18 July 2016

Australian Markets Weekly

National Australia Bank

The last bond bear has left the building

- **It's a relatively quiet week data-wise, locally and offshore. Tomorrow's RBA Minutes from July's Board meeting will be under focus for any clues on RBA policy leanings. Offshore data and events generally less market significant this week.**
- **Last week's Australian economic reports continue to indicate further growth in the non-mining economy in the June quarter. Markets are looking ahead to next Wednesday's Q2 CPI ahead of the August RBA Board meeting on Tuesday 2 August – NAB will publish its preview in the next 24 hours but another ultra-low core CPI is unlikely, while the headline rate will be boosted by oil prices and regular seasonal developments.**
- **Australia's 10 year government bond yields have been falling for 34 years and a few weeks ago reached an all-time low below 2%.**
- **Inside, we discuss the factors that have contributed to the decline in yields and conclude that while bond yields are likely to remain very low relative to recent decades, they are likely to be somewhat higher than current yields in the years ahead.**
- **Contributing factors are: 1) global bond yields can only go so negative which means there is a limit to the rally in global yields; 2) the bond market's pricing for Australia's annual inflation rate to average 1.6% over the next decade looks too low; and 3) the ongoing pick-up in private sector credit growth implies borrowers think current interest rates are low.**

Recent developments

Last week's local data provided further indication that the recovery in the non-mining sectors has continued through the June quarter. The NAB Business Survey was taken just after the Brexit referendum and ahead of the Australian Federal election and yet Business Confidence rose to +6, its long term average, businesses seemingly drawing comfort from the resilient business activity. Business conditions rose by 2 points to +12, the equal highest level since the GFC, including a welcome increase in the NAB Employment index to +4. Strength in NSW and Victoria underpinned the result while South Australia has strengthened in recent months.

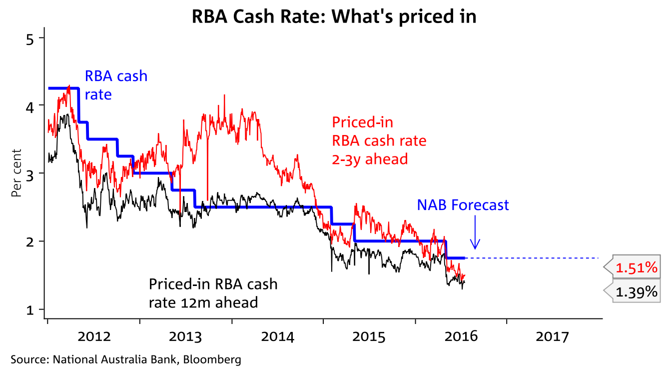
The solid NAB Business Survey was followed by further moderate employment growth of 8K, taking annual employment growth to 1.9%. This was not quite sufficient to stop the unemployment rate edging higher to 5.8%, though sample rotation effects were also present which reduced employment by 13K and indicating that underlying employment growth was closer to 20k.

Key markets over the past week

	Last	% chg week		Last	bp / % chg week
AUD	0.7583	0.7	RBA cash	1.75	0
AUD/CNY	5.06	0.0	3y swap	1.79	3
AUD/JPY	80.1	3.4	ASX 200	5,439	1.9
AUD/EUR	0.686	0.2	Iron ore	58.4	5.9
AUD/NZD	1.071	2.8	WTI oil	45.9	2.5

Source: Bloomberg

Chart 1: Markets pricing in another easing



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Markets were relatively quiet compared to the previous week's Brexit related volatility. The US stock market reached a record high each day last week, while bond markets retraced some of the Brexit rally in yields. The main market move was a sharp weakening of the JPY after the Japanese government signalled it was preparing further fiscal stimulus.

