

AUSTRALIAN MARKETS WEEKLY



Why we forecast – it's the turning point that matters

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- NAB changed its RBA rate call last Tuesday and is now forecasting the RBA to lift rates in August 2018 by 25bps to 1.75%. At this stage we don't expect the cash rate to increase by much in the next few years – a cumulative 100bps of increases to 2½% by the end of 2019.
- Will we be right? The most confident thing your scribe can say about last week's changes is that it will not be the last change to our forecasts that we make. Our – or anyone's forecasts – will not be perfect. What is important is that NAB is saying we have seen a turning point in Australia's interest rate cycle driven by a run of better domestic data and continuing strength in the global economy.
- For users of forecasts, such frankness may be unsettling, but it does not need to be. Forecasts are inherently uncertain given our limited ability to predict the future. Instead we encourage users to focus on the "big forces" behind forecasts and forecast changes, and the key messages they are conveying.
- The key messages to take from NAB's updated forecasts are we have likely reached the turning point in the interest rate cycle. What remains uncertain is the wages/inflation nexus. Our forecast, and our models, still rely on history and expect that if the economy continues to improve then wage growth and inflation will eventually pick up. Of course it will be important to watch incoming wage/inflation data and adjust our models.
- If our forecasts turn out as expected, then Australian businesses and households will be in better shape in a year from now. If so, and with the current 1.5% cash rate 200bps below the RBA estimate of neutral, the RBA will likely take the opportunity to gradually lift the cash rate with the timing to be determined by the incoming data. As always though, incoming data and developments will determine the actual pace and timing of RBA interest rate increases – and our forecasts.
- Locally, it's a week of RBA focus in a light data week. First up is the RBA Board Minutes tomorrow, but most interest is likely in what the Governor says in Perth on Thursday, speaking on "The Next Chapter". RBA Assistant Governor (Economic) Luci Ellis also speaks, at a business economists' function on Wednesday, speaking we understand on the global economy.
- Offshore, attention focuses on the Fed with an expected announcement to formally commence the wind-down of their \$4½t balance sheet. Equal if not of more interest to the market will be in the Fed's new set of forecasts especially for the Fed funds rate. NZ has its Q2 GDP out on Thursday as well as its too-close-to-call General Election on Saturday. Germany also has elections on Sunday with Chancellor Merkel the frontrunner.

To contact NAB's market experts, please click on one of the following links:

[Ask the Economists](#)

[Ask the FX Strategists](#)

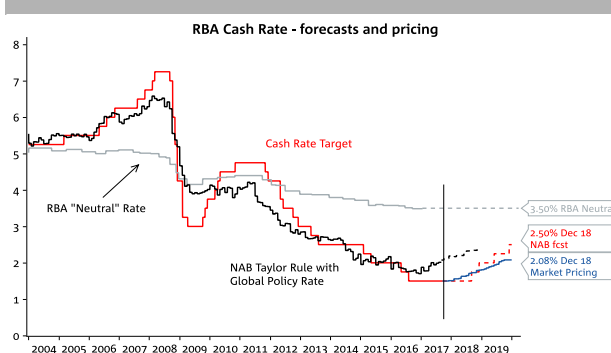
[Ask the Interest Rate Strategists](#)

Key markets over the past week

	Last	% chg week		Last	bp / % chg week
AUD	0.7998	-0.7	RBA cash	1.50	0
AUD/CNY	5.24	0.1	3y swap	2.21	13
AUD/JPY	88.9	1.7	ASX 200	5,695	0.4
AUD/EUR	0.670	-0.1	Iron ore	72.1	-3.0
AUD/NZD	1.097	-0.9	WTI oil	49.8	3.6

Source: Bloomberg

Chart of the week: RBA Cash Rate Forecasts



Source: National Australia Bank, Macrobond
 RBA Neutral Rate = RBA real cash rate calculation from Debelle Jul 17 speech + 0.5 Inflation target.
 NAB Taylor Rule = RBA cash rate a function of 1) Global Policy Rate, 2) Neutral RBA cash rate (Debelle speech 21/07/17) 3) inflation gap, and 4) unemployment gap. Estimated since 1995. GPR - US, Eurozone, Japan, UK, Canada, NZ, Norway, Sweden, and Denmark

Peter Jolly, Head of Research, Markets

"It's tough to make predictions, especially about the future." Yogi Berra.

