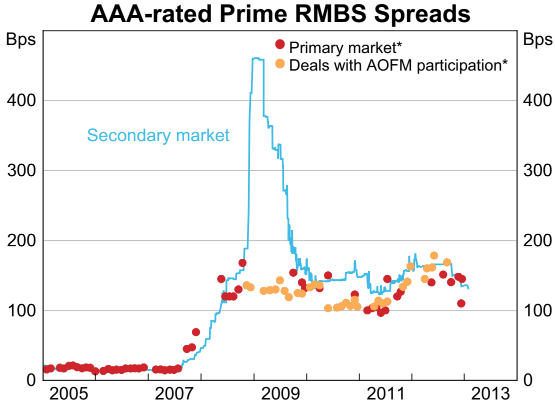


Sources: Bloomberg; RBA; UBS AG, Australia Branch

Relative to the cash rate, banks' outstanding funding costs are estimated to have been broadly unchanged over the past three months. The relative cost of banks' outstanding long-term wholesale debt remained stable over the period, with the large reduction in spreads for new bond issuance having only a minimal effect on banks' outstanding wholesale funding costs at this stage. It will take some time for the reduction in spreads to flow through to overall bank funding costs owing to the relatively subdued growth in credit and the slow run-off of wholesale debt issued previously at higher spreads.

Conditions in the Australian securitisation market have also continued to improve in recent months, with a number of residential mortgage-backed securities (RMBS) and asset-backed securities executed at spreads that were around 20 basis points narrower than those achieved on similar deals in the third quarter of 2012. In December, National Australia Bank priced the most senior tranche of its 3-year RMBS at 110 basis points above the 1-month bank bill swap reference rate, the tightest pricing on a transaction of this type since mid 2011 (Graph 4.11). Around $3 billion in RMBS and $1.7 billion in other asset-backed securities have been issued since the previous *Statement*, with the continuing decline in covered bond spreads helping to entice investors back into the RMBS market. Given the strong demand from the private sector, the Australian Office of Financial Management did not participate in any of these RMBS deals, and has recently sold $275 million of its RMBS holdings to private investors.

Graph 4.11
AAA-rated Prime RMBS Spreads



* Primary market spreads are face value weighted monthly averages of AAA-rated RMBS with conservative average LVRs and low proportion of low-doc loans

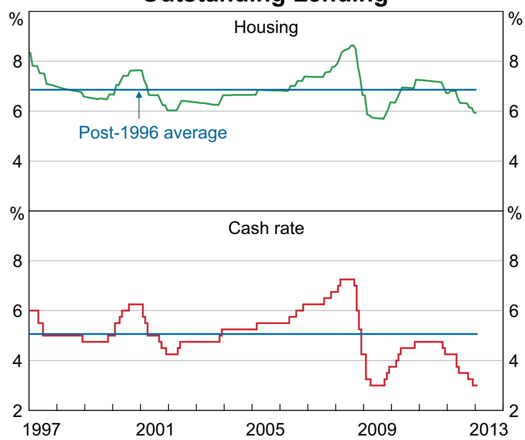
Sources: RBA; Royal Bank of Scotland; Westpac

Moody's has downgraded the ratings on most Australian mortgage insurers to the low single A range. This follows an update to Moody's rating methodology which now takes into account the state of housing markets and revised capital adequacy metrics. Separately, both Standard & Poor's and Moody's revised their outlooks on QBE's group rating (currently A and A3, respectively) to negative, following a profit warning from the company due to revised claims estimates mostly related to Hurricane Sandy in the United States.

Household Financing

Following the Reserve Bank Board's announcement of a 25 basis point reduction in the cash rate target in December, most lenders reduced their standard variable housing loan rates by 20 basis points (Table 4.2). Rates on new three-year, fixed-rate mortgages have generally moved in line with three-year benchmark rates. Overall, the average interest rate on outstanding housing loans is now about 25 basis points above its 2009 low (Graph 4.12).

Graph 4.12
Average Interest Rates on Outstanding Lending



Sources: ABS; APRA; Perpetual; RBA

Discounts offered on certain variable-rate mortgage products have not changed much since the end of October, although a number of banks have either introduced or extended some other competitive measures to attract loan customers. One major bank's subsidiary has introduced a temporary offer for new customers to undercut any advertised home loan rate offered by the major banks, while a major bank extended its offer to undercut the fixed rates of the other major banks. Some lenders have extended cash-back offers or temporarily waived or reduced some of their mortgage application fees.

Table 4.2: Intermediaries' Variable Lending Rates

Per cent

	Level at end January 2013	Change since: End October 2012	End October 2011
Cash rate	3.00	–0.25	–1.75
Housing loans			
– Standard variable rate[(a)]	6.44	–0.20	–1.35
– Package variable rate[(b)]	5.69	–0.21	–1.34
– Fixed rate[(c)]	5.52	–0.02	–1.00
Personal loans			
– Variable rate	12.89	–0.03	–0.37
Small business (variable rates)			
Residentially secured, advertised			
– Term loans	7.60	–0.20	–1.40
– Overdraft	8.47	–0.20	–1.38
Average rate[(d)]	7.33	–0.20	–1.30
Large business			
Average rate[(d)] (variable rate and bill funding)	5.36	–0.29	–1.67

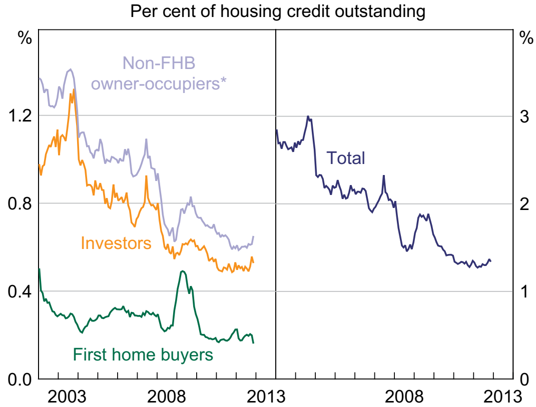
(a) Average of the major banks' standard variable rates
(b) Average of the major banks' discounted package variable rates on new, $250 000 full-doc loans
(c) Average of the major banks' three-year fixed rates
(d) Rates on outstanding business lending (includes discount)
Sources: ABS; APRA; RBA

Decreases in lending rates since late 2011 have contributed to an increase in the value of housing loan approvals, which grew by 7¼ per cent over the year to November (Graph 4.13). In recent months, approvals for first home buyers have been affected by changes to grants in New South Wales and Queensland, resulting in large falls in housing loan approvals for first home buyers in those two states. However, approvals for other owner-occupiers and investors have been growing more strongly over recent months. The stock of housing credit has continued to grow at a relatively subdued pace, increasing by 4.5 per cent over the year to December. Growth in investor credit has outpaced growth in owner-occupier credit, which is in part due to owner-occupiers using the low interest rate environment to repay their mortgages at a faster rate. Investors do not have as strong an incentive to prepay their mortgage given the tax deductibility of interest payments for them.

The value of outstanding personal credit grew slightly during the December quarter owing to a larger volume of fixed-term loans. Some of the increase in fixed-term loans relates to growth in car finance, reflecting recent growth in motor vehicle

Graph 4.13
Value of Housing Loan Approvals

Per cent of housing credit outstanding



* Net of refinancing
Sources: ABS; RBA

sales. Interest rates on variable-rate personal loans declined by less than 5 basis points in the quarter. Since October 2011, the spreads on personal loans over the cash rate have widened by 138 basis points. This has been primarily driven by rates on personal credit cards, which are generally less sensitive to changes in the cash rate.

