AUSTRALIAN MARKETS WEEKLY

Govt pushes for transparency as unconventional monetary policy nears

National Australia Bank

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Analysis – Government pushes for greater transparency as unconventional monetary policy nears

- Governor Lowe has repeatedly called for fiscal stimulus to help support the economy, but so far the government has remained focused on delivering a surplus. The treasurer has dismissed reports of friction between the governor and government over fiscal policy, but we wonder if it is having a bearing on the time being taken to finalise the Statement on the Conduct of Monetary Policy, which outlines the common understanding between the Reserve Bank and government on policy.
- The treasurer reportedly plans to require the governor to write a Bank of England-style letter of explanation if the bank misses the inflation target, which at the margin would add to the pressure to cut rates. It is unclear whether increased accountability would extend to unconventional policy, which is also in the Bank of England's remit and which we think could be implemented next year unless meaningful fiscal stimulus is forthcoming from the government.
- For his part, Lowe has suggested the Reserve Bank would draw together a package of unconventional policy if the cash reached around 0.5%. Adapting work by the Fed, we estimate that the probability of the cash rate reaching this level has increased from 4% prior to the global financial crisis to 25% on our estimate of a 3.25% neutral cash rate. None of this would be news to the bank, but it is not obvious that the government appreciates these risks, which means that the bank would have a greater burden in supporting the economy even though the government is better placed given the low level of public debt and record low borrowing costs.

The week ahead – RBA speech; RBNZ on hold; US consumer spending; EZ PMIs

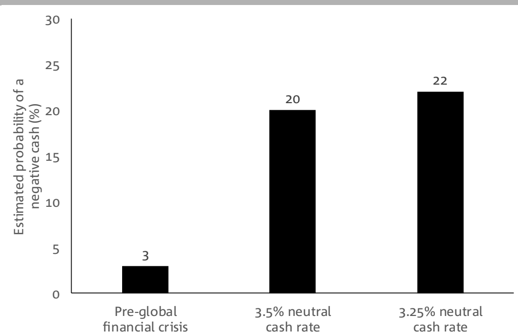
- On Tuesday night, Governor Lowe will deliver "An economic update", where we expect he will signal an October rate cut (we now expect an October easing and a follow-up cut in December). Given the regional location we expect Lowe to highlight the damage from the ongoing drought and the risks from the US-China trade war. While wary of the RBNZ's ability to surprise, we think it will hold the cash rate at 1% at Wednesday's OCR Review.
- In the US, August personal spending and the PCE deflators are released on Friday, with spending set to rise further. Also out Friday are durables goods orders, which should provide insight on whether the escalation in trade tensions in August saw more businesses defer investment decisions. Orders likely weakened, in stark contrast to strong consumption. In the euro area, flash September manufacturing and service sector PMIs are expected to show a further stabilisation in manufacturing conditions offset by ongoing resilience in the service sector.

Key markets over the past week

	Last	% chg week		Last	bp/% chg week
AUD	0.6775	-1.3	RBA cash	1.00	0
AUD/CNY	4.82	-0.6	3y swap	0.79	-13
AUD/JPY	73.0	-1.7	ASX 200	6,750	1.1
AUD/EUR	0.615	-1.5	Iron ore	91	-4.2
AUD/NZD	1.081	-0.1	WTI oil	58.7	-6.3

Source: Bloomberg

Chart of the week: The probability of negative rates



Kieran Davies

Government pushes for greater transparency as unconventional monetary policy nears

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To date, the government has rejected the RBA's call for additional fiscal stimulus

For some time now, Reserve Bank Governor Lowe has called for additional fiscal stimulus to support monetary policy in boosting growth, reducing unemployment and returning inflation to the 2-3% target band. Specifically, the governor has called for increased infrastructure spending – which can have the benefit of boosting both demand and supply in the economy – and unspecified structural reforms.