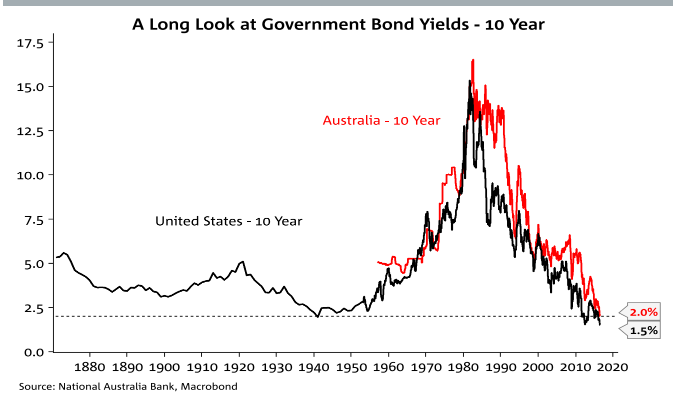
For the RBA, the most important Australian economic report in the lead up to the August RBA Board meeting remains next Wednesday's CPI and whether that indicates the Bank's forecasts for inflation look too ambitious (despite having revised down their fkorecasts in May). There's no doubt that the August meeting is "live" for consideration of a further easing, should inflation be another very low reading. NAB's view remains that the RBA will remain on hold, subject to the CPI report. Recent economic activity data does not argue strongly for an easing, but if the CPI is low enough, then another easing might be warranted to support the achievement of the RBA's 2-3% inflation target.

The last bond bear left in the building

Australia's 10 year government bond yield reached a peak of 16.5% in August 1982 close to 34 years ago. A week or so ago the yield reached an all-time low of 1.84% before rebounding over the past week to now be around 2.0%. Australia is not alone and across all other major countries bond yields have plunged to all-time lows with many government bond yields now negative. 10-year government bond yields are currently around 1.5% in the United States, 0.0 % in Germany, -0.2% in Japan and a stunning -0.6% in Switzerland.

To put the past 34 years in some context, chart 2 below plots US and Australian 10-year bond yields as far back as I could – we have a history back to 1957 for Australia and 1871 for the United States.

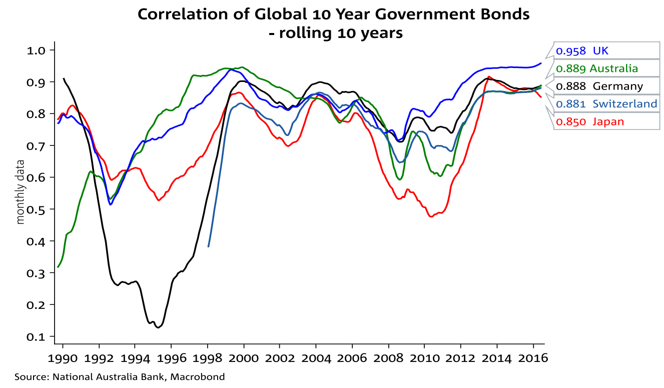
Chart 2: Bond yields are super low



This super long look at history has several striking features.

First, bond yields are super low. Against this near 150 years of history for US Treasury bonds, yields have never been lower. The only comparable time in the US was the early 1940s, when the US 10-year treasury yield reached 2%. This was at the start of World War II and it was also no coincidence that the US 3-month Treasury bill rate was close to zero at the time, as it is now.

Chart 3: Global bond markets closely correlated to US



Second, there is a close correlation between Australian and US bond yields. In fact, we can widen this out a bit further and say that there is a high correlation between global bond yields. Chart 3 shows the rolling 10-year correlation of different bond markets to the 10-year US Treasury yield. The correlation coefficient is currently 0.85 for Japan, 0.88 for Switzerland, 0.89 for Germany, 0.90 for Australia and 0.96 for the UK. As well, the chart illustrates these correlations have risen significantly over the past decade despite often quite different macroeconomic paths for individual countries.

One likely reason for the higher correlation of global bond yields is the increasing presence of global investors that are constantly looking across the world for the best places to allocate money. These investors will see buying an Australian government bond as an alternative to buying a US or Japanese government bond – foreigners currently own around 65% of Australian's government bonds.

"High yielding" Australia back in investors' cross-hairs

As an aside, I was recently in the US seeing clients and I came away with the impression that "high yielding" Australian and NZ bonds were starting to look more attractive to these global investors. Several reasons were given for their attractiveness: 1) the higher yield; 2) few wanted to invest in the UK/Euro in the wake of the Brexit vote; 3) it was too early to venture into emerging markets where growth is still sputtering; 4) the Australian and NZ economies have done better than just about all others over the past year; and 5) many noted the AUD/USD and NZD/USD had stopped falling and were flat to higher over the past year.