Business Financing

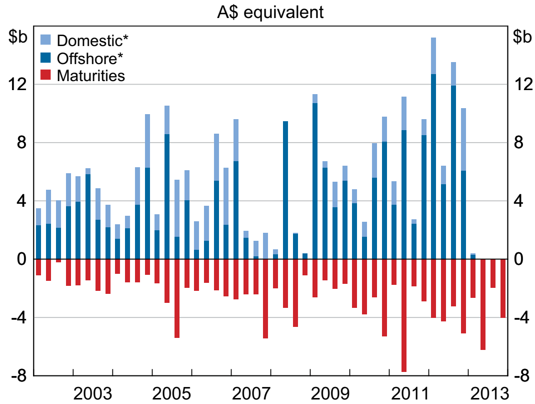
Australian non-financial corporates have issued $5.6 billion of bonds since the previous *Statement*, with a multi-currency offshore deal by Rio Tinto in early December accounting for just under half of that issuance (Graph 4.14). Robust corporate bond issuance in the last few months of 2012 capped off an active year for the domestic market and the strongest year on record for offshore issuance. Despite two large issuers – BHP Billiton and Rio Tinto – together accounting for half of the total volume, 2012 was also notable for having the highest number of individual issuers.

Non-intermediated markets remain favourable for corporates, with investor appetite for new issuance high and yields at multi-year lows. Spreads over CGS have declined by around 20 to 35 basis points since the previous *Statement* and are around their lowest levels since the start of the financial crisis (Graph 4.15).

In January, the Australian Government announced legal initiatives aimed at reducing the cost of retail corporate bond issuance by allowing the use of streamlined two-part prospectuses – a short offer prospectus and a more detailed 'base prospectus' – and reducing directors' liability to only misstatements or omissions from disclosure documents that are due to misleading or deceptive conduct. Most retail issuance to date has been in the form of high-yielding hybrid securities, which are not covered under the proposals.

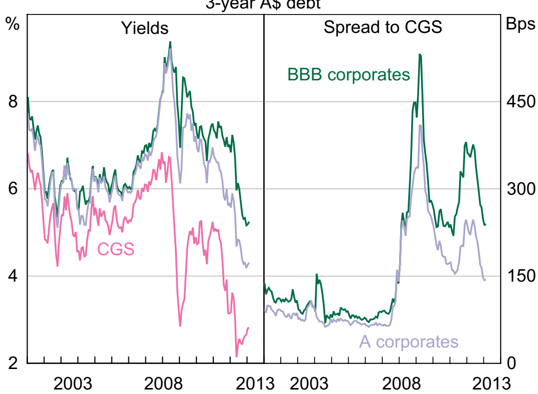
Intermediated business credit fell by 0.3 per cent over the December quarter. The fall was driven by lower lending to private trading corporations, while lending to unincorporated businesses continued to grow modestly over the period (Graph 4.16). The lower lending to private trading corporations witnessed over the past six months has coincided with greater net bond issuance by Australian corporates and may reflect some businesses substituting intermediated debt with non-intermediated debt. Growth in business credit during the December quarter was also affected by loan refinancings that moved credit off the books of domestic financial institutions (which are captured in the Reserve Bank's financial aggregates) and onto the books of offshore institutions (which are not captured).

Graph 4.14
Australian Corporates' Bond Issuance
A$ equivalent



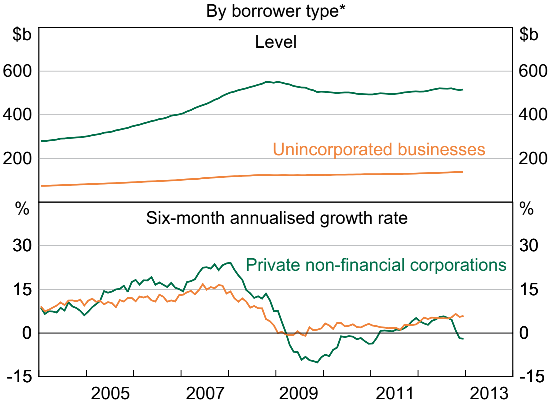
* Latest quarter issuance to date
Source: RBA

Graph 4.15
Australian Corporates' Bond Pricing
3-year A$ debt



Sources: RBA; UBS AG, Australia Branch

Graph 4.16
Business Credit
By borrower type*



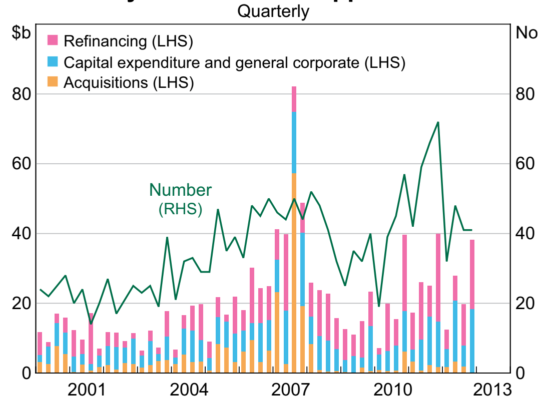
* Excludes securitised loans
Sources: APRA; RBA

Activity within the Australian syndicated lending market increased in the December quarter, although the volume of loan approvals remains well below the level seen in late 2011 (Graph 4.17). The increase in activity in the quarter was driven by a number of large new loans, particularly to the energy sector. Lending by Asian banks continued to grow faster than the system average and was largely concentrated in lending to resource-related borrowers.

The cost of intermediated business borrowing declined over the December quarter, with the average interest rate on outstanding bank loans to both small and large businesses falling by about 30 basis points (Graph 4.18). The decline in average business rates broadly reflected movements in wholesale benchmark rates, with spreads on business rates increasing only slightly. Average rates on small and large business loans are now around their lowest level since September 2009.

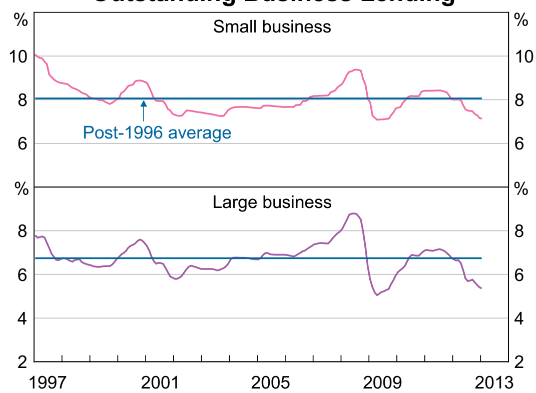
Equity raising activity has remained subdued, although there was a modest increase in the December quarter (Graph 4.19). Initial public offerings (IPOs) picked up somewhat following the spin-off of Woolworths' property portfolio and the listing of the dairy cooperative Fonterra. Notwithstanding this increase in activity, total equity raisings for the 2012 calendar year were broadly the same as the year earlier, which was the lowest annual level since 2004.