To date, the governor's call has been rejected by the government, which remains committed to the politically-symbolic objective of returning the budget to surplus after achieving a broadly-balanced outcome in 2018-19 with a small deficit rounding to 0.0% of GDP.

Indeed, the treasurer recently took the unusual step of personally highlighting to the governor the difficulty of bringing forward existing infrastructure investment due to long lead times. In contrast, maintenance spending of the type undertaken in the global financial crisis is more flexible, but relatively small in size.[1] At the same time, both the treasurer and prime minister have pointed to reports of capacity constraints in the sector.[2]

Nonetheless, the governor recently indicated that he would continue to speak out on fiscal policy. In a media interview, "Asked whether he'd go quiet if the government no longer wished to hear his message, Lowe replies: 'Certainly not.' No politician has suggested he should go quiet, he attests. 'I wouldn't expect that they would ever do it, partly because it'd be the wrong thing to do and also partly because they know I'd ignore it. I can only see losers out of doing that. There's no benefit to come from that."[3]

Friction between the government and Reserve Bank may see the government mandate greater transparency, similar to the BoE's arrangements

Although the treasurer has dismissed reports of friction between the government and Reserve Bank over the governor's call for action fiscal policy, we wonder if it has had any bearing on the unusually long time being taken for the treasurer and governor to finalise an updated Statement on the Conduct of Monetary Policy.

The statement outlines the common understanding between the governor and government on monetary and central banking policy. The statement was last updated in September 2016 on the day after Lowe took over as governor to emphasise financial stability as a consideration in setting monetary policy.

In discussing possible changes to the agreement, the treasurer has already signalled his commitment to the 2-3% inflation target, but reportedly plans to require governor to write a letter of explanation when inflation deviates from the target range, similar to that required by the Bank of England.[4] There is also some possibility that this requirement may emphasise the 2.5% midpoint of the target, although reports are less clear on this front.

Given Australia's predilection for copying UK policy, we wouldn't be surprised if a revised statement borrows some of the detail of the UK chancellor's remit to the governor of the Bank of England. Under that arrangement, the governor has to write an open letter to the chancellor if inflation deviates from the 2% target by more than 1pp.[5] This letter must cover:

- The outlook for inflation the reasons for the forecast miss;
- The policy action the bank is taking in response;
- The appropriate horizon for inflation to return to the target;
- The trade-off made between inflation and output variability in determining the scale and duration of the deviation from target; and

[1] See Treasury, *Meeting with the RBA governor on Thursday 11 July 2019*, Freedom of information documents 1-6, 16 August 2019.

[2] For example, see Phillip Coorey, *Infrastructure boom triggers cost blowouts: PM*, Australian Financial Review, 5 September 2019.

[3] See Peter Hartcher, *'What's going wrong with Australia?': RBA chief Philip Lowe fear's the economy's time is up*, Sydney Morning Herald, 6 September 2019.

[4] See Shane Wright, *Treasurer looks to 'strengthen' RBA agreement on inflation target*, Sydney Morning Herald, 4 September 2019.

[5] See Chancellor of the Exchequer, *Remit for the Monetary Policy Committee*, Letter to the Governor of the Bank of England, 29 October 2018.

- How this approach meets the government's monetary policy objectives.

In current circumstances, more accountability around the target could create additional pressure for rate cuts

At the margin, we think that the requirement to write a letter if inflation misses the target would add some pressure to ease policy further, although such pressure would be hard to distinguish from the influence of the state of the economy at the time.

In our view, it would be more interesting if the updated statement emphasised the 2.5% midpoint of the target given that historically the Reserve Bank has judged success in meeting the target as an "average inflation rate over time of 2 point something [per cent]".[6] At this stage, though, we are unsure whether the treasurer would rework the statement along these lines.

There has been no word on whether a revised statement would cover unconventional policy

If, as we suspect, the government plans to mirror UK arrangements in requiring more accountability from the Reserve Bank, it will be interesting if this extends to unconventional policy.