I therefore have not been surprised at all by the better performance of AUD and NZD in recent weeks.

Back to our story, where there are many questions and even more answers that are prompted by the large fall in bond yields over the past 34 years. The two questions I ponder most are first why have bond yields fallen and second where to from here?

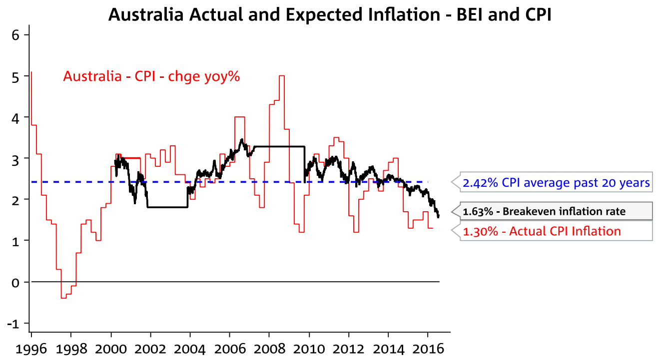
Why have global bond yields fallen?

When thinking about this question it helps to think about a nominal bond yield as being the sum of 1) compensation for expected inflation and 2) the remainder which is the "real" yield[1].

It's clear that the 34 year decline in Australia's bond yields has been driven by both factors.

On inflation compensation, Australia's CPI inflation rate peaked at 17½% in 1975 and is now running closer to 1%, a little below the RBA's 2-3% target band.

Chart 4: Significant decline in Australian inflation

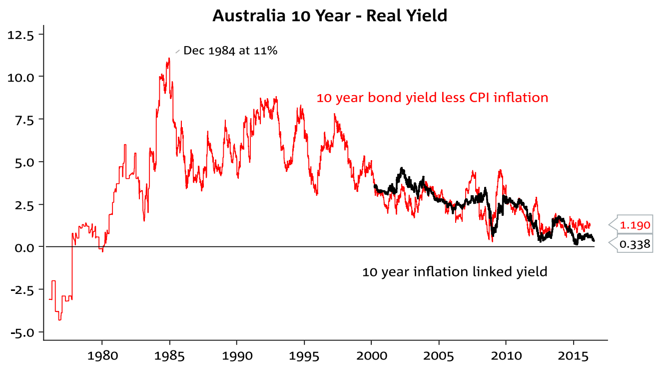


Source: National Australia Bank, Macrobond

Even after accounting for inflation, the "real" bond yield has also declined significantly over the past 30 years. Using trailing inflation, Australia's real yield peaked near 11% in late 1984 and is now less than 1% – see chart 5 which shows that the Commonwealth's inflation linked 10 year bond currently yields 0.3%.

This decline in Australia's real bond yield will reflect a mix of Australian and, due to the presence of global investors, global factors.

Chart 5: Significant decline in real yields



Source: National Australia Bank, Macrobond

On these global factors, one nifty recent study by Bank of England staff[2] showed that the 450bps decline in the global real interest rate over the past 30 years can be explained by: 1) a slowdown in the global economy's trend growth rate; and then 2) an increase in the number of global savers relative to the number of global borrowers.

On the latter, global savings have increased due to the emerging market savings glut (i.e., Asian countries tend to save more than they invest), while at the same time the global demand for credit has reduced due to lower public investment in infrastructure in recent decades as well as a fall in the price of capital goods which "means it costs less to fund any given investment project."

Australian specific factors will also partly explain the decline in Australia's real yields, with a key one being the slowdown in potential growth in recent years. My NAB economics colleagues recently estimated that Australia's potential growth rate may have slipped to 2½% from 3¼% – all other things equal this might explain a 75bps reduction in the equilibrium real interest rate[3].

Are we there yet? I expect somewhat higher bond yields ahead.

So far I have described the factors that have contributed to the decline in bond yields over the past 34 years – a fascinating period of economic and financial history. But what will yields do in the years ahead? My conclusion is that anything is possible on a day to day, and week to week basis, but over the years ahead, bond yields are 1) likely to remain very low relative to recent decades' history: but 2) be somewhat higher than they are now.