Graph 4.17
Syndicated Loan Approvals
Quarterly



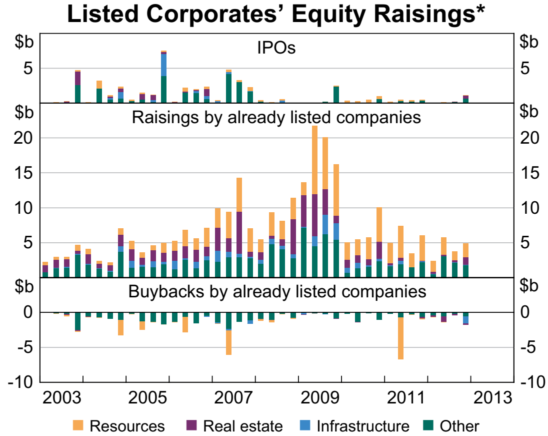
Sources: RBA; Thomson Reuters

Graph 4.18
Average Interest Rates on Outstanding Business Lending



Sources: APRA; RBA

Graph 4.19
Listed Corporates' Equity Raisings*

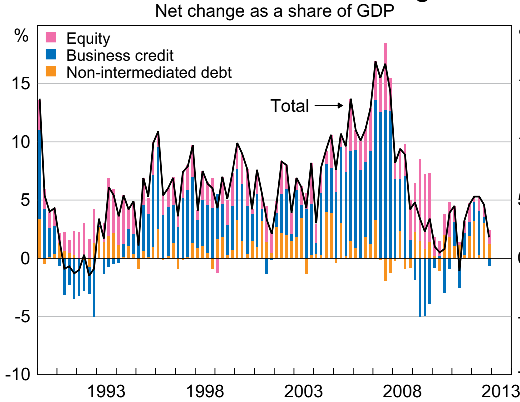


* Excludes privatisations and hybrid conversions, which are very small
Sources: ASX; RBA

Mergers and acquisitions (M&A) activity has also remained low, with only $6.2 billion in M&A deals involving ASX-listed companies announced since the last *Statement*. The largest deals were transfers of equity stakes in natural gas projects; BHP Billiton sold its remaining stake in the Woodside-led Browse Basin LNG project, while Woodside Petroleum purchased a portion of the Leviathan gas field off the coast of Israel. Like equity raisings, 2012 was a subdued year for M&A transactions, with only $37 billion in deals announced during the year, the lowest level of activity since 2004.

Net new business external funding eased to 1.8 per cent of GDP in the December quarter, driven by a fall in credit advanced by financial institutions. As discussed above, the recent decline in business credit has been offset to some extent by non-intermediated funding, although issuance of such debt did slow during the quarter. The overall contribution from equity raisings was broadly stable (Graph 4.20).

Graph 4.20
Business External Funding
Net change as a share of GDP



Sources: APRA; ASX; RBA

Aggregate Credit

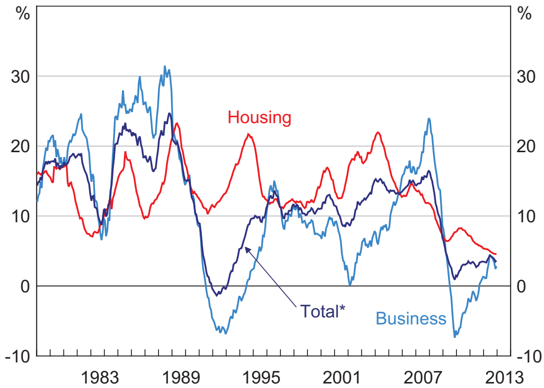
Growth in total outstanding credit slowed to a rate of around 0.5 per cent in the December quarter, driven by the softness in business credit (Table 4.3, Graph 4.21). Over the year, broad money growth has outpaced credit growth; although the two have changed by similar amounts in dollar terms.

Table 4.3: Growth in Financial Aggregates(a)
Per cent

	Three-month-ended		Year-ended
	Sep 2012	Dec 2012	Dec 2012
Total credit	0.8	0.5	3.6
– Household	1.0	1.0	4.0
– Housing	1.1	1.1	4.5
– Owner-occupier	1.0	1.0	4.1
– Investor	1.2	1.4	5.5
– Personal	–0.2	0.1	–0.3
– Business	0.3	–0.3	2.8
M3	1.4	1.1	7.2
Broad money	1.3	1.0	6.6

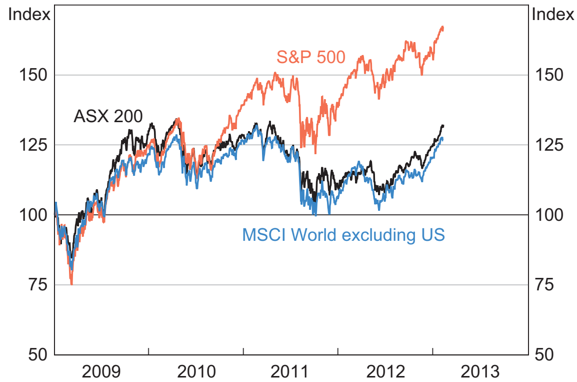
(a) Growth rates are break adjusted and seasonally adjusted
Source: RBA

Graph 4.21
Credit Growth
Year-ended



* Includes housing, personal and business credit
Source: RBA

Graph 4.22
Share Price Indices
End December 2008 = 100



Sources: Bloomberg; Thomson Reuters

Equity Markets

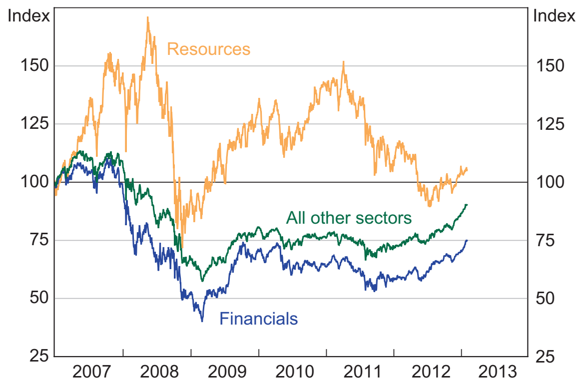
Australian equity prices have increased by 10 per cent since the previous *Statement*, broadly in line with overseas markets (Graph 4.22). Globally, equity markets have been supported by positive international policy developments, including a partial agreement by US lawmakers that averted severe fiscal consolidation, and a rebound in some commodity prices. Australian equity prices rose by 15 per cent over 2012, and are currently at their highest level since April 2011.

The increase in equity prices since the previous *Statement* has been broad based (Graph 4.23). In the resources sector, the share prices of iron ore producers rose following the rebound in the commodity's price. In January, Rio Tinto announced that it expects to report an impairment charge of US$14 billion for the 2012 financial year, mainly comprised of a writedown to its aluminium assets.

Bank share prices have risen since the previous *Statement* as investors continue to seek high-yielding stocks. Share prices within the insurance sector have increased, despite a profit downgrade by QBE, one of Australia's largest insurers by market capitalisation.

The improvement in share market sentiment has come despite ongoing downgrades to analysts' earnings expectations. In particular, private sector forecasts for resources sector earnings in the current

Graph 4.23
Australian Share Price Indices
End December 2006 = 100

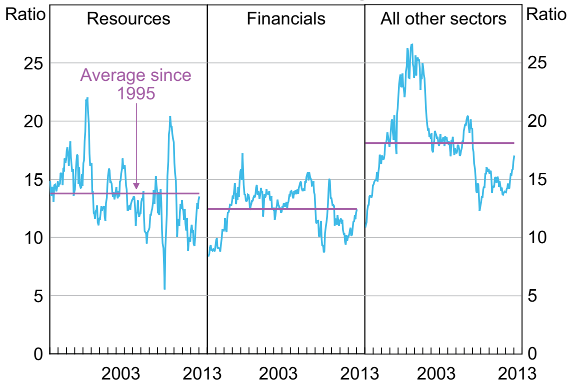


Sources: Bloomberg; RBA

financial year have declined by a further 3 per cent since the previous *Statement*. This, and the gains in equity prices, have lifted valuations well above their mid 2012 lows, with price-earnings ratios close to their average levels of the past two decades (Graph 4.24).

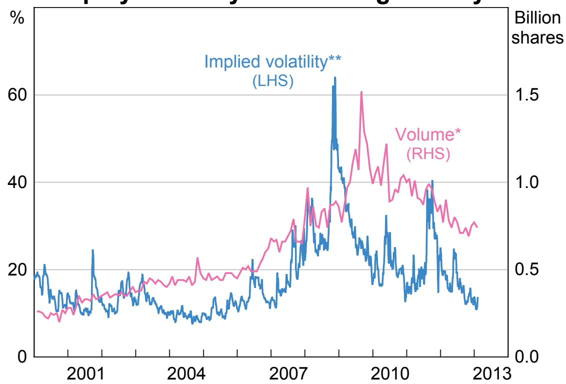
Within the domestic share market, trading activity has remained subdued since the previous *Statement*, with traded volumes falling close to their lowest level in more than five years. Similarly, volatility has remained low, with volatility implied by option prices declining to be near its lowest level since early 2006 (Graph 4.25). The trend towards lower volatility and trading volume has also been observed in overseas markets (see 'Box B: Financial Market Volatility').