There has been no word on whether the treasurer is considering such a step, but it is worth noting that the Bank of England remit also covers unconventional policy instruments. The remit requires the bank to work with the government to "ensure the appropriate governance arrangements are in place to ensure accountability in the deployment of [unconventional policy] instruments [when the policy rate has approached its effective lower bound]", as occurred with bond purchases in 2009 and funding banks/building societies to lend to households and companies in 2012.

Such accountability does not extend to forward guidance, which the government leaves to the Bank of England's discretion.

Unconventional policy could be undertaken in 2020 unless there is meaningful additional fiscal stimulus

Extended accountability arrangements may be especially important because we believe unconventional policy is close.

For his part, Governor Lowe downplayed the risk of unconventional policy in his recent testimony, saying it was "a small possibility, but possible". Lowe said the Reserve Bank had scope to cut to about 0.5%, at which point it would consider a package based on international lessons on unconventional policy and one that included fiscal policy. He added that quantitative easing in an Australian context would most likely take the form of buying government securities in order to "lower the risk-free rates further out along the term spectrum".

Our central case is that the Reserve Bank cuts the cash rate to 0.5% by December, but we think unconventional policy could be implemented by mid 2020, alongside cutting the cash rate to 0.25%, if a meaningful fiscal stimulus is not forthcoming from the government.

Our expectation is that unconventional policy would initially involve an explicit form of forward guidance and the purchase of government bonds, including both Commonwealth and state government debt. An expansion of this could include a broader range of asset purchases and increasing liquidity in the short-end of the market. Long-dated repurchase agreements to banks are another option. The choice of instruments and size of the package is likely to reflect both economic conditions and financial market circumstances at the time of implementation.

The government is considering a small tax break for business, but not at the expense of the surplus

Given the government's focus on achieving a surplus, a large fiscal stimulus not seem likely at this stage, which raises the probability of unconventional monetary policy next year. The prime minister has said that the government would look at the impact of a protracted US-China trade war in both the mid-year review of the budget and next year's budget, but so far the only new policy measure canvassed by the treasurer has been a broad-based depreciation allowance for business investment in the May budget.[7]

Such a policy would presumably be along the lines of the temporary tax break introduced during the global financial crisis. The Reserve Bank found that the crisis measure "substantially raised [business] investment", where "both GDP growth and the cash rate would have been significantly lower in 2009 without the tax break".[8]

No costings have been released, but the measure under consideration would reportedly be constrained to be less than the forecast surplus of $7b for 2019-20, which is less than 0.3% of GDP. This compares with the crisis tax break, where business claimed "at least $15b" of extra deductions, or 1.2% of GDP.

Unconventional policy and fiscal stimulus are both more likely at a low level of the cash rate

Regardless of the exact mix of monetary and fiscal policy next year, the Reserve Bank is more likely to reach the limits of conventional monetary policy given interest rates are already low, meaning there is a greater risk that unconventional policy and fiscal stimulus will be required.

As a way of fleshing out this point, we adapted some work by the Federal Reserve to estimate the probability that the cash rate might reach the 0.5% threshold suggested by Governor Lowe for considering unconventional policy.[9]

Over the time span from 1959 to mid 2007 – a period that covered both high and low inflation as well as five recessions – the cash rate averaged 7.5%, with a standard deviation of 4.1%. Assuming a normal distribution, this implied that the pre-crisis probability of

[6] See Governor Philip Lowe, *Inflation targeting and economic welfare*, Address to the Anika Foundation luncheon, 25 July 2019.

[7] See Prime Minister Morrison, *Transcript – doorstop interview – Washington*, 21 September 2019 and Phillip Coorey, *Treasurer eyes depreciation stimulus*, Australian Financial Review, 27 August 2019.

[8] See David Rodgers and Jonathan Hambur, *The GFC investment tax break*, Reserve Bank of Australia Discussion Paper RDP 2018-07, June 2018.