"It's a natural human tendency to focus overly on small changes (in forecasts), perhaps because it allows us to maintain the comfortable illusion that things are predictable and controllable. But this fervent desire for precision is not supported by any demonstrated accuracy of economic forecasts." RBA Governor Glenn Stevens, "The Long Run", 24 November 2015.

It's the turning point that matters

NAB changed its key forecasts for the Australian economy last week. Recognising the growing strength that has been evident in employment and business surveys in recent months, we lifted our GDP growth forecast, lowered our unemployment rate forecast, and brought forward the timing for the first RBA rate hike to the second half of 2018.

The big deal here is that after having been on a declining trend since the end of 2011, for the first time, NAB is now saying we have seen a turning point for Australia's interest rate cycle.

The most confident thing I can say about last week's forecast changes is that they will not be the last change we make. Our – or anyone's - forecasts will not be perfect. Errors creep into the forecast in numerous ways.

To begin with there is the starting point problem. Reasonable people disagree on where the economy is today in part because there are lags and inaccuracies in data reporting – for example, a few weeks ago we received Q2 GDP data, two months after the quarter had ended – and no doubt this data will be revised in the future.

Another source of error is that our understanding of what drives economic growth, inflation, interest rates, and the \$A (our model if you like) is imperfect and subject to revision. Looking for patterns in "big-data" can help and weather forecasters have used this to improve their forecasting accuracy, particularly in the short run. That said, statistical inferences from big data are not the same as better understanding the fundamental drivers of the weather.

Currently, the largest "model" uncertainty is the wage/inflation process, with the recent growth in wages and inflation being lower than almost everyone's models have expected. Central banks are uncertain – as are we at NAB – as to whether the previous relationships have permanently changed.

A final source of error is that seemingly random stuff often happens, e.g. surges in commodity prices, the GFC, weather events and natural disasters, geopolitics etc.

In short, the future is wonderfully uncertain and any forecast is a probabilistic outcome.

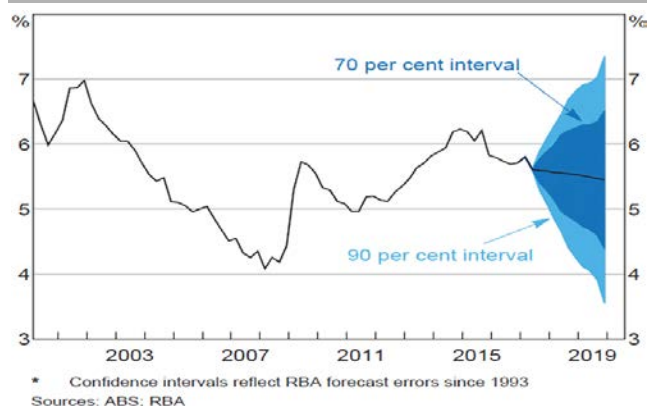
RBA Fan Charts

To give a sense of how limited our ability to predict the future is I'd cite two examples from the RBA and Fed – institutions with more firepower than most to try and predict the future.

When the RBA puts out its quarterly forecasts for the key variables, they show their forecasts as a fan chart.

This fan chart – or confidence interval – shows the central forecast alongside the historical forecast error of the RBA's actual forecasts. So when the RBA was forecasting in August that the unemployment rate would be around 5½% over the next few years, their historical forecasting errors say they are only 70% certain it will be between 4½% and 6½% by the end of 2019! (Chart 1).