Graph 4.24
Forward Price-earnings Ratios



Sources: MSCI; RBA; Thomson Reuters

Graph 4.25
Equity Volatility and Trading Activity



* ASX 200 average daily volume per month, seasonally adjusted

** 5-day moving average, ASX VIX from 2008, implied volatility from ASX SPI options prior to 2008

Sources: ASX; Bloomberg; RBA; Thomson Reuters

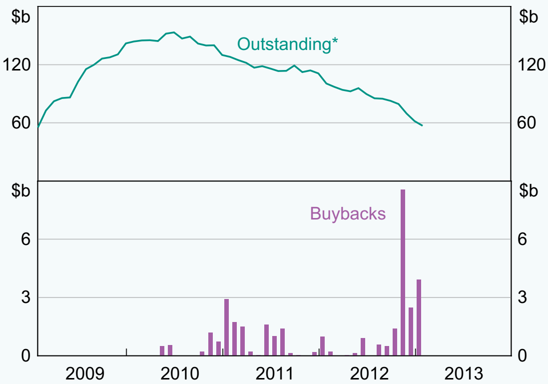
Box D

Buybacks of Government Guaranteed Securities

In October 2008 the Australian Government Guarantee Scheme for Large Deposits and Wholesale Funding was enacted by the government as part of a suite of measures responding to the global financial crisis.[1] The Scheme permitted Australian authorised deposit-taking institutions (ADIs) to issue securities with maturities of up to five years that were fully guaranteed by the Australian Government.[2] ADIs were charged a monthly fee for using the Scheme based on their outstanding stock of guaranteed securities and the institution's credit rating: AA-rated institutions were charged a fee of 70 basis points per annum, while A-rated and BBB-rated institutions were charged 100 and 150 basis points, respectively. By the time the Scheme closed to new issuance in March 2010, a total of 16 ADIs had issued around $166 billion of guaranteed securities in the domestic and offshore markets, with the final guaranteed instrument due to mature in March 2015. The Scheme is administered by the Reserve Bank of Australia on behalf of the Australian Government. By end December 2012, the Scheme had generated around $3.8 billion in fees for the government.

Around the time the Scheme was closed to new issuance, funding conditions in financial markets began to improve. ADIs started buying back guaranteed bonds, at first in small amounts but increasing in size as conditions became more favourable. By mid 2012 around $16 billion of guaranteed bonds had been repurchased. In late 2012 and early 2013 several ADIs, including some of the biggest issuers of guaranteed bonds, undertook large-scale repurchases, buying back around $15 billion of guaranteed bonds. These buybacks, together with bond maturities and revaluations due to the appreciation of the Australian dollar, have contributed to a decline in the remaining stock of outstanding guaranteed bonds to around $57 billion (Graph D1). This has been a faster decline in the Australian Government's contingent liabilities than would have occurred without these buybacks.

Graph D1
Australian Government Guaranteed Debt



* Adjusted for monthly exchange rate movements; numbers in the text are based on original Australian dollar equivalents
Source: RBA

While wholesale debt guarantee schemes were enacted in at least 15 OECD countries during the global financial crisis, large-scale buybacks have not been a feature of guarantee schemes in other countries. Fees under these schemes were paid up front and were non-refundable. In contrast, under the Australian scheme the fee is applied each month on the balance of outstanding guaranteed bonds, which permits the bond issuer to repurchase the

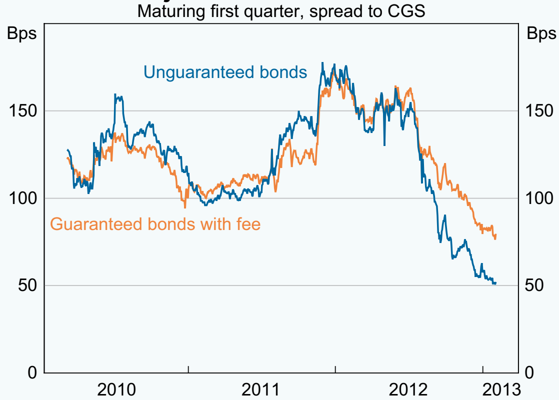
1 See Prime Minister of Australia (2008), 'Global Financial Crisis,' Media Release, 12 October. The Scheme is further described in Schwartz C (2010), 'The Australian Government Guarantee Scheme', RBA *Bulletin*, March, pp 19–26.

2 The Scheme also permitted ADIs to offer guaranteed deposits of more than $1 million. Deposits of less than $1 million were automatically guaranteed through the Financial Claims Scheme, which was also introduced in October 2008. This cap was revised to $250 000 in February 2012.

guaranteed bonds when wholesale funding market conditions improve.

A buyback of a bond issued under the Scheme is optimal when the value of the guarantee to an investor is less than the cost of the guarantee to the issuer. The value an investor places on the guarantee can be measured by the difference in yield between a guaranteed bond and an unguaranteed bond of equivalent maturity from the same issuer. At the height of the global financial crisis, 5-year guaranteed bonds issued by the major banks yielded around 90 basis points less than unguaranteed bonds, rendering guaranteed bonds 20 basis points cheaper for these ADIs to issue after accounting for their 70 basis point guarantee fee. As global financial market conditions have improved, the spread between unguaranteed and guaranteed bonds has narrowed, reflecting investors' increasing confidence that banks will be able to honour their contractual payments. At the same time, the maturity profile of the guaranteed bonds has shortened. As a result, it is now economical for the major banks to buy back most guaranteed bonds with between 12 to 18 months remaining to maturity (Graph D2). Meanwhile, access to alternative funding markets has steadily improved since the beginning of 2012. By late last year, credit spreads had tightened considerably, and Australian banks were able to issue significant volumes into the unsecured domestic and offshore markets, allowing them to refinance guaranteed bonds with longer-dated issuance.

Graph D2
Major Banks' 2014 Bonds
Maturing first quarter, spread to CGS



Sources: RBA; UBS AG, Australia Branch

ADIs have also sourced an increasing share of their funding from domestic deposits, which have grown rapidly in recent times as ADIs actively target this source of funding. In addition, the introduction of covered bonds in late 2011 presented investors with an alternative AAA-rated ADI-issued security. Some investors in guaranteed bonds are constrained by their mandates to invest only in AAA-rated paper, and had purchased Australian ADI securities for the first time when the Scheme was enacted. The advent of covered bonds, which are also AAA-rated, has provided an avenue for these investors to continue investing in Australian ADI-issued securities, and has facilitated their participation in the buybacks.

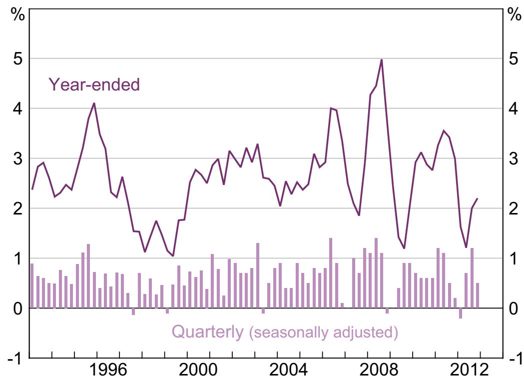
Banks have offered a premium of around 10 basis points to secondary market spreads to encourage investors to participate in the buybacks. Nonetheless, not all bond holders have participated, in part due to the scarcity of alternative highly rated Australian dollar-denominated securities. This has been especially the case for official sector investors, such as reserve asset managers, many of whom are limited to investing in government or quasi-government securities. Some buy-and-hold investors have also preferred to continue to earn the premium offered by guaranteed bonds, a result of their lower liquidity relative to Commonwealth Government securities (CGS). One-year guaranteed bank paper, for example, currently offers a yield that is around 10 basis points higher than that of CGS, while retaining the credit risk profile of the Australian Government.