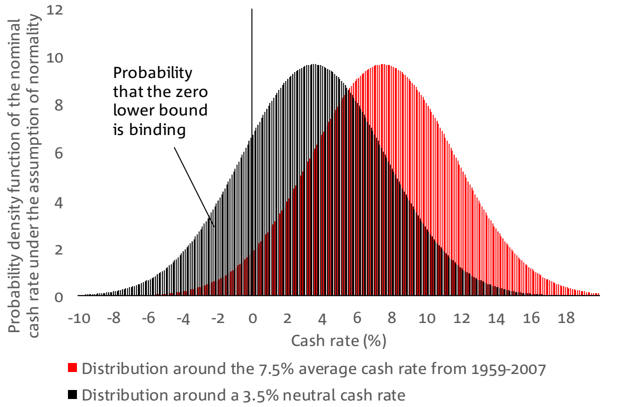
[9] See Michael Kiley and John Roberts, *Monetary policy in a low interest rate world*, Brookings Papers on Economic Activity, Spring 2017.

falling to the 0.5% threshold or below was 4%, with the risk of a negative cash rate 3%.

With the neutral cash rate falling since the global financial crisis, this increases the probability that the 0.5% threshold will be reached. Taking the Reserve Bank's 2017 estimate of a 3.5% neutral cash rate, we calculated the probability density function around this lower cash rate maintaining the same standard deviation and again assuming a normal distribution.[10] This implied that the current probability of reaching the 0.5% or less mark is 23% with the risk of a negative cash rate at 20%.

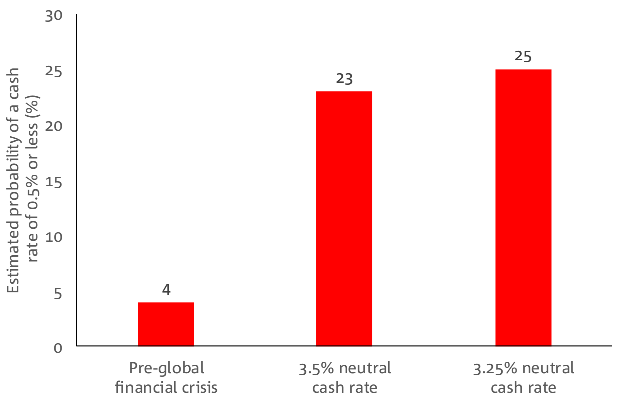
We suspect that the actual probabilities may be a little higher given that the neutral cash rate has likely fallen to 3.25% since the Reserve Bank published its estimate in 2017. This reflects a roughly 25bp widening of the spread between mortgage rate and the cash rate over this time. At this lower level of the neutral rate, the estimated probability of the cash rate falling to 0.5% or less is 25% with the odds of a negative cash rate at 22%.

Chart 1: Unconventional policy and fiscal stimulus are more likely to be needed at a lower neutral interest rate



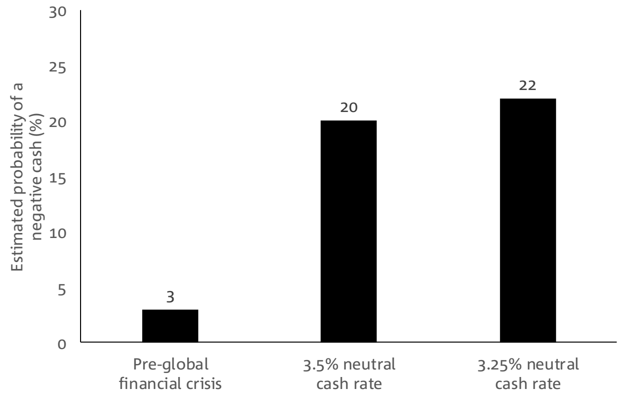
Source: Reserve Bank of Australia, National Australia Bank

Chart 2: The estimated probability of hitting the 0.5% threshold is significantly higher ....



