AUSTRALIAN MARKETS WEEKLY

Mining investment poised for a modest rebound

In this issue

Analysis – Mining investment poised for a modest rebound

- The Reserve Bank thinks the economy may be at a "gentle turning point", although its forecasts show a somewhat more abrupt improvement in growth, with the slowdown in activity effectively ending in Q1. Indeed, in the August Statement on Monetary Policy, while highlighting a series of near-term downside risks, the risks on the medium-term outlook, which includes 2.8% GDP growth over 2020, were described as more balanced than they had been for some time.
- One factor underpinning the bank's optimism is a "brighter outlook" for mining investment, which has tumbled from its record high of 9% of GDP in 2012-13 to 2.5%. We are a little more circumspect on prospects for the overall economy than the Reserve Bank, but share the bank's view that the the worst is over for mining investment, with spending poised for a modest rebound given: (1) capital expenditure is now failing to keep pace with wear and tear on existing mining assets; (2) miners report a recovery in planned investment; and (3) there has been a rebound in the return on mining capital.
- However, this is not a return to the boom times of 2012 and a modest rebound in investment is unlikely to have much effect on growth given about half the spending is on imports.

The week ahead – RBA speech and labour market data; US-China trade tensions

- In Australia, RBA Deputy Governor Debelle is speaking on Thursday on "Risks to the outlook", where he should expand on the downside risk to global growth from the worsening US-China trade conflict. Wednesday should show wages growth remains low, with the wage price index expected to post another 0.5% quarterly increase. Thursday's labour force survey should show a modest gain in jobs of 15k with unemployment ticking up to 5.3%. Weak outcomes would place pressure on the Reserve Bank to cut again given the Board said it was watching labour market developments closely.
- Aside from US/China trade tensions, the focus turns to the state of the US consumer and manufacturing. Thursday's retail sales report for June is expected to show continued growth, backed by a still-upbeat level of consumer confidence in the UoM Consumer Sentiment Survey for early August out on Friday. Thursday's industrial production report for July should show a 0.4% decline in an already-bruised manufacturing sector. The first two regional readings on manufacturing for August from the Empire State and Philly Fed are also out Thursday. The July CPI on Tuesday should show annual core inflation unchanged at 2.1%. In China, industrial production, fixed asset investment and retail sales are due Wednesday. Data released so far for July shows ongoing resilience in the Chinese economy with evidence that stimulus measures are gaining traction. German GDP may have shrunk in Wednesday's read on Q2 GDP.

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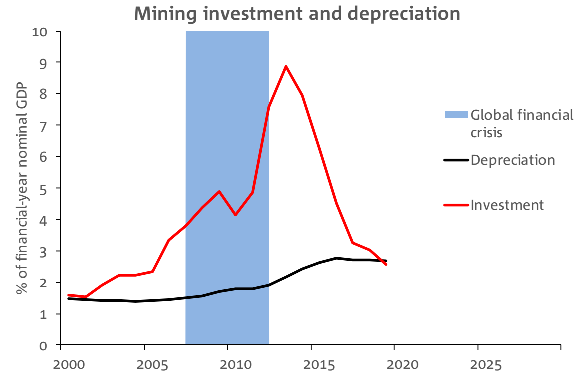
[Ask the FX Strategists](#)
[Ask the Interest Rate Strategists](#)

Key markets over the past week

	Last	% chg week		Last	bp/% chg week
AUD	0.6754	0.0	RBA cash	1.00	0
AUD/CNY	4.77	-0.3	3y swap	0.70	-1
AUD/JPY	71.1	-0.7	ASX 200	6,590	-0.8
AUD/EUR	0.604	0.2	Iron ore	88	-14.8
AUD/NZD	1.048	1.2	WTI oil	53.7	-1.8

Source: Bloomberg

Chart of the week: Mining capex and depreciation



Kieran Davies

Mining investment poised for a modest rebound

- The Reserve Bank thinks the economy may be at a "gentle turning point", although its forecasts show a somewhat more abrupt improvement in growth, with the slowdown in activity effectively ending in Q1. Indeed, in the August Statement on Monetary Policy, while highlighting a series of near-term downside risks, the risks on the medium-term outlook, which includes 2.8% GDP growth over 2020, were described as more balanced than they had been for some time.
- One factor underpinning the bank's optimism is a "brighter outlook" for mining investment, which has tumbled from its record high of 9% of GDP in 2012 13 to 2.5%. We are a little more circumspect on prospects for the overall economy than the Reserve Bank, but share the bank's view that the the worst is over for mining investment, with spending poised for a modest rebound given: (1) capital expenditure is now failing to keep pace with wear and tear on existing mining assets; (2) miners report a recovery in planned investment; and (3) there has been a rebound in the return on mining capital.
- However, this is not a return to the boom times of 2012 and a modest rebound in investment is unlikely to have much effect on growth given about half the spending is on imports.