5. Price and Wage Developments

Recent Developments in Inflation

The quarterly rate of inflation slowed in the December quarter. On a seasonally adjusted basis, the consumer price index (CPI) rose by 0.5 per cent, following a 1.2 per cent increase in the September quarter, to be 2.2 per cent higher over the year (Graph 5.1, Table 5.1). Lower inflation in the quarter largely reflected the absence of the one-off factors that had lifted inflation in the September quarter, notably the introduction of the carbon price and the means testing of private health insurance rebates. Inflation in the prices of both utilities and medical services eased in the December quarter. Inflation also slowed for new dwelling purchase costs and for a broad range of food items, with a pronounced fall

Graph 5.1
Consumer Price Inflation*



* Excluding interest charges prior to the September quarter 1998 and adjusted for the tax changes of 1999–2000
Sources: ABS; RBA

Table 5.1: Measures of Consumer Price Inflation
Per cent

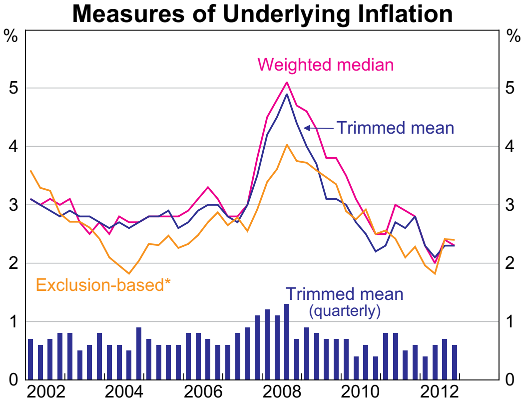
	Quarterly(a)		Year-ended(b)	
	September quarter 2012	December quarter 2012	September quarter 2012	December quarter 2012
Consumer Price Index	1.4	0.2	2.0	2.2
Seasonally adjusted CPI	1.2	0.5	2.0	2.2
– Tradables	0.8	–0.3	–1.2	–0.4
– Tradables (excl volatile items and tobacco)(c)	0.1	–0.3	–0.8	–0.7
– Non-tradables	1.6	0.8	4.0	3.9
Selected underlying measures				
Trimmed mean	0.7	0.6	2.3	2.3
Weighted median	0.8	0.5	2.4	2.3
CPI excl volatile items(c)	1.1	0.5	2.4	2.4

(a) Except for the headline CPI, quarterly changes are based on seasonally adjusted data; those not published by the ABS are calculated by the RBA using seasonal factors published by the ABS
(b) Year-ended changes are based on non-seasonally adjusted data, except for the trimmed mean and weighted median
(c) Volatile items are fruit, vegetables and automotive fuel
Sources: ABS; RBA

in the prices of fruit and vegetables. This was partly offset by an increase in inflation for a number of market services, as well as an increase in the price of automotive fuel.

The various measures of underlying inflation were around ½ per cent in the December quarter. Underlying inflation was around 2¼ per cent in year-ended terms, unchanged from the September quarter (which was revised down slightly reflecting changes in seasonal adjustments) (Graph 5.2). Information from liaison contacts, and the pattern of price changes for different components of the CPI, are consistent with the earlier expectation that the introduction of the carbon price would be likely to have only a modest effect on measures of underlying inflation (see August 2012 *Statement*).

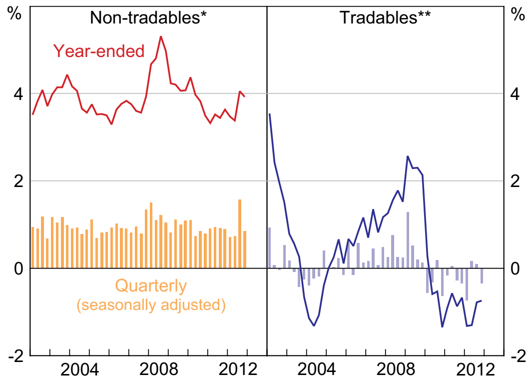
Graph 5.2
Measures of Underlying Inflation



* Excludes fruit, vegetables, automotive fuel (and deposit & loan facilities to June 2011)
Sources: ABS; RBA

Prices of non-tradable goods and services increased by 0.8 per cent in the December quarter, after rising by 1.6 per cent in the September quarter, to be 3.9 per cent higher over the year (Graph 5.3). Abstracting from the one-off policy changes that boosted the September quarter outcome, non-tradables inflation appears to have edged a little higher. This can largely be attributed to inflation in the prices of a range of market services, such as insurance & financial services, telecommunications, and domestic holiday travel & accommodation. The inflation of rents also ticked up, following an unusually low outcome in the September quarter. On the other hand, new dwelling cost inflation eased in the quarter, partly owing to changes in first home buyer grants available for new dwellings in several states.

Graph 5.3
Non-tradables and Tradables Inflation



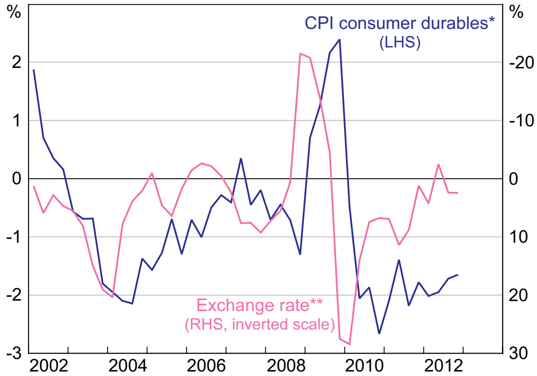
* Excluding deposit & loan facilities to June 2011
** Excluding volatile items (fruit, vegetables and automotive fuel) and tobacco
Sources: ABS; RBA

Tradables prices (excluding volatile items and tobacco) declined by 0.3 per cent in the December quarter, following small increases in the previous two quarters. Prices fell for a range of traded food items in the quarter, while international holiday travel and accommodation prices, which tend to be volatile, also declined.

The pace of decline in consumer durables prices eased a little in the December quarter, reflecting a rise in prices of clothing accessories. Nevertheless, the decline in consumer durables prices remained more pronounced than that implied by the historical relationship with the exchange rate (Graph 5.4). In particular, the prices of audio, visual and computing equipment continued to decline significantly, while prices were also lower for household appliances. Overall, the recent falls in the retail prices of household electrical goods appear to have exceeded the declines in these goods' import prices.

Excluding the volatile fruit and vegetables component, quarterly food price inflation in the December quarter returned to its low levels of recent years. Inflation eased for a broad range of food items

Graph 5.4
Consumer Prices and the Exchange Rate
Year-ended percentage change



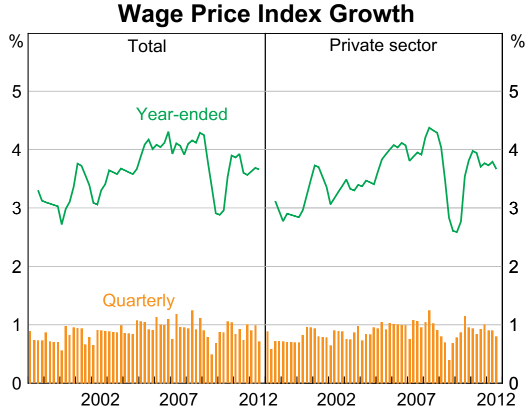
* Retail items (excluding food and alcohol) and motor vehicles and parts
** Import-weighted index
Sources: ABS; RBA

in the quarter, including bread, dairy items and some meats. This is consistent with reports that supermarket competition is continuing to restrain price increases, partly through putting downward pressure on supplier costs.