Source: Reserve Bank of Australia, National Australia Bank

Chart 3: ... as is the estimated probability of a negative cash rate



Source: Reserve Bank of Australia, National Australia Bank

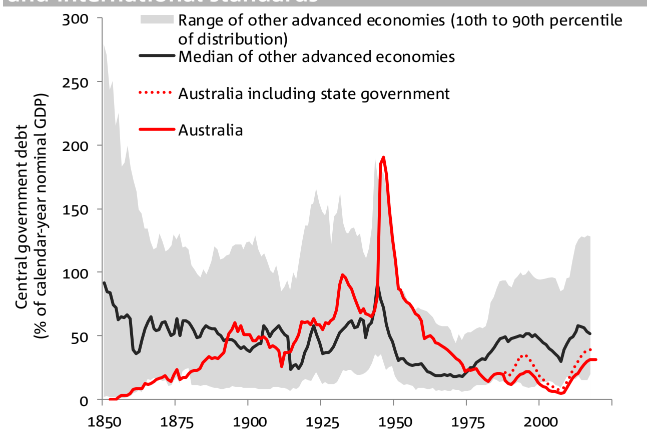
The RBA is likely to shoulder the burden, but the government has more capacity to support the economy

None of this would be news for the Reserve Bank, although clearly our estimated probabilities are higher than Governor Lowe's judgment that unconventional policy was only "a small possibility, but possible".

However, it is not obvious that the government appreciates these risks, which means that the burden of supporting the economy is likely to fall on the Reserve Bank. That would be a suboptimal outcome as the government has the balance sheet to support the economy, with public debt low relative to history and other countries. At the same time the cost of borrowing is at an all-time low for government with the 10-year bond yield at 1%.

Kieran Davies

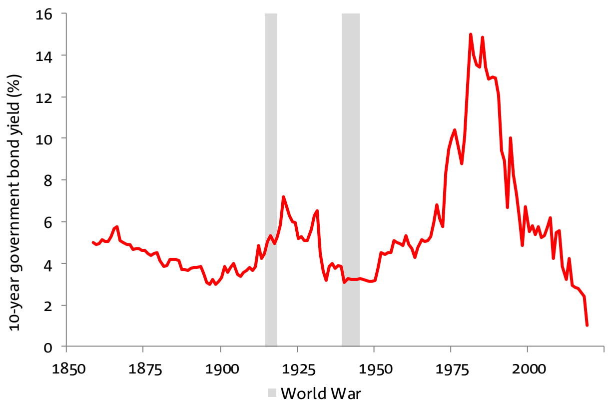
Chart 4: Australia's public debt is low by both historical and international standards



Source: Australian Bureau of Statistics, Bank for International Settlements, International Monetary Fund, World Bank, National Australia Bank

[10] See Rachael McCririck and Daniel Rees, *The neutral interest rate*, Reserve Bank of Australia Bulletin, September quarter 2017.

Chart 5: The government's cost of borrowing is at a record low



Note: Colonial estimates prior to federation. The data are end-calendar year estimates.
Source: Jorda, Schularick and Taylor, Reserve Bank of Australia, National Australia Bank