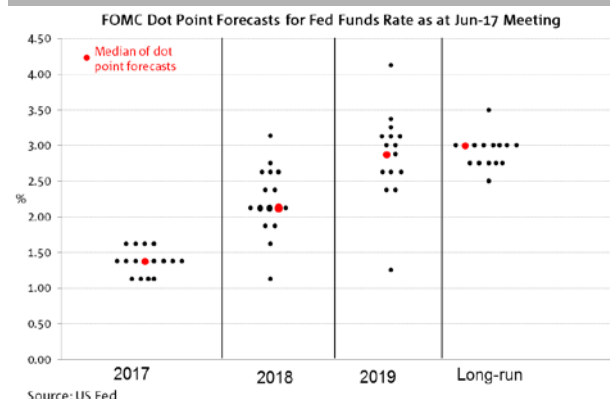
Chart 1: RBA Unemployment Rate Forecast (qtrly)



Fed Dots

My favourite example on the difficulty of forecasting comes from the "Fed dots" – see chart 2. Each quarter, FOMC members anonymously put in their forecasts for key economic variables, as well as where they think the Federal Funds rate will be at certain points in the future. These 16 people almost all have PhDs in Economics, almost all are supported by large teams of economists, and all have the same information and data when making their forecasts. Yet, as the chart shows, at the end of 2019, the forecast for the fed funds rate (of course, a policy variable that they control) ranges from 1.125% to 4.125% - a 3% range!

Chart 2: Fed Randomness – FOMC Funds Rate Forecast



How to use forecasts

Former RBA Governor Stevens' earlier quote implied it would be foolhardy to rely on "the precision" of even the RBA's forecasts. By precision I expect he is referring to a forecast being accurate in terms of both its rate and date – e.g. NAB's new forecast for the RBA to lift the cash rate in August 2018 by 25bps to 1.75%.

We tried to highlight this uncertainty last week by saying the exact timing for RBA interest rate increases will – as always – be driven by the information in the incoming data.

Instead, former Governor Stevens encouraged users of forecasts to focus on "the big forces" and the key messages they are conveying.

Conclusions

The key messages to take from NAB's updated forecasts are:

- 1) The forecasts have generally been revised for the better. That is good news as history tells us that forecasts revisions are serially correlated – particularly at turning points. If history repeats (it often does) the next change to NAB's forecast is also likely to be an upgrade to growth.
- 2) The global economy is getting better – incoming data tell us global growth lifted in mid-2016 and leading indicators remain positive.
- 3) Wages and inflation – as noted, there is considerable uncertainty about the likely path for wages and inflation ahead. Our forecast, and our models, still rely on history and expect that if the global economy continues to improve then wage growth and inflation will eventually pick up. It will be important to watch incoming inflation/wage data and adjust our models. Noteworthy for those who think history will repeat, at least to some degree, is that after falling all year due to some one-offs, US inflation did turn up again in August.
- 4) Australia – locally, the incoming data suggest the pace of growth in the economy has stepped up recently. This is most evident in business surveys – like NAB's where business conditions pushed to a post GFC high in August. Employment growth has also accelerated and the unemployment rate is on a downward trend. NAB's new forecast now sees the current 5.6% unemployment rate declining slowly to be 5.4% at the end of 2017, 5.3% at the end of 2018, and 5.1% the end of 2019.
- 5) However, not all is well yet. Households are not as confident as businesses and our research suggests that this is mostly due to weaker wage outcomes. The forecast expects wages to pick up as unemployment and underemployment decline – although this is a clear risk to the forecast.
- 6) The RBA's cash rate – the next move is likely to be up. There is no pressure for the RBA to lift the cash rate at the moment. There is still some slack in the labour market – particularly as wages growth is soft. But monetary policy acts with a lag of 18-24 months and if our forecast turns out as expected, then Australian businesses and households will be in better shape a year from now. If so, and with the current 1.5% cash rate 200bps below the RBA estimate of neutral, the RBA will take the opportunity to gradually lift the cash rate with the timing to be determined by the incoming data.

To summarise, the future is wonderfully uncertain and accordingly it would be unwise to take any forecast (about the economy or the weather) literally.