There are several reasons for this:

1) **The last bond bear has left the building!** The 1960s to mid-80s would have been a great time to be a bond bear – expecting yields to rise – but for the past 34 years it's been a tough gig. There has been the odd period of joy, like the big 1994 bond sell-off as the Fed surprised with its pace of tightening, but overall it's been three decades where bond bulls have ruled the roost. So much so that "everything is going to zero" is now the consensus view. Being a bit contrarian it's made me start to wonder whether everything, and more, is already in these very high bond prices (low yields). Just as there wouldn't have a been a bond bull standing in 1984 – before the start of a 34 year rally in yields – there may not be a bond bear left in the market today.

2) **Global yields can only go so negative.** As noted above, Government bond yields in much of Europe as well as Switzerland and Japan are all negative. They might go somewhat more negative in the near term – central banks doing QE will keep buying negative yielding bonds and some insurance companies and banks are being forced to own these negatively yielding bonds for regulatory reasons. Even so, given that: 1) not all investors are forced to own bonds; and 2) that even cash yielding zero % must be looking increasingly attractive relative to negatively yielding bonds, it seems self-evident that yields can only go so negative. Where the exact limit for negative yields is I am not sure – that said it's hard to conceive of a bond yield of -2 or -3%. Practically, if there is a practical limit to how negative yields will go this means there is also a limit to rally in global and Australian bond yields.

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1 The remainder or real yield is a mix of factors including the expected path for the real RBA cash rate as well as factors like risk premia and liquidity.

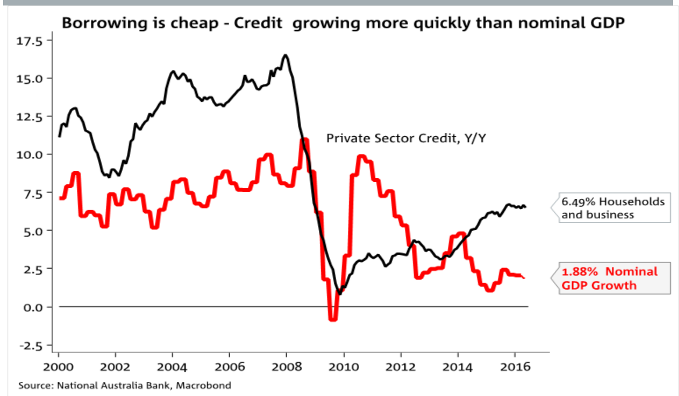
2 https://bankunderground.co.uk/2015/07/27/drivers-of-long-term-global-interest-rates-can-weaker-growth-explain-the-fall/

3 *Australia's Changing Growth Potential*, 26 May 2016, NAB's James Glenn and Riki Polygenis

3) **Australia's inflation expectations look too low.** Inflation compensation for the next 10 years (the break-even inflation rate) is currently trading at 1.6% in Australia. This is below the bottom end of the RBA's 2-3% band and significantly below the average realised inflation rate over the past 20 years of 2.4% and past decade of 2.5%. NAB's forecast sees inflation remaining low for the next several years but eventually returning to the RBA's 2-3% band over the next 5-10 years.

4) **Borrowers think Australia's interest rates are cheap.** As noted earlier, the general level of real interest rates can be thought of as the equilibrium rate between borrowers and savers. If the interest rate is seen as super low then it would make sense for Australia's businesses, government, and households to borrow this cheap money and invest it in the broader economy – adjusted for specific project risks. Recent credit data suggests this is exactly what is happening, with private sector credit growing at an annual pace of 6½% relative to the economy's currently (subdued) near 2% growth in nominal GDP – see chart 6. This is a contrast to the post GFC period, where credit growth was subdued relative to economic growth as businesses preferred to reduce debt – business credit is around 7% higher than a year ago.

Chart 6: Borrowing is cheap



Summary – somewhat higher ahead.

Australia's bond yields have been falling for 34 years and a few weeks ago the government 10-year bond yield reached an all-time low of 1.84%. This large decline can be explained by both global and local factors and in turn by both a decline in inflation expectations as well as real yields.

Many of the fundamental drivers of the fall in both real yields and inflation expectations are likely to persist in the decades ahead and will surely keep bond yields lower than in recent decades – the "new normal". Even so, bond markets don't always get it perfect and there is accumulating evidence that Australia's real bond yields, as well as inflation compensation, are currently low relative to the probable future.