Governor Lowe believes the economy may be at a "gentle turning point"

Testifying before parliament on Friday, Governor Lowe suggested the economy "may have reached a gentle turning point", with the bank "expecting the quarterly GDP growth outcomes to strengthen gradually after a run of disappointing numbers".[1]

The governor argued the outlook for an improvement in growth was supported by:

- lower interest rates;
- the recent tax cuts;
- a lower Australian dollar;
- a "brighter outlook" for mining investment;
- some earlier-than-expected stabilisation in the housing market; and
- ongoing high levels of investment in infrastructure.

The main risk to this outlook was the trade conflict between the US and China, which posed a "significant risk to the global economy", though domestically, in the near term there remained considerable uncertainty about the pace of consumer spending

The trade conflict was seen as:

- disrupting trade;
- increasing uncertainty, which was causing investment to be postponed/reconsidered;
- increasing financial market volatility; and
- increasing the prospect of monetary easing in many countries.

Lowe argued "we have a lot riding on these disputes being resolved soon". If the bank proved "inappropriately optimistic" in anticipating a speedy resolution, then ongoing trade tensions would underpin persistent uncertainty and market volatility, with weaker investment leading to slower world growth.

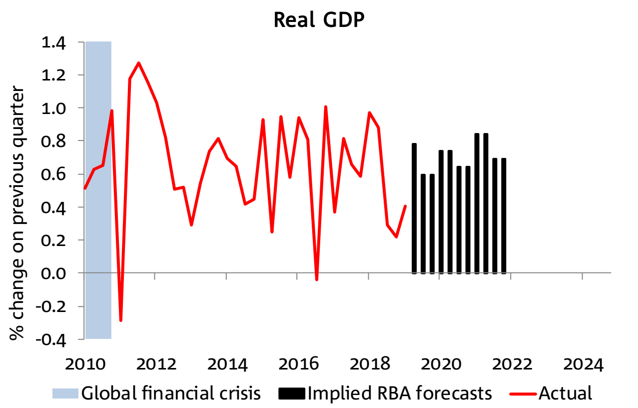
The RBA forecasts actually imply a somewhat more abrupt improvement in growth is already under way

Analysing the Reserve Bank's forecasts for growth that were published in Friday's Statement on Monteary policy, the bank's outlook actually incorporates an abrupt improvement in activity starting in Q2 (the Q2 data will be released in early September).

This can be seen by backing out quarterly estimates from the bank's forecasts for annual growth that are published for Q2 and Q4 each year. This shows the bank believes that strong growth resumed in Q2, forecasting growth of 0.8% in the quarter after an average increase of 0.3% over recent quarters. Thereafter, quarterly growth is forecast to average between 0.6-0.8% over the half years through to end-2021.

This forecast profile means that the Reserve Bank not only believes the recent economic slowdown ended in Q2, growth is already back at the averages prevailing in the years prior to the slowdown. Looking into the detail of this forecast, the bank expects net exports to add 0.4pp to Q2 growth, likely reflecting an expectation that resource exports rebound sharply after supply disruptions in Q1.

Chart 1: The Reserve Bank's forecasts imply a sharp improvement in growth started in Q2



Note: The forecasts of quarterly growth were backed out from Q2 and Q4 estimates of annual growth published in the August Statement on Monetary Policy.
Source: Australian Bureau of Statistics, Reserve Bank of Australia, National Australia Bank

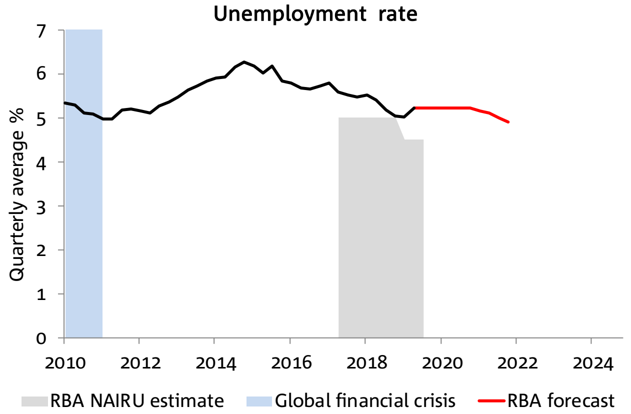
The Reserve Bank expects spare capacity to remain significant