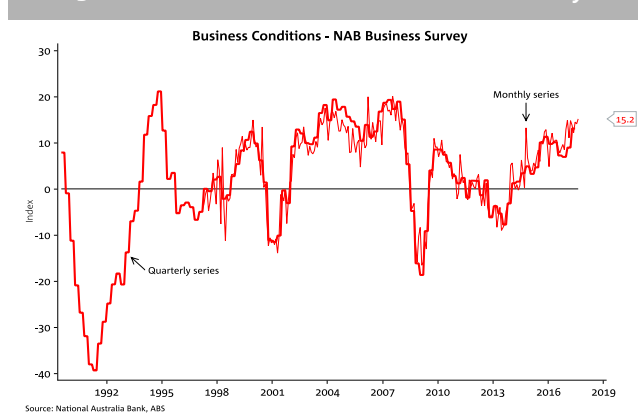
That said, forecasts – and the direction of their revisions – do contain useful information for corporates and

investors. At NAB we made a big change to our forecasts last week by calling a turning point for the RBA's cash rate. At this stage we don't expect it to increase by much in the next few years – a cumulative 100bps of increases to 2½% by the end of 2019, which notably is 50bps more of increases than the market is currently pricing.

As always though, incoming data and developments will determine the actual pace and timing of RBA interest rate increases – and our forecasts.

Peter Jolly
Global Head of Research
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Chart 3: Business Conditions – NAB Business Survey



Week Ahead

Aside from elevated North Korean geopolitics understandably drawing continuing interest (if muted market reaction so far), central banks will be the focus. Just on the North Korean situation, the market will be alert to what President Trump has to say when he addresses the UN tomorrow night.

Locally, with little data to speak of, it's a week of RBA focus. First up is the RBA Board Minutes tomorrow, but most interest is likely in what the Governor says in a speech in Perth on Thursday, speaking on "The Next Chapter". RBA Assistant Governor (Economic) Luci Ellis also speaks at a business economists' function on Wednesday.

Across the Tasman, Thursday's NZ GDP report (and before then Wednesday's balance of payments net exports) will have more eyes than usual, two days ahead of next Saturday's General Election. There's also another global dairy auction early Wednesday morning; our BNZ colleagues have no strong view on price guidance.

Thursday morning, the Fed is expected to formally announce the imminent commencement of reducing its \$4½tn balance sheet, though the market interest will be more on whether we see any shift (down) in the latest iteration of the Fed's dots. US data this week centres on housing and any building activity disappointments could well flow from Harvey. The BoJ meets on Friday with absolutely no expectation of any change from their stylised very accommodative monetary policy settings.