NAB's forecast sees the current 10-year government bond yield of 2.0% being 2.1% at the end of 2016 and 2.5% at the end of 2017.

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This week: RBA Minutes

Australia: The local data flow eases right back this week as the markets prepare for the Q2 CPI on Wednesday week (27 July) and the RBA August Board meeting the week after.

As is usually the case, the market will be looking for the Minutes to provide a fuller account of the RBA's reading on the performance of the economy. The market will be more intensely interested in discussion around the Bank's change in language in the final paragraph of the post-July Board Statement, which outlined that "further information should allow the Board to refine its assessment of the outlook for growth and inflation and make any adjustment to the stance of policy that may be appropriate". This is a none too subtle hint that the Bank will look closely at the Q2 CPI and other economic reports to assess whether monetary policy should be eased further at the August meeting.

Offshore, the IMF releases a global forecast update tomorrow along with a press conference, with some expecting a downgrade if only because of Brexit uncertainty. In the days following, Finance Ministers and Central Bank Governors meet in China this weekend, 23-24 July.

The US data flow slows in the lead up to the FOMC meeting next week, with Fed speakers now in lock down ahead of that meeting. The ECB meets this week, though no further monetary easing is expected, while the RBNZ is providing a special economic update on Thursday which our BNZ colleagues expect will at least see the Bank voice its displeasure with the strength of the NZD.

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Calendar of Economic Releases