CALENDAR OF ECONOMIC RELEASES

Country	Economic Indicator	Period	Forecast	Consensus	Actual	Previous	GMT	AEST
Monday 23 September 2019								
JN Public Holiday - Autumn equinox								
GE	Markit/BME Germany Manufacturing PMI	Sep P		44.5		43.5	7.30	17.30
GE	Markit Germany Services PMI	Sep P		54.4		54.8	7.30	17.30
EC	Markit Eurozone Manufacturing PMI	Sep P		47.5		47	8.00	18.00
EC	ECB Draghi testifies to European Parliament						13.00	23.00
US	Markit US Services PMI	Sep P		51.6		50.7	13.45	23.45
US	Markit US Manufacturing PMI	Sep P		50.2		50.3	13.45	23.45
US	Fed Williams speaks at Treasury Market Conference						13.50	23.50
US	Fed Daly speaks at Conference on Economic Opportunities						15.30	1.30
US	Fed Bullard discusses US economy and monetary policy						17.00	3.00
Tuesday 24 September 2019								
JN	BoJ Governor Kuroda speaks in Osaka						5.30	15.30
GE	IFO Business Climate	Sep		94.8		94.3	8.00	18.00
GE	IFO Current Assessment	Sep		--		97.3	8.00	18.00
US	Conf. Board Consumer Confidence	Sep		133.5		135.1	14.00	0.00
Wednesday 25 September 2019								
NZ	Trade Balance NZD	Aug	-1582	-1350		-685	22.45	8.45
NZ	RBNZ Official Cash Rate	Sep 25	1	1		1	2.00	12.00
US	Fed Evans speaks on economy and monetary policy						12.00	22.00
US	New Home Sales	Aug		650		635	14.00	0.00
US	Fed Kaplan speaks in moderated Q&A						23.00	9.00
Thursday 26 September 2019								
EC	M3 Money Supply YoY	Aug		--		5.2	8.00	18.00
US	Wholesale Inventories MoM	Aug P		--		0.2	12.30	22.30
US	GDP Annualized QoQ	2Q T		2		2	12.30	22.30
US	GDP Price Index	2Q T		2.4		2.4	12.30	22.30
US	Core PCE QoQ	2Q T		--		1.7	12.30	22.30
US	Fed's Kaplan Gives Opening Remarks at Dallas Fed Conference						13.30	23.30
EC	ECB President Mario Draghi Speaks in Frankfurt						13.30	23.30
UK	BOE Governor Carney Speaks on Financial Services in Frankfurt						13.45	23.45
EC	BOE Deputy Governor Cunliffe Speaks in Frankfurt						13.45	23.45
US	Bullard Gives Welcoming Remarks at Minorities Banking Forum						14.00	0.00
US	Fed's Clarida, Daly at Fed Listens Event in San Francisco						15.45	1.45
US	Fed's Kashkari Speaks in Townhall Event in Billings, Montana						18.00	4.00
US	Fed's Barkin Speaks at Financial Markets Event in Richmond						20.30	6.30
Friday 27 September 2019								
NZ	ANZ Consumer Confidence Index	Sep		--		118.2	22.00	8.00
JN	Tokyo CPI YoY	Sep		0.5		0.6	23.30	9.30
GE	Retail Sales MoM	Aug		--		-2.2	27 Sep to 3 Oct	
US	Fed Quarles speaks on Macroprudential Regulation						12.30	22.30
US	Durable Goods Orders	Aug P		-1.3		2	12.30	22.30
US	Personal Spending	Aug		0.3		0.6	23.30	9.30
US	PCE Core Deflator MoM	Aug		0.2		0.2	12.30	22.30
US	PCE Core Deflator YoY	Aug		1.8		1.6	12.30	22.30
US	U. of Mich. Sentiment	Sep F		92.1		92	14.00	0.00
US	U. of Mich. Expectations	Sep F		--		82.4	14.00	0.00
Upcoming Central Bank Interest Rate Announcements								
New Zealand, RBNZ		Sep 25	1.00	1.00		1.00		
Australia, RBA		Oct 1	0.75	1.00		1.00		
Europe, ECB		Oct 24	-0.5%	-0.50		-0.50		
Canada, BoC		Oct 30	1.75	1.75		1.75		
US, Federal Reserve		Oct 30	1.75/2	1.75/2		1.75/2		
Japan, BoJ		Oct 31	-0.10%	-0.10		-0.10		
UK, BOE		Nov 7	0.75	0.75		0.75		