CALENDAR OF ECONOMIC RELEASES

Country	Economic Indicator	Period	Forecast	Consensus	Actual	Previous	GMT	AEST
Monday, 18 September 2017								
CH	Foreign Direct Investment YoY CNY	Sep				9.1	9-18 Sep release	
NZ	Performance Services Index	Aug				56.0	23.30	8.30
UK	Rightmove House Prices MoM/YoY	Sep		/		-0.9/3.1	0.10	9.10
CH	Property Prices	Aug						
AU	New Motor Vehicle Sales MoM/YoY	Aug		/		-2.0/1.8	2.30	11.30
EC	CPI MoM/YoY	Aug		0.3/1.5		-0.5/1.3	10.00	19.00
EC	CPI Core YoY	Aug F		1.2		1.2	10.00	19.00
CH	FX Net Settlement - Clients CNY	Aug				-42.8		
CA	Bloomberg Nanos Confidence	Sep 15				58.4	15.00	0.00
US	NAHB Housing Market Index	Sep		67		68.0	15.00	0.00
UK	BOE Governor Carney Speaks at IMF in Washington, DC						16.00	1.00
CA	Speech by Bank of Canada Deputy Governor Tim Lane						19.15	4.15
US	Total Net TIC Flows/Net Long-term TIC Flows	Jul		/		7.7/34.4	21.00	6.00
Tuesday, 19 September 2017								
NZ	Westpac Consumer Confidence	3Q				113.4	23.00	8.00
AU	ANZ Roy Morgan Weekly Consumer Confidence Index	Sep 17				109.8	0.30	9.30
AU	House Price Index QoQ/YoY	2Q	1.0/9.1	1.3/9.2		2.2/10.2	2.30	11.30
AU	RBA Sept. Rate Meeting Minutes						2.30	11.30
EC	ECB Current Account SA	Jul				21.2	9.00	18.00
EC	Construction Output MoM/YoY	Jul		/		-0.5/3.4	10.00	19.00
GE	ZEW Survey Current Situation/Expectations	Sep		86/12		86.7/10.0	10.00	19.00
CA	Manufacturing Sales MoM	Jul		-1.5		-1.8	13.30	22.30
US	Housing Starts #/MoM	Aug		1174/1.7		1155.0/-4.8	13.30	22.30
US	Building Permits #/MoM	Aug		1220/-0.8		1223.0/-4.1	13.30	22.30
US	Current Account Balance	2Q		-115		-116.8	13.30	22.30
US	Import Price Index MoM/YoY	Aug		0.4/2.2		0.1/1.5	13.30	22.30
US	Export Price Index MoM/YoY	Aug		0.2/		0.4/0.8	13.30	22.30
Wednesday, 20 September 2017								
NZ	BoP Current Account Balance NZD/% GDP Yr	2Q		-0.9/-3.1		0.2/-3.1	23.45	8.45
JN	Trade Balance Adjusted	Aug		404.7		337.4	0.50	9.50
AU	Westpac Leading Index MoM	Aug				0.1	1.30	10.30
AU	Skilled Vacancies MoM	Aug				0.8	2.00	11.00
AU	RBA's Luci Ellis Assistant Governor (Economic), at the Australian Business Economists (ABE) Lunchtime Briefing						4.05	13.05
GE	PPI MoM/YoY	Aug		0.1/2.5		0.2/2.3	7.00	16.00
UK	Retail Sales Ex Auto Fuel MoM/YoY	Aug		0/1.4		0.5/1.5	9.30	18.30
EC	EC Brexit negotiator Barnier speaks in Brussels (timing yet to be determined)							
EC	OPEC's Joint Technical Committee (technical representatives) meets in Vienna ahead of Joint Ministerial Monitoring Committee on Friday							
AU	RBA's Ellis Gives Speech in Sydney							
US	Existing Home Sales #/MoM	Aug		5.46/0.37		5.4/-1.3	15.00	0.00
US	FOMC Rate Decision (Lower/Upper Bound)	Sep 20		1/1.25		1.0/1.25	19.00	4.00
US	Fed Chair Yellen FOMC Conference						19.30	4.30
Thursday, 21 September 2017								