Country	Economic Indicator	Period	Forecast	Consensus	Actual	Previous	*GMT*	AEST
Monday, 18 July 2016								
NZ	Performance Services Index	Jun				56.9	22.30	8.30
NZ	CPI QoQ/YoY	2Q	0.6/0.6	0.5/0.5		0.2/0.4	22.45	8.45
UK	Rightmove House Prices MoM/YoY	Jul		/		0.8/5.5	23.10	9.10
CH	Property Prices	Jun					1.30	11.30
UK	BOE's Weale speaks in London Brexit Impact on Monetary Policy						8.15	18.15
CA	Int'l Securities Transactions	May				15.5	12.30	22.30
CA	Bloomberg Nanos Confidence	Jul 15				56.9	14.00	0.00
US	NAHB Housing Market Index	Jul		60		60.0	14.00	0.00
US	Total Net TIC Flows/Long term TIC Flows	May		/		80.4/-79.6	20.00	6.00
Tuesday, 19 July 2016								
AU	ANZ Roy Morgan Weekly Consumer Confidence Index	Jul 17				115.2	23.30	9.30
AU	RBA July Meeting Minutes						1.30	11.30
AU	CBA/HIA House Affordability	2Q				80.9	1.45	11.45
EC	ECB Bank Lending Survey						8.00	18.00
UK	CPI MoM/YoY	Jun		0.2/0.4		0.2/0.3	8.30	18.30
UK	CPI Core YoY	Jun		1.3		1.2	8.30	18.30
UK	PPI Input NSA MoM/YoY	Jun		1.1/-0.7		2.6/-3.9	8.30	18.30
UK	PPI Output NSA MoM/YoY	Jun		0.2/-0.5		0.1/-0.7	8.30	18.30
UK	PPI Output Core NSA MoM/YoY	Jun		0.1/0.6		0.0/0.5	8.30	18.30
UK	House Price Index YoY	May					8.30	18.30
EC	Construction Output MoM/YoY	May		/		-0.2/-0.4	9.00	19.00
GE	ZEW Survey Current Situation/Expectations	Jul		51.8/9		54.5/19.2	9.00	19.00
EC	ZEW Survey Expectations	Jul				20.2	9.00	19.00
US	Housing Starts, #/MoM	Jun		1165/0.1		1164/-0.3	12.30	22.30
US	Building Permits, #/MoM	Jun		1150/1.2		1138/0.7	12.30	22.30
US	IMF releases WEO Global Growth Update						13.00	23.00
NZ	GDT Dairy Auction					flat	early AM NZT	
Wednesday, 20 July 2016								
AU	Westpac Leading Index MoM	Jun				0.2	0.30	10.30
AU	Skilled Vacancies MoM	Jun				1.0	1.00	11.00
JN	Convenience Store Sales YoY	Jun				-0.3	7.00	17.00
EC	ECB Current Account SA	May				36.2	8.00	18.00
UK	Jobless Claims Change/Claimant Count Rate	Jun		3/2.2		-0.4/2.2	8.30	18.30
UK	Average Weekly Earnings 3M/YoY, ex bonus 3M/YoY	May		2.3/2.4		2.0/2.3	8.30	18.30
UK	ILO Unemployment Rate/Employment change 3Mths	May		5/71		5.0/55.0	8.30	18.30
CH	Conference Board Leading Economic Index	Jun					13.00	23.00
Thursday, 21 July 2016								
NZ	RBNZ Update on Economic Assessment ahead of 11 August MPS						21.00	7.00
NZ	Net Migration SA	Jun				5500	22.45	8.45
AU	NAB Business Confidence	2Q				3.7	1.30	11.30
AU	RBA FX Transactions Market	Jun				909.0	1.30	11.30
AU	RBA FX Transactions Government	Jun				-916.0	1.30	11.30
AU	RBA FX Transactions Other	Jun				25.0	1.30	11.30
NZ	Credit Card Spending MoM/YoY	Jun				0.0/5.9	3.00	13.00
JN	All Industry Activity Index MoM	May		-1.1		1.3	4.30	14.30
JN	Machine Tool Orders YoY	Jun F				-19.9	6.00	16.00
UK	Retail Sales Ex Auto Fuel MoM/YoY	Jun		-0.6/4.8		1.0/5.7	8.30	18.30
UK	Retail Sales Inc Auto Fuel MoM/YoY	Jun		-0.5/5.1		0.9/6.0	8.30	18.30
UK	Public Finances (PSNCR)/Net Borrowing	Jun		/9.3		3.4/9.1	8.30	18.30
EC	Euro Area Government Deficit/Debt	Q1					9.00	19.00
EC	ECB Main Refinancing Rate/Deposit Facility Rate	Jul 21		0/-0.4		0.0/-0.4	11.45	21.45
US	Chicago Fed Nat Activity Index	Jun		-0.2		-0.5	12.30	22.30
CA	Wholesale Trade Sales MoM	May		0.3		0.1	12.30	22.30
US	Initial Jobless Claims	Jul 16		265		254.0	12.30	22.30
US	Philadelphia Fed Business Outlook	Jul		4.5		4.7	12.30	22.30
US	FHFA House Price Index MoM	May		0.4		0.2	13.00	23.00
US	Existing Home Sales, #/MoM	Jun		5.48		5.5	14.00	0.00
US	Leading Index	Jun		0.2		-0.2	14.00	0.00
Friday, 22 July 2016								
CH	MNI Business Indicator	Jul					1.45	11.45
JN	Nikkei Japan PMI Mfg	Jul P				48.1	2.00	12.00
GE	Markit/BME Germany Manufacturing PMI	Jul P		53.4		54.5	7.30	17.30
GE	Markit Germany Services/Composite PMI	Jul P		53.2/53.6		53.7/54.4	7.30	17.30
EC	ECB Survey of Professional Forecasters						8.00	18.00
EC	Markit Eurozone Manufacturing PMI	Jul P		52		52.8	8.00	18.00
EC	Markit Eurozone Services/Composite PMI	Jul P		52.3/52.5		52.8/53.1	8.00	18.00
CA	Retail Sales MoM/YoY	May		0/0.3		0.9/1.3	12.30	22.30
CA	CPI NSA MoM/YoY	Jun		0.1/1.4		0.4/1.5	12.30	22.30
CA	CPI Core MoM/YoY	Jun		-0.1/2		0.3/2.1	12.30	22.30
US	Markit US Manufacturing PMI	Jul P		51.5		51.3	13.45	23.45
EC	Consumer Confidence	Jul A		-8		-7.3	14.00	0.00
Upcoming Central Bank Interest Rate Announcements								
Europe ECB		21-Jul				0.00%		
US Federal Reserve		27-Jul				0.25-0.50%		
Japan, BoJ		29-Jul				-0.1% to +0.1%		
Australia, RBA		2-Aug	1.75%	1.50%		1.75%		
UK BOE		4-Aug		0.25%		0.50%		
New Zealand, RBNZ		11-Aug	2.00%	2.00%		2.25%		
Canada, BoC		7-Sep				0.50%		