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

FORECASTS

Economic Forecasts

	Annual % change				Quarterly % change															
					2018				2019				2020				2021			
Australia Forecasts	**2018**	**2019**	**2020**	**2021**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Household Consumption	2.6	1.4	1.7	2.3	0.5	0.8	0.3	0.4	0.3	0.4	0.3	0.3	0.4	0.5	0.6	0.5	0.6	0.6	0.6	0.6
Underlying Business Investment	1.2	-2.1	0.2	1.9	0.7	-0.8	-2.1	0.1	-0.2	-0.6	-0.3	-0.5	0.1	0.1	1.1	0.5	0.4	0.4	0.2	0.4
Residential Construction	4.8	-8.6	-8.1	-0.9	3.3	2.8	0.1	-2.8	-2.2	-4.4	-2.7	-2.4	-2.1	-1.3	-1.7	-0.5	0.1	0.2	0.5	0.8
Underlying Public Spending	4.3	4.2	3.8	3.6	1.4	-0.1	2.1	0.8	1.1	1.4	0.4	0.8	1.1	1.1	0.9	0.9	0.8	0.8	0.8	0.9
Net Exports (a)	0.8	1.6	-0.1	-0.2	0.6	0.0	0.4	-0.2	0.4	0.6	0.3	0.3	0.0	0.0	-0.1	0.0	0.0	0.0	-0.1	0.0
Inventories (a)	0.1	-0.4	0.1	0.1	0.0	0.2	-0.3	0.2	-0.1	-0.5	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Domestic Demand (q/q %)	--	--	--	--	0.9	0.5	0.4	0.2	0.1	0.3	0.2	0.2	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.7
Dom Demand (y/y %)	2.8	0.9	1.7	2.6	3.5	3.3	2.5	2.0	1.2	1.0	0.8	0.8	1.2	1.4	1.9	2.2	2.5	2.6	2.7	2.8
Real GDP (q/q %)	--	--	--	--	1.0	0.7	0.3	0.1	0.5	0.5	0.5	0.5	0.6	0.5	0.7	0.6	0.6	0.6	0.6	0.7
Real GDP (y/y %)	2.7	1.7	2.2	2.5	3.1	3.1	2.6	2.2	1.7	1.4	1.6	2.0	2.1	2.1	2.3	2.4	2.4	2.6	2.5	2.6
CPI headline (q/q %)	--	--	--	--	0.4	0.4	0.4	0.5	0.0	0.6	0.4	0.6	0.4	0.4	0.5	0.7	0.5	0.5	0.6	0.7
CPI headline (y/y %)	1.9	1.5	1.8	2.2	1.9	2.1	1.9	1.8	1.3	1.6	1.6	1.6	2.0	1.7	1.8	1.9	2.0	2.1	2.3	2.3
CPI underlying (q/q %)	--	--	--	--	0.5	0.5	0.4	0.4	0.2	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
CPI underlying (y/y %)	1.9	1.4	1.5	1.9	1.9	1.9	1.8	1.8	1.5	1.4	1.4	1.3	1.5	1.5	1.5	1.6	1.7	1.9	2.0	2.0
Private wages (q/q %)	--	--	--	--	0.5	0.6	0.5	0.6	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Private wages (y/y %)	2.1	2.3	2.5	2.8	1.9	2.1	2.1	2.3	2.4	2.3	2.3	2.3	2.4	2.5	2.6	2.6	2.7	2.7	2.8	2.8
Unemployment Rate (%)	5.3	5.2	5.4	5.5	5.5	5.6	5.1	5.0	5.0	5.2	5.2	5.3	5.3	5.4	5.5	5.5	5.5	5.4	5.5	5.4
Terms of trade	2.0	3.2	-7.9	1.8	3.3	-1.3	1.1	3.0	3.1	1.5	-4.4	-4.7	-2.6	-0.6	0.9	-0.2	1.2	0.6	-0.1	-0.1
Current Account (% GDP)	-2.1	0.3	-1.0	-0.8	-2.2	-2.7	-2.2	-1.4	-0.2	1.2	0.5	-0.3	-0.9	-1.1	-1.0	-1.0	-0.8	-0.7	-0.8	-0.9