NZ	GDP SA QoQ/YoY	2Q		0.8/2.5		0.5/2.5	23.45	8.45
NZ	Net Migration SA	Aug				5800.0	23.45	8.45
AU	RBA FX Transactions Market	Aug				984.0	2.30	11.30
AU	RBA Bulletin						2.30	11.30
NZ	Credit Card Spending MoM/YoY	Aug		/		0.9/7.2	4.00	13.00
JN	BOJ Policy Balance Rate/10 Yr yield target	Sep 21		-0.1/0		-0.1/0.0		
JN	All Industry Activity Index MoM	Jul		-0.1		0.4	5.30	14.30
AU	RBA Governor Lowe speaks: "The Next Chapter" at American Chamber of Commerce in Australia Business Briefing, Perth						6.10	15.10
JN	BOJ Kuroda speaks at press conference after MPM						7.30	16.30
EC	ECB's "Understanding Inflation" conference							
EC	ECB's Frank Smets speaks in Frankfurt						7.55	16.55
EC	ECB Publishes Economic Bulletin						9.00	18.00
UK	UK Finance Loans for Housing	Aug		41700		41587.0	9.30	18.30
UK	Public Sector Net Borrowing/PSNB ex Banking Groups	Aug		6.35		-0.8	9.30	18.30
EC	ECB Executive Board member Praet chairs a panel in Frankfurt						10.30	19.30
CA	Wholesale Trade Sales MoM	Jul		-1		-0.5	13.30	22.30
US	Initial Jobless Claims	Sep 16		300		284	13.30	22.30
US	Philadelphia Fed Business Outlook	Sep		17		18.9	13.30	22.30
US	FHFA House Price Index MoM	Jul		0.4		0.1	14.00	23.00
EC	ECB President Mario Draghi speaks in Frankfurt						14.30	23.30
EC	Consumer Confidence	Sep A		-1.5		-1.5	15.00	0.00
US	Leading Index	Aug		0.2		0.3	15.00	0.00
US	Household Change in Net Worth	2Q				2347.0	17.00	2.00
Friday, 22 September 2017								
GE	Markit/BME Germany Manufacturing PMI	Sep P		59		59.3	8.30	17.30
GE	Markit Germany Services/Composite PMIs	Sep P		53.7/55.7		53.5/55.8	8.30	17.30
EC	Markit Eurozone Manufacturing PMI	Sep P		57.2		57.4	9.00	18.00
EC	Markit Eurozone Services/Composite PMIs	Sep P		54.8/55.5		54.7/55.7	9.00	18.00
EC	OPEC Joint Ministerial Monitoring Committee meets in Vienna to review production cuts							
UK	CBI Trends Total Orders/Selling Prices	Sep		13/		13.0/19.0	11.00	20.00
CA	CPI NSA MoM/YoY	Aug		0.2/1.5		0.0/1.2	13.30	22.30
CA	Retail Sales MoM	Jul		0.1		0.1	13.30	22.30
US	Fed's George Speaks at Conference on Outlook for Oil						14.30	23.30
US	Markit US Manufacturing PMI	Sep P		53		52.8	14.45	23.45
US	Markit US Services/Composite PMIs	Sep P		55.8/		56.0/55.3	14.45	23.45
US	Baker Hughes U.S. Rig/Oil Rig Count	Sep 22		/		936.0/749.0	18.00	3.00
Saturday, 23 September 2017								
NZ	General Election							
Sunday, 24 September 2017								
GE	General Election							
Upcoming Central Bank Interest Rate Announcements								
US	Federal Reserve	21-Sep	1.00-1.25%	1.00-1.25%		1.00-1.25%		
Japan	BoJ	21-Sep	-0.1%	-0.1%		-0.1%		
New Zealand	RBNZ	28-Sep	1.75%	1.75%		1.75%		
Australia	RBA	3-Oct	1.50%	1.50%		1.50%		
Europe	ECB	26-Oct	-0.4%	-0.4%		-0.4%		
Canada	BoC	26-Oct				1.00%		
UK	BOE	2-Nov				0.25%		