GMT: Greenwich Mean Time; AEST: Australian Eastern Standard Time

Forecasts

Economic Forecasts

	Annual % change				Quarterly % change											
					2015				2016				2017			
Australia Forecasts	**2015**	**2016**	**2017**	**2018**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Household Consumption	2.8	2.7	2.4	2.4	0.6	0.6	0.9	0.8	0.7	0.5	0.7	0.5	0.6	0.6	0.7	0.6
Underlying Business Investment	-10.5	-13.0	-7.9	1.4	-3.3	-2.4	-6.0	-2.7	-3.4	-1.7	-3.2	-3.3	-1.8	-1.8	-1.1	0.1
Residential Construction	9.8	5.5	0.4	-3.5	4.3	1.0	1.5	2.8	1.4	0.6	0.6	0.1	0.2	0.2	-0.8	-0.6
Underlying Public Spending	2.1	2.5	2.6	2.6	1.0	2.4	-0.9	1.4	0.4	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Exports	5.9	8.2	9.0	5.4	3.2	-3.4	5.3	0.4	4.4	-0.3	2.3	2.5	2.4	2.3	2.3	1.5
Imports	1.5	-2.4	1.2	3.3	3.4	0.0	-1.7	0.5	-0.8	-1.3	-0.2	0.1	0.5	0.6	0.7	0.8
Net Exports (a)	1.0	2.3	1.9	0.7	0.0	-0.8	1.5	0.0	1.1	0.2	0.6	0.6	0.5	0.4	0.4	0.2
Inventories (a)	0.1	0.0	-0.1	0.0	0.4	0.0	-0.2	0.0	0.1	-0.1	0.0	-0.1	0.0	0.0	0.0	0.1
Domestic Demand - qtr%					0.3	0.6	-0.3	0.5	0.1	0.3	0.2	0.1	0.3	0.4	0.4	0.5
Dom Demand - ann %	1.1	0.8	1.2	1.9	0.7	1.4	1.1	1.1	0.9	0.6	1.1	0.8	1.0	1.1	1.2	1.6
Real GDP - qtr %					**0.8**	**0.3**	**1.0**	**0.7**	**1.1**	**0.3**	**0.6**	**0.7**	**0.8**	**0.8**	**0.8**	**0.8**
Real GDP - ann %	2.5	2.9	2.8	2.5	**2.3**	**2.1**	**2.7**	**2.9**	**3.1**	**3.2**	**2.8**	**2.7**	**2.4**	**2.9**	**3.1**	**3.2**
CPI headline - qtr %					0.2	0.7	0.5	0.4	-0.2	0.9	0.9	0.7	0.9	0.5	0.8	0.5
CPI headline - ann %	1.5	1.8	3.0	2.6	1.3	1.5	1.5	1.7	1.3	1.6	2.0	2.3	3.4	2.9	2.9	2.6
CPI underlying - qtr %					0.6	0.5	0.3	0.5	0.2	0.6	0.5	0.5	0.5	0.5	0.4	0.4
CPI underlying - ann %	2.2	1.7	1.9	1.9	2.3	2.2	2.1	2.0	1.5	1.7	1.9	1.8	2.1	1.9	1.9	1.8
Wages (Pvte WPI - ann %)	2.1	1.9	1.9	2.5	2.3	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Unemployment Rate (%)	6.0	5.7	5.6	5.7	6.2	6.0	6.2	5.9	5.9	5.7	5.6	5.6	5.6	5.6	5.7	5.7
Terms of trade	-11.5	-6.6	-3.9	-0.6	-2.7	-4.1	-2.8	-3.2	-1.9	2.1	-2.1	-1.8	-1.0	-0.5	-0.4	-1.8
G&S trade balance, $Abn	-35.9	-24.0	-13.3	-17.3	-5.3	-11.4	-8.3	-10.9	-8.1	-5.7	-5.4	-4.9	-4.3	-3.4	-2.3	-3.3
% of GDP	-2.2	-1.4	-0.8	-1.0	-1.3	-2.8	-2.0	-2.7	-2.0	-1.4	-1.3	-1.2	-1.0	-0.8	-0.5	-0.8
Current Account (% GDP)	-4.8	-4.5	-3.8	-4.0	-3.5	-5.3	-4.8	-5.5	-5.0	-4.4	-4.3	-4.2	-4.0	-3.8	-3.5	-3.8