Costs

Wage growth moderated a little in the September quarter, consistent with relatively subdued labour market conditions over the past year and reports from the Bank's liaison with firms. The wage price index rose by 0.7 per cent in the quarter, to be 3.7 per cent higher over the year (Graph 5.5). Part of the slowing can be attributed to the fact that the

Graph 5.5
Wage Price Index Growth

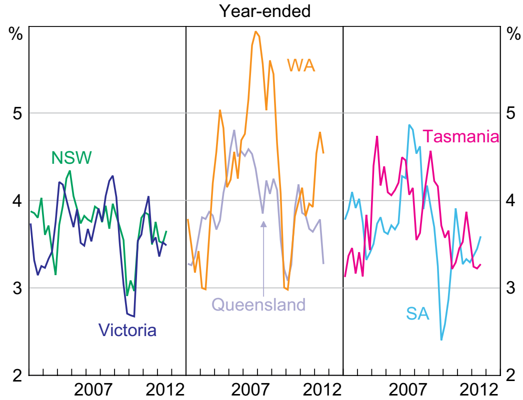


Source: ABS

annual award wage increase that came into effect in July was smaller than in the previous year. Wage growth in the private sector eased slightly over the year, with the decline most pronounced in industries more directly exposed to consumer demand, such as retail trade and household services. In contrast, wage growth in mining and professional & scientific services remained strong, notwithstanding signs of weakening demand for labour in these industries since the middle of 2012. Public sector wage growth remained below average in line with ongoing fiscal restraint at all levels of government.

Differences in state labour market conditions continue to be reflected in wage outcomes. Wage growth has been relatively low in Queensland and Tasmania, consistent with elevated unemployment rates in both states (Graph 5.6). Western Australia continued to experience faster wage growth than the other states, where wage growth generally remained stable at around or a little below decade averages.

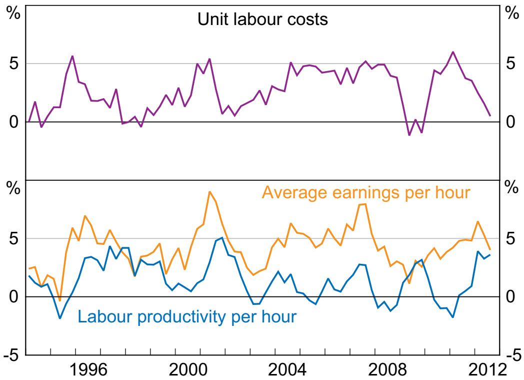
Graph 5.6
Wage Growth by State
Year-ended



Source: ABS

Growth in unit labour costs continued to ease in the second half of 2012, reflecting slower growth in earnings and above-average growth in labour productivity (Graph 5.7). The increase in labour productivity growth in 2012 was broad based, with significant productivity improvements in the agriculture, wholesale trade, transport,

Graph 5.7
Unit Labour Costs Growth
Non-farm, year-ended



Sources: ABS; RBA

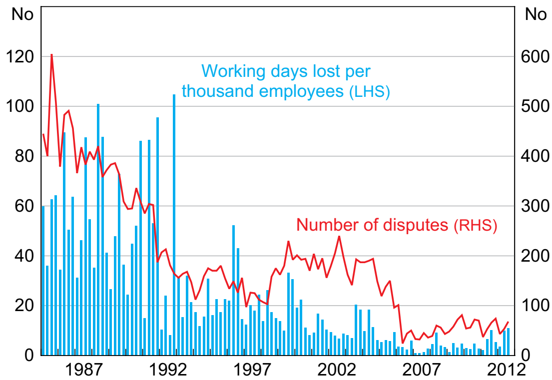
postal & warehousing and construction industries. The shift of employment into the mining sector over the past year has also made a significant contribution to aggregate labour productivity growth given that the level of labour productivity in mining remains well above the average for the economy as a whole.

Business surveys suggest that wage pressures eased further in the December quarter. Liaison with firms also indicates that there has been a pick-up in the share of firms expecting no growth in average wages over the year ahead, and that skills shortages and wage pressures in the resources sector have eased.

Following a moderate rise in the September quarter, producer price data suggest that domestic inflation pressures were subdued in the December quarter, consistent with the outcome for consumer price inflation.

ABS data suggest that the number of working days lost as a result of industrial disputes in the September quarter remained a little higher than the average of recent years but still well below its longer-run history (Graph 5.8). There was a pick-up in disputes in the construction industry, which accounted for two-fifths of working days lost in the quarter, while the number of working days lost in the education and healthcare industries declined.

Graph 5.8
Industrial Disputes
Quarterly

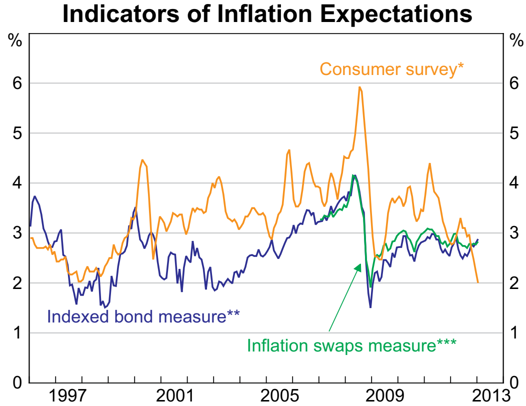


Source: ABS

Inflation Expectations

Measures of inflation expectations remain consistent with the inflation target. Since the November *Statement*, the near-term inflation expectations of union officials surveyed by the Bank, and market economists, are unchanged (Table 5.2). Financial market measures of inflation expectations have edged higher in recent months, although they remain around their long-run average levels (Graph 5.9). In contrast, the Melbourne Institute's measure of consumer inflation expectations, which tends to be volatile, has averaged 2 per cent in the three months to January, its lowest level since 1997.

Graph 5.9
Indicators of Inflation Expectations



* Three-month moving average of the trimmed mean expectation of inflation over the next year
** Break-even 10-year inflation rate on indexed bonds
*** Expectations of average annual inflation over the next 10 years
Sources: Bloomberg; Melbourne Institute of Applied Economic and Social Research; RBA

Table 5.2: Median Inflation Expectations
Per cent

	Year to December 2013			Year to December 2014	
	August 2012	November 2012	February 2013	November 2012	February 2013
Market economists	2.7	2.6	2.6	2.7	2.7
Union officials[(a)]	2.2	2.5	2.5	2.5	2.5

(a) Excluding carbon price
Sources: RBA; Workplace Research Centre

6. Economic Outlook

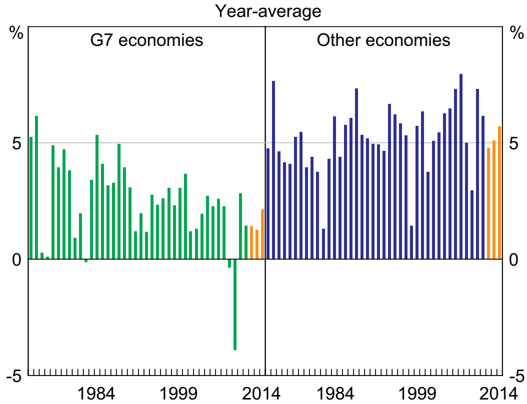
The International Economy

With developments over the past few months broadly in line with the expectations at the time of the November *Statement*, the global forecasts are largely unchanged. World GDP growth is expected to be around 3½ per cent in 2013, before picking up to around 4 per cent in 2014, similar to the forecasts of the International Monetary Fund (IMF) and those published by Consensus Economics (Graph 6.1).