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

FORECASTS

Economic Forecasts					Annual % change												Quarterly % change											
	Annual % change				2015				2016				2017				2018											
	2015	2016	2017	2018	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4								
Australia Forecasts																												
Household Consumption	2.7	2.7	2.4	2.1	0.7	0.6	1.0	0.6	0.9	0.4	0.3	1.1	0.5	0.7	0.4	0.5	0.5	0.5	0.6	0.6								
Underlying Business Investment	-10.0	-11.7	1.3	4.3	-3.4	-2.0	-4.9	-2.3	-3.4	-2.5	-4.6	1.3	2.2	0.8	0.6	0.7	0.9	1.4	1.8	1.4								
Residential Construction	10.1	7.6	-1.8	0.9	5.0	-1.5	5.0	0.7	4.0	1.1	-0.9	1.9	-3.7	0.2	0.8	0.4	0.3	0.0	-0.2	-0.2								
Underlying Public Spending	2.6	4.8	3.8	3.2	1.3	1.6	-0.7	2.4	0.8	2.3	0.3	1.1	0.5	1.8	0.3	0.8	0.8	0.8	0.8	0.9								
Exports	6.1	7.3	5.1	6.7	3.5	-3.1	4.9	0.2	3.0	1.5	1.0	2.8	-2.2	2.7	3.5	1.8	1.5	0.9	0.9	0.8								
Imports	2.0	0.0	6.5	4.7	2.4	0.6	-0.8	0.0	-0.8	2.3	1.4	1.6	2.2	1.2	1.0	1.2	1.1	1.3	1.2	1.1								
Net Exports (a)	0.7	1.5	-0.3	0.4	0.2	-0.8	1.1	0.0	1.1	-0.2	-0.1	0.3	-0.9	0.3	0.5	0.1	0.1	-0.1	-0.1	-0.1								
Inventories (a)	0.1	0.0	0.0	0.0	0.7	-0.3	-0.1	0.0	-0.1	0.3	0.1	-0.3	0.5	-0.6	0.1	0.0	0.0	0.0	0.0	0.0								
Domestic Demand - qtr%					0.5	0.4	-0.1	0.6	0.1	0.6	-0.3	1.2	0.6	1.0	0.4	0.6	0.6	0.6	0.7	0.7								
Dom Demand - ann %	1.3	1.6	2.6	2.5	1.1	1.4	1.3	1.4	1.4	1.6	1.3	1.9	2.0	2.4	3.2	2.6	2.6	2.3	2.5	2.6								
Real GDP - qtr %					1.0	0.1	0.9	0.6	1.0	0.8	-0.4	1.1	0.3	0.8	1.0	0.8	0.7	0.5	0.6	0.6								
Real GDP - ann %	2.4	2.5	2.5	2.9	2.5	2.0	2.5	2.6	2.6	3.2	1.9	2.4	1.8	1.8	3.3	3.0	3.3	3.0	2.7	2.5								
CPI headline - qtr %					0.2	0.7	0.5	0.4	-0.2	0.4	0.7	0.5	0.5	0.2	1.2	0.7	0.5	0.5	0.6	0.7								
CPI headline - ann %	1.5	1.3	2.2	2.5	1.3	1.5	1.5	1.7	1.3	1.0	1.3	1.5	2.1	1.9	2.4	2.5	2.6	2.9	2.3	2.3								
CPI underlying - qtr %					0.6	0.5	0.4	0.4	0.2	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5								
CPI underlying - ann %	2.2	1.5	2.0	2.0	2.4	2.2	2.2	2.0	1.6	1.5	1.5	1.6	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.1								
Wages (Pvte WPI - ann %)	2.1	1.9	1.9	2.0	2.2	2.2	2.1	2.0	2.0	1.9	1.9	1.8	2.0	1.9	1.9	1.8	1.8	1.8	2.1	2.4								
Unemployment Rate (%)	6.0	5.7	5.6	5.3	6.1	6.0	6.2	5.9	5.8	5.8	5.6	5.6	5.9	5.6	5.6	5.4	5.3	5.3	5.3	5.3								
Terms of trade	-11.6	0.6	9.1	-1.4	-2.0	-4.2	-2.9	-4.1	-1.9	2.5	4.7	10.5	5.6	-6.0	-6.4	0.6	-3.2	-2.1	0.1	-0.3								
G&S trade balance, \$Abn	-36.7	-12.5	10.4	-17.1	-4.4	-11.0	-9.1	-12.1	-8.1	-6.9	-3.7	6.2	7.4	3.1	-0.6	0.5	-2.2	-4.6	-4.9	-5.5								
% of GDP	-2.2	-0.7	0.6	-0.9	-1.1	-2.7	-2.2	-3.0	-2.0	-1.6	-0.9	1.4	1.7	0.7	-0.1	0.1	-0.5	-1.0	-1.0	-1.2								
Current Account (% GDP)	-4.7	-2.6	-2.2	-3.9	-3.2	-5.1	-5.0	-5.6	-3.6	-3.7	-2.6	-0.8	-1.1	-2.1	-3.0	-2.7	-3.5	-4.0	-4.0	-4.1								