However, even with growth immediately bouncing back, the Reserve Bank still forecasts that significant spare capacity will persist in the labour market. This is clear from its forecast profile for the unemployment rate, where unemployment is not expected to fall below 5% until the end of 2021, still well above the bank's latest 4.5% estimate of the NAIRU. That forecast is behind an expectation that wages growth will not accelerate any time soon, and, as a consequence, there will be a further

[1] See House of Representatives Standing Committee on Economics, *Reserve Bank of Australia annual report 2018*, Proof committee hansard, 9 August 2019.

delay in the return of inflation to the target range, with inflation not above 2% until 2021.

Chart 2: The Reserve Bank expects little improvement in the unemployment rate



Note: The Q1 and Q3 estimates are interpolated from the Q1 and Q4 forecasts published in the August Statement on Monetary Policy. The NAIRU estimates were as published by the Reserve Bank.
Source: Australian Bureau of Statistics, Reserve Bank of Australia, National Australia Bank

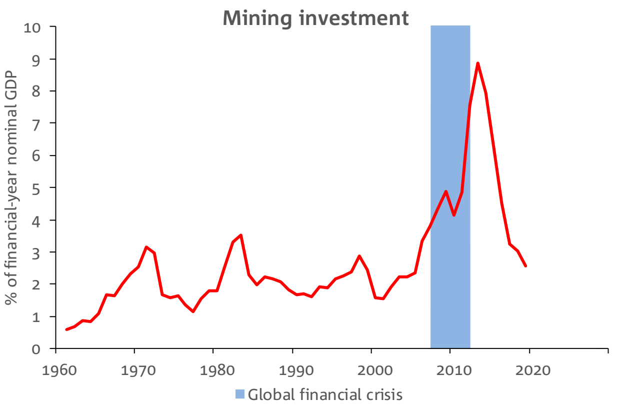
The RBA remains optimistic about medium-term growth in part because it believes the long decline in mining investment is effectively over

The RBA retained its medium-term brighter outlook for growth, with the forecast for GDP growth over 2020 little changed at 2.8% (this forecast includes the technical assumption of two further interest rate reductions). Indeed, while retaining near-term downside risk concerns, the bank described the medium-term outlook as more balanced than it had been for some time.

Focusing on the Reserve Bank's outlook, we have examined the "brighter outlook" for mining investment, which implies that the long decline in investment is finally over.

To recap on developments in the resources sector, investment reached a record 9% of GDP at the height of the boom in 2012-13. From that point, investment fell sharply and is currently 2.5%, close to the 2% level prevailing prior to the boom.

Chart 3: Mining investment has fallen continuously from a record peak of 9% of GDP in 2012-13



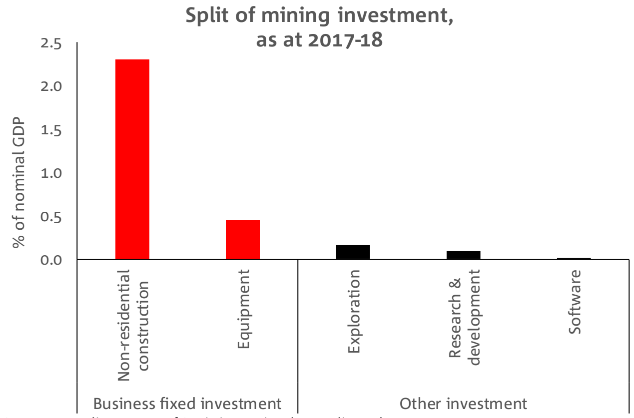
Note: Investment = non-residential construction + equipment investment + software investment + research & development + exploration. The 2018-19 observation is the average of the year to date.
Source: Australian Bureau of Statistics, National Australia Bank

A commodity split of total mining investment is not available, but the figures on business fixed investment, a narrower measure of capital expenditure that comprises non-residential construction and equipment investment, provide some insight into the underlying trends.

The split of business fixed investment shows that the boom and bust was driven by the LNG mega projects, with oil and gas expenditure peaking at a record 4% of GDP in late 2013 and subsequently declining to just over 0.5% in early 2019. Given that work is now complete on the Ichthys project in northern Australia – i.e. the last LNG mega project – this likely marks the low-point for oil and gas investment.