Source: NAB Group Economics; (a) Contributions to GDP growth

Exchange Rate Forecasts

	18-Jul	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17
Majors						
AUD/USD	0.7584	0.72	0.70	0.69	0.69	0.69
NZD/USD	0.7079	0.68	0.66	0.66	0.65	0.66
USD/JPY	105.67	105	105	103	103	102
EUR/USD	1.1063	1.08	1.06	1.05	1.05	1.06
GBP/USD	1.3256	1.28	1.25	1.22	1.20	1.22
USD/CNY	6.6708	6.73	6.80	6.78	6.76	6.74
USD/CAD	1.2959	1.33	1.40	1.40	1.42	1.42
Australian Cross Rates						
AUD/JPY	80.1	76	74	71	71	70
AUD/EUR	0.6855	0.67	0.66	0.66	0.66	0.65
AUD/GBP	0.5721	0.56	0.56	0.57	0.58	0.57
AUD/NZD	1.0713	1.06	1.06	1.05	1.06	1.05
AUD/CNY	5.0591	4.85	4.76	4.68	4.66	4.65
AUD/CAD	0.9828	0.96	0.98	0.97	0.98	0.98
AUD/CHF	0.7458	0.72	0.68	0.68	0.70	0.72

Global GDP

Dec year	2013	2014	2015	2016	2017	2018	20 Yr Avge
Australia	2.0	2.7	2.5	2.9	2.8	2.5	3.4
US	1.5	2.4	2.4	1.8	2.1	1.9	2.6
Eurozone	-0.3	0.9	1.5	1.3	1.3	1.5	1.5
UK	2.2	2.9	2.3	1.2	0.6	1.2	2.4
Japan	1.4	-0.1	0.6	0.5	0.6	0.6	0.8
China	7.7	7.3	6.9	6.7	6.5	6.3	9.2
India	6.3	7.0	7.2	7.7	7.7	7.5	6.6
New Zealand	2.4	3.7	2.5	2.9	2.9	1.9	3.0
World	3.3	3.3	3.0	2.8	3.0	3.1	3.5
MTP Top 5	3.9	3.8	3.8	3.6	3.6	3.4	5.0

Commodity prices ($US)

	18-Jul	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17
WTI oil	45.86	45	52	54	56	58	60
Gold	1329	1320	1300	1250	1210	1170	1120
Iron ore	58	44	41	40	41	41	40
Hard cok. coal	89	93	85	83	84	85	85
Thermal coal	65	62	62	62	58	58	58
Copper	4900	4650	4750	4790	4840	4890	4940
Japan LNG	6.6	6.8	7.1	8.0	8.3	8.5	8.6

Interest Rate Forecasts

	18-Jul	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17
Aust rates							
RBA Cash rate	1.75	1.75	1.75	1.75	1.75	1.75	1.75
3 month bill rate	1.95	1.95	1.95	1.95	1.95	1.95	1.95
3 Year Swap Rate	1.78	1.7	1.8	1.8	1.8	1.8	2.0
10 Year Swap Rate	2.20	2.1	2.3	2.3	2.4	2.4	2.7
Offshore Policy Rates							
US Fed funds	0.50	0.50	0.75	0.75	1.00	1.25	1.50
ECB deposit rate	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
BoE repo rate	0.50	0.50	0.50	0.50	0.50	0.50	0.75
BoJ excess reserves rate	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
RBNZ OCR	2.25	2.00	1.75	1.75	1.75	1.75	2.00
China 1yr lending rate	4.35	3.85	3.85	3.60	3.60	3.60	3.60
China Reserve Ratio	17.0	16.0	16.0	16.0	16.0	16.0	16.0
10 Year Benchmark Bond Yields							
Australia	2.01	1.95	2.10	2.10	2.25	2.25	2.45
United States	1.55	1.50	1.75	1.75	2.00	2.00	2.25
New Zealand	2.33	2.25	2.35	2.55	2.65	2.75	2.95

Sources: NAB Global Markets Research; Bloomberg; ABS

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