The forecasts assume that the political process in the United States avoids a severe tightening of fiscal policy, with growth in the US economy returning to a long-run average pace supported by the recovery in the housing market and accommodative monetary policy settings. Activity in the euro area is forecast to stabilise in the first half of 2013 and then grow modestly. This assumes that the euro area crisis continues to be managed in a manner that avoids serious destabilisation. While the forecasts are based on the absence of any major negative shocks in the United States and euro area, and hence they assume that global financial markets remain relatively calm, the main downside risk still appears to emanate from the euro area, as discussed below.

Despite the outlook for only modest growth in the large advanced economies overall, global growth is expected to be close to its long-run average in 2013 because of the relatively strong growth, and increasing size, of the fast-growing Asian economies. In particular, GDP growth in China over the next two years is expected to be a little stronger than in 2012, underpinned by growth in domestic demand.

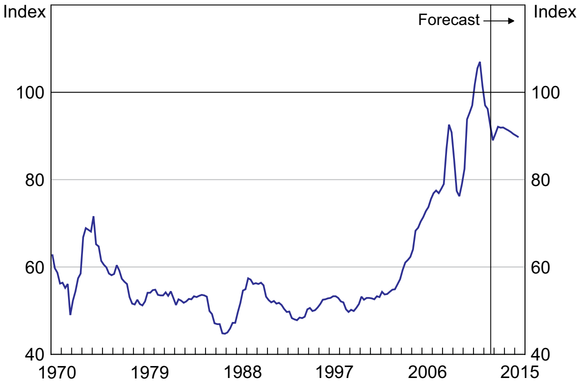
Graph 6.1
Global GDP Growth*
Year-average



* Australia's major trading partners; weighted using output shares at market exchange rates
Sources: CEIC; IMF; RBA; Thomson Reuters

Since the November *Statement*, the price of iron ore has increased significantly, reportedly in response to some restocking by Chinese steel producers after a significant drawdown in inventories over the second half of 2012. Other commodity prices have increased a little. However, forecasts of commodity prices in the medium term are mostly unchanged and so overall the profile for the terms of trade is largely as it was in the November *Statement*. Over time, the terms of trade are expected to decline gradually as the large amount of investment in the resource sector currently underway globally is likely to lead supply of bulk commodities to increase faster than demand (Graph 6.2).

Graph 6.2
Terms of Trade
2010/11 average = 100



Sources: ABS; RBA

Domestic Activity

In preparing the domestic forecasts, a number of technical assumptions have been employed as usual. The exchange rate is assumed to remain at its current level over the forecast period (A$ at US$1.03, TWI at 77), which is around the same as the November *Statement*. The forecasts are based on the price for Brent oil remaining at US$113 per barrel, slightly higher than the assumption in November. The cash rate is assumed to be unchanged over the rest of the forecast period at 3 per cent, following the 25 basis points cut in December. The cash rate assumed for the forecasts is more than 200 basis points lower than its post-1996 average, while borrowing rates are currently 95–140 basis points below average. Finally, the forecasts assume that annual growth in the working-age population over 2013 and 2014 is 1.7 per cent and 1.8 per cent, respectively, a touch higher than the previous forecasts and in line with the recent pick-up in the rate of immigration.

The available data show that while growth in the domestic economy over the year to the September quarter was around trend, it had slowed somewhat through the year. This was evident in a slowing in consumption growth, in line with softer growth in employment and labour income. The Australian Government's fiscal consolidation also weighed on growth. However, output growth appears to have picked up in the December quarter with a sharp rise in coal and iron ore exports. Dwelling investment has begun to recover after declining steadily over 2011/12, and business investment is likely to have continued to increase. Overall, GDP growth over 2012 is likely to have been close to 3½ per cent, which is broadly in line with the November *Statement* forecast (Table 6.1).

GDP growth is expected to be below trend at around 2½ per cent over 2013 before picking up to just under 3 per cent over 2014. These forecasts have been revised down since the November *Statement*, largely reflecting the slightly weaker outlook for mining and non-mining investment. Overall, the soft outlook over the next year or so reflects a number of factors: mining investment is expected to peak, both fiscal consolidation and the persistently high level of the Australian dollar will weigh on growth, and there is little sign of a near-term pick-up in non-mining business investment.

The downward revisions to business investment for both the mining and non-mining sectors have been concentrated in spending on machinery and equipment. This largely reflects weaker-than-expected data in the ABS capital expenditure survey, as well as subdued investment intentions reported in business surveys and the Bank's liaison. The forecast for investment in buildings and structures in the mining sector has been lowered from mid 2013 onwards, as a range of information suggests that mining investment is likely to peak before the end of this year.

Over the past six months, the largest downward revisions to the mining investment profile have been in the coal sector. Despite recent rises, prices for both coking and thermal coal remain more than 20 per cent lower than they were a year ago and most forecasters expect prices to remain relatively subdued over the medium term, with global demand for coal dampened by the increase in natural gas production in the United States. The fall in iron ore prices over the September quarter was reportedly a factor in the delay of some iron ore projects. Notwithstanding the significant increase in the iron ore price of late,

Table 6.1: Output Growth and Inflation Forecasts[(a)]
Per cent

	Year-ended					
	Dec 2012	June 2013	Dec 2013	June 2014	Dec 2014	June 2015
GDP growth	3½	2½	2–3	2–3	2½–3½	2½–3½
Non-farm GDP growth	3½	2¾	2–3	2–3	2½–3½	2½–3½
CPI inflation	2.2	3	2–3	2–3	2–3	2–3
Underlying inflation	2¼	2½	2–3	2–3	2–3	2–3
	Year-average					
	2012	2012/13	2013	2013/14	2014	2014/15
GDP growth	3¾	3	2–3	2–3	2¼ –3¼	2½–3½

(a) Technical assumptions include A$ at US$1.03, TWI at 77 and Brent crude oil price at US$113 per barrel
Sources: ABS; RBA

mining company statements indicate that they remain focused on containing costs and it remains difficult to obtain finance for some projects. A small downward revision was also made to the outlook for investment in the liquefied natural gas sector. This reflects the effect of delays to the construction of some projects, which has been partially offset by changes to the cost of construction.

The outlook for the rest of the economy remains mixed. Growth in public demand is expected to be very subdued over the next two years, as both the Australian and state governments undertake significant fiscal consolidation (although there may be some rebound in the December quarter from the unusually sharp fall in measured public investment in the previous quarter). On the other hand, a gradual recovery in residential construction investment looks to be underway, as lower interest rates, rising rental yields and an improvement in conditions in the established housing market have created a more favourable environment for investment.

The outlook for consumption is little changed from the time of the November *Statement*. The available data suggest that after growing rapidly early in 2012, consumption grew at a more moderate pace thereafter, in line with slower growth in labour income. Looking ahead, consumption spending is expected to grow a little below trend in the near term before picking up slightly. With consumption growth broadly in line with income growth, the household saving ratio is expected to remain fairly steady.

Employment growth has remained subdued in recent months, with the unemployment rate drifting gradually higher. Sectors exposed to the mining sector have scaled back their demand for labour and remain focused on minimising costs, while the ongoing fiscal consolidation has weighed on public sector employment. Employment is expected to grow only modestly in the near term, broadly in line with the outlook implied by a range of leading indicators. Employment growth is then expected to pick up gradually, but to remain below the pace of population growth over most of the forecast horizon. Accordingly, unemployment is expected to drift gradually higher.

Given the softer outlook for labour demand, growth in the wage price index is expected to ease further to around 3¼ per cent over the forecast period, a little above the rates recorded in 2009/10 following the global downturn. Even so, growth in unit labour costs is forecast to rise somewhat over the forecast period as productivity growth is expected to decline gradually from the relatively high rate recorded over the past year.