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

Exchange Rate Forecasts

	23-Sep	Dec-19	Mar-20	Jun-20	Sep-20	Dec-20
Majors						
AUD/USD	0.678	0.65	0.66	0.67	0.69	0.70
NZD/USD	0.63	0.62	0.62	0.63	0.65	0.65
USD/JPY	107.8	104	104	105	106	106
EUR/USD	1.10	1.12	1.11	1.13	1.14	1.15
GBP/USD	1.25	1.20	1.18	1.20	1.22	1.24
USD/CNY	7.11	7.40	7.40	7.30	7.20	7.10
USD/CAD	1.33	1.36	1.38	1.38	1.36	1.35
USD/CHF	0.99	0.97	0.95	0.96	0.96	0.96
Australian Cross Rates						
AUD/NZD	1.08	1.05	1.06	1.06	1.06	1.08
AUD/JPY	73.0	68	69	70	73	74
AUD/EUR	0.62	0.58	0.59	0.59	0.61	0.61
AUD/GBP	0.54	0.54	0.56	0.56	0.57	0.56
AUD/CNY	4.82	4.81	4.88	4.89	4.97	4.97
AUD/CAD	0.90	0.88	0.91	0.92	0.94	0.95
AUD/CHF	0.67	0.63	0.63	0.64	0.66	0.67

Interest Rate Forecasts

	23-Sep	Dec-19	Mar-20	Jun-20	Sep-20	Dec-20
Australian Rates						
RBA cash rate	1.00	0.75	0.50	0.50	0.50	0.50
3 month bill rate	0.92	0.85	0.60	0.60	0.60	0.60
3 Year Swap Rate	0.79	0.70	0.70	0.85	0.95	1.00
10 Year Swap Rate	1.18	1.05	1.05	1.20	1.35	1.45
Offshore Policy Rates						
US Fed funds	2.00	1.75	1.75	1.75	1.75	1.75
ECB deposit rate	-0.50	-0.60	-0.60	-0.60	-0.60	-0.50
BoE repo rate	0.75	0.75	0.75	0.75	0.75	1.00
BoJ excess reserves rate	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
RBNZ OCR	1.00	0.75	0.75	0.75	0.75	0.75
China 1yr lending rate	4.35	4.10	4.10	4.10	4.10	4.10
China Reserve Ratio	13.0	12.50	12.00	12.00	12.00	12.00
10-year Bond Yields						
Australia	1.00	0.90	0.90	1.00	1.10	1.20
United States	1.76	1.50	1.50	1.60	1.70	1.80
New Zealand	1.13	0.95	0.95	1.05	1.10	1.30

Sources: NAB Global Markets Research; Bloomberg; ABS

Global GDP

	2018	2019	2020	2021
Australia	2.7	1.7	2.2	2.5
United States	2.9	2.2	1.6	1.8
Eurozone	1.9	1.1	1.1	1.4
United Kingdom	1.4	1.2	1.2	1.5
Japan	0.8	1.0	0.2	0.9
China	6.6	6.3	6.0	5.8
India	6.8	5.7	6.8	7.1
New Zealand	2.9	2.1	2.4	2.0
World	3.6	3.1	3.2	3.5

Commodity prices ($US)

	23-Sep	Dec-19	Mar-20	Jun-20	Sep-20
Brent oil	64.9	70	70	75	75
Gold	1512	1450	1483	1518	1547
Iron ore	na	76	72	68	71
Hard coking coal*	144	170	165	160	155
Thermal coal	68	90	93	90	88
Copper	5770	6300	6225	6150	6125
Aus LNG**	10	12	12	12	12

** FOB quarterly contract prices (thermal coal is JFY contract)*

*** Implied Australian LNG export prices*

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