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

Exchange Rate Forecasts

	18-Sep	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18
Majors						
AUD/USD	0.8027	0.75	0.74	0.73	0.73	0.73
NZD/USD	0.7319	0.70	0.69	0.69	0.70	0.70
USD/JPY	111.16	116	118	118	118	120
EUR/USD	1.1943	1.17	1.18	1.20	1.22	1.20
GBP/USD	1.3593	1.33	1.30	1.31	1.28	1.26
USD/CNY	6.5480	6.67	6.64	6.64	6.62	6.65
USD/CAD	1.2185	1.26	1.27	1.30	1.31	1.33
USD/CHF	0.9602	0.98	0.98	0.97	0.96	0.98

Australian Cross Rates						
AUD/NZD	1.0967	1.07	1.07	1.06	1.05	1.04
AUD/JPY	89.2	87	87	86	86	88
AUD/EUR	0.6721	0.64	0.63	0.61	0.60	0.61
AUD/GBP	0.5905	0.56	0.57	0.56	0.57	0.58
AUD/CNY	5.2561	5.00	4.91	4.85	4.83	4.85
AUD/CAD	0.9781	0.95	0.94	0.95	0.96	0.97
AUD/CHF	0.7708	0.73	0.72	0.71	0.70	0.72

Interest Rate Forecasts

	18-Sep	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18
Australia Rates						
RBA Cash rate	1.50	1.50	1.50	1.50	1.75	2.00
3 month bill rate	1.72	1.75	1.75	1.75	2.00	2.25
3 Year Swap Rate	2.23	2.3	2.6	2.7	3.0	3.2
10 Year Swap Rate	2.98	3.2	3.5	3.5	3.6	3.7
Offshore Policy Rates						
US Fed funds	1.25	1.50	1.75	2.00	2.00	2.25
ECB deposit rate	-0.40	-0.40	-0.40	-0.40	-0.30	0.00
BoE repo rate	0.25	0.25	0.50	0.50	0.50	0.50
BoJ excess reserves rate	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
RBNZ OCR	1.75	1.75	1.75	2.00	2.25	2.50
China 1yr lending rate	4.35	4.10	4.10	4.10	4.10	4.10
China Reserve Ratio	17.0	16.5	16.5	16.5	16.5	16.5
10-year Benchmark Bond Yields						
Australia	2.80	2.95	3.20	3.20	3.30	3.40
United States	2.20	2.75	3.00	3.00	3.00	3.00
New Zealand	2.99	3.10	3.35	3.40	3.50	3.60

Sources: NAB Global Markets Research; Bloomberg; ABS

Global GDP

Dec year	2013	2014	2015	2016	2017	2018	20 Yr Ave
Australia	2.1	2.8	2.4	2.5	2.5	2.9	3.4
US	1.7	2.6	2.9	1.5	2.1	2.3	2.6
Eurozone	-0.2	1.4	1.9	1.8	2.2	2.0	1.5
UK	1.9	3.1	2.2	1.8	1.5	1.4	2.4
Japan	2.0	0.2	1.1	1.0	1.5	1.0	0.8
China	7.7	7.3	6.9	6.7	6.7	6.5	9.2
India	6.1	7.0	7.5	7.9	6.8	7.4	6.6
New Zealand	2.2	3.4	2.5	3.1	2.5	3.0	3.0
World	3.4	3.5	3.3	3.2	3.4	3.6	3.5
MTP Top 5	4.1	4.0	4.1	3.8	4.0	3.8	5.0

Commodity prices (\$US)

	18-Sep	Dec-17	Mar-18	Jun-18	Dec-18
WTI oil	49.91	51	52	54	58
Gold	1318	1240	1260	1270	1290
Iron ore	72.1	60	58	60	60
Hard coking coal	206	140	120	110	100
Thermal coal	99	85	85	65	65
Copper	6463	6180	6120	6060	6060
Aust LNG (*)	6.57	7.8	7.9	8.0	8.5

(*) Implied Australian LNG export prices.

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