Inflation

The outlook for inflation is a little lower than the forecasts published in the November *Statement*. Data for the December quarter indicate that year-ended underlying inflation has been around 2¼ per cent since the middle of last year. The earlier data were revised down slightly and so, reflecting this lower starting point, the forecasts are lower in the near term. The year-ended rate of underlying inflation is then expected to pick up a little to around 2½ per cent. Looking further out, the forecasts are slightly lower than previously, with the weaker outlook for domestic activity and labour demand expected to contain unit costs amid continued productivity improvements.

Over the first half of the forecast period, the profile for headline CPI is expected to be affected by a number of recent one-off factors. Although most of the direct effects (on utility prices) of the introduction of the carbon price appear to have come through in the September quarter, the introduction of the carbon price is expected to make a further modest contribution to quarterly headline and underlying inflation in early 2013. By the end of 2013, headline inflation is expected to fall back to around the middle of the target range as the effects of the introduction of the carbon price largely drop out.

Risks

Overall, the risks to the international outlook appear to be more balanced than at the time of the previous *Statement*. The main identifiable source of downside risk continues to be the banking and fiscal problems in the euro area. European policymakers continue to work to address the underlying structural causes and alleviate some of the symptoms of the crisis, and in doing so have reduced the near-term risks. However, recovery in economic activity is some way off and prospects remain fragile. The crisis economies, in particular, remain vulnerable to adverse shocks, including the possibility of social unrest in response to austerity measures. Risks to the upside and downside now appear more evenly balanced for both China and the United States. The large degree of monetary stimulus in place in many economies, particularly the major advanced economies, has seen significant increases in asset prices and could well lead to a larger pick-up in economic activity than is currently anticipated.

Economic activity in the United States continues to expand moderately, with some of the restraining influences on the economy slowly unwinding. The reduction in the downside risks from a sharp fiscal consolidation has made the outlook for the US economy seemingly more balanced. The downside risks have not been completely eliminated and ongoing negotiations on fiscal policy and debt could further dampen consumer, business and financial market confidence and hamper the ensuing recovery. But if this uncertainty is resolved, with fiscal consolidation not occurring too rapidly in the near term, then the improvement in sentiment could result in an increase in investment and consumer spending, which would in turn bolster growth.

There has been a general increase in confidence that growth in China has stabilised. Nevertheless, there remains some uncertainty about the nature of future policies given the extended leadership transition in many parts of the government and state-owned enterprises. As China continues to develop, there is also the potential for imbalances in the housing market or financial system, which could ultimately prove destabilising for the broader economy. In Japan, the new government has announced plans to boost domestic growth and combat deflation, including through public spending. A large fiscal stimulus could, however, increase downside risks further down the track. Territorial disputes in the region remain a risk to economic activity.

The forecasts for the Australian economy continue to embody a recovery in non-mining business investment, though it is expected to remain relatively low as a share of economic activity. While the underlying drivers of investment are supportive of growth, the absence of any clear indications of a pick-up in non-mining investment means that the outlook remains quite uncertain. The preconditions for an ongoing recovery in dwelling investment are also in place, although the lack of improvement in the demand for new detached houses to date raises questions about the breadth and strength of the recovery.

While information received since the November *Statement* still suggests that the peak in the mining investment boom is near, considerable uncertainty remains about the exact profile for spending. Furthermore, given the recent pick-up in the price of iron ore, it is possible that the existing caution of miners could lessen and more projects be considered economically viable.

There is also considerable uncertainty surrounding the outlook for public spending, given the large fiscal consolidation currently underway and planned by the Australian and state governments. The Australian Government's recent announcement that the federal budget is unlikely to return to surplus in 2012/13, owing to weaker-than-expected revenue growth, has reduced the likelihood of larger cuts to total public spending in the near term. Nevertheless, while the staff forecast is for subdued growth in public demand over the next two years, this will depend in part on state and federal government revenue, which is sensitive to changes in commodity prices.

The risks around the outlook for inflation reflect the usual mix of factors pertaining to aggregate demand, the labour market, productivity and the exchange rate. While the labour market is expected to remain soft over the forecast horizon, a more pronounced or protracted slowdown in activity could see a larger-than-expected rise in unemployment, which would constrain wage costs and consumer incomes, and also limit firms' ability to raise prices. The effects of the high exchange rate on inflation may also be proving to be longer lasting than expected. On the other hand, while wage growth has moderated recently, a continued softening in nominal wage growth and continued growth in productivity are likely to be required to keep cost pressures consistent with the inflation target.

Box E

Forecast Confidence Intervals

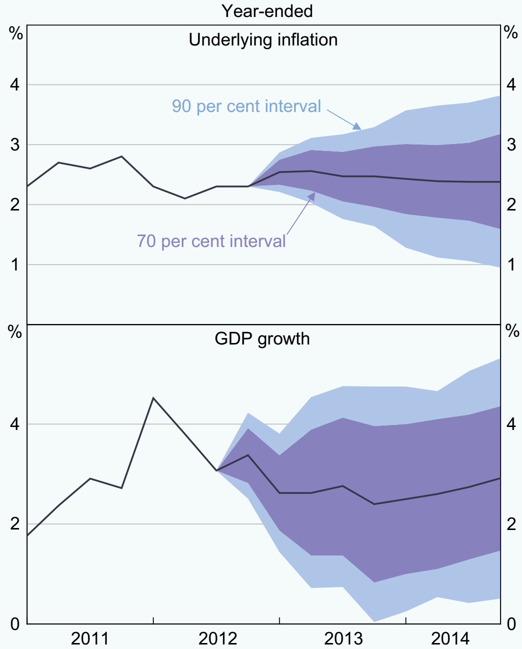
Table 6.1 presents the Bank's expectation of the central or most likely path for key macroeconomic variables. However, many other outcomes are also possible. Some of the factors that could result in alternative outcomes are more obvious – see the discussion under the heading 'Risks' – but others are less tangible.

The range of likely outcomes can be estimated by examining past forecast errors. In a recent Research Discussion Paper, Tulip and Wallace (2012) calculate the Bank's forecast errors between 1993 and 2011.[1] The distribution of these errors can be added to the forecasts to construct confidence intervals. Graph E1 shows 70 per cent and 90 per cent confidence intervals around the forecasts for underlying inflation and GDP growth on a year-ended basis.

The top panel shows that a 70 per cent confidence interval for the forecast of underlying inflation over the year to the December quarter 2014 extends from 1.6 per cent to 3.2 per cent. That is, if the Bank makes similar-sized forecast errors to those made in the past, then there is a 70 per cent probability that underlying inflation will fall between 1.6 per cent and 3.2 per cent. Similarly, the 70 per cent confidence interval for GDP growth over the year to the December quarter 2014 extends from 1.5 per cent to 4.4 per cent.

These estimates make several assumptions. They assume that the accuracy of the current forecasts will be similar to that of the past. They assume that the confidence intervals are symmetric and centred on the forecasts. However, they do not make the common assumption that the errors are normally distributed.

Graph E1
Confidence Intervals about the Forecast



Sources: ABS; RBA

The width of the confidence intervals indicates there is always substantial uncertainty about the economic outlook. This is not an unusual result: high levels of uncertainty have also been found in other countries, for other macroeconomic variables and for both private and public sector forecasts. One implication of this uncertainty is that there is limited value in discussing precise point estimates of the forecasts. Accordingly, the forecasts in Table 6.1 are rounded in the short term and presented as ranges further out. Another implication of the results is that there is substantially more confidence about the near-term outlook for underlying inflation than there is about the outlook for GDP growth.

1 See Tulip P and S Wallace (2012), 'Estimates of Uncertainty around the RBA's Forecasts', RBA Research Discussion Paper No 2012-07.