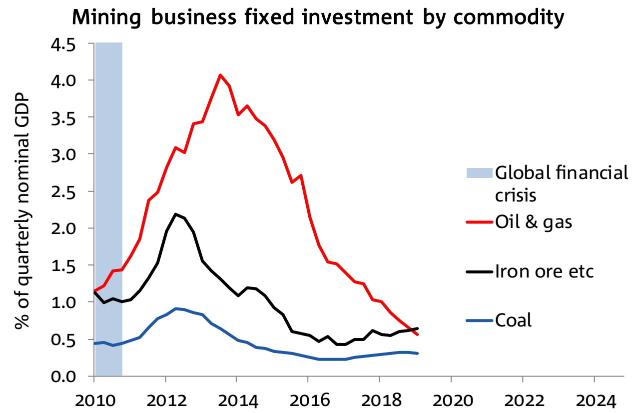
In comparison, coal and iron ore actually peaked earlier in 2012, broadly stabilising by about 2016 and picking up fractionally as a share of GDP over the past few years.

Chart 4: Mining investment is dominated by non-residential construction



Source: Australian Bureau of Statistics, National Australia Bank

Chart 5: Iron ore and coal investment troughed a few years ago, with the total decline in spending driven by LNG



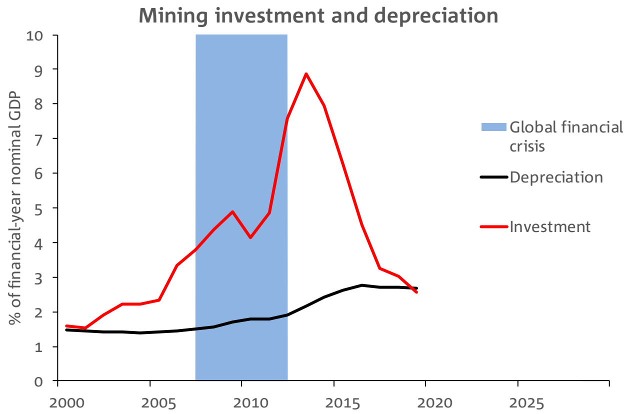
Note: Business fixed investment = non-residential construction + equipment investment. The data were seasonally adjusted by NAB.
Source: Australian Bureau of Statistics, National Australia Bank

Investment is now marginally below depreciation on the existing capital stock

With the completion of the Ichthys project marking a likely trough in total mining investment, total spending is likely to lift over the next year or two given mining investment is now failing to keep pace with the wear and tear on the existing capital stock. That is, on our calculation, depreciation is 2.7% of GDP in 2018-19, slightly above investment at 2.5%.

Depreciation is likely to rise further over coming years, which points to a pick-up in investment to keep pace with maintenance on existing mining assets.

Chart 6: Mining investment is now marginally below depreciation on the existing capital stock



Note: The 2018-19 observation for investment is the average of the year to date, while the observation for depreciation is an estimate assuming that the depreication rate on the capital stock is unchanged from 2017-18.
Source: Australian Bureau of Statistics, National Australia Bank

Firms' surveyed intentions point to a recovery in investment in 2019-20 of unknown quantity

Firms' business fixed investment plans also point to a recovery in mining investment, although there is significant uncertainty about the extent of the rebound.

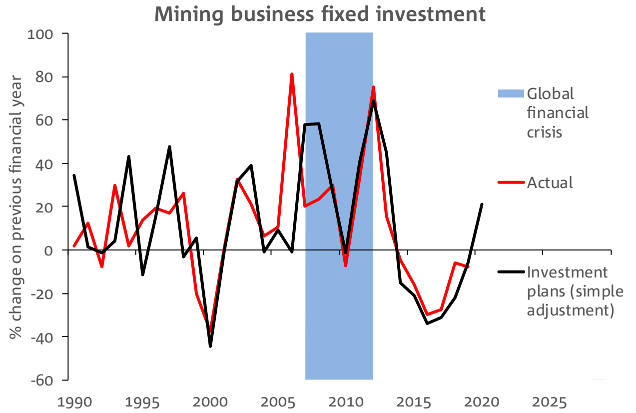
The latest capital expenditure survey published data on miners' sixth estimate of business fixed investment in 2018-19 and the second estimate of expenditure in 2019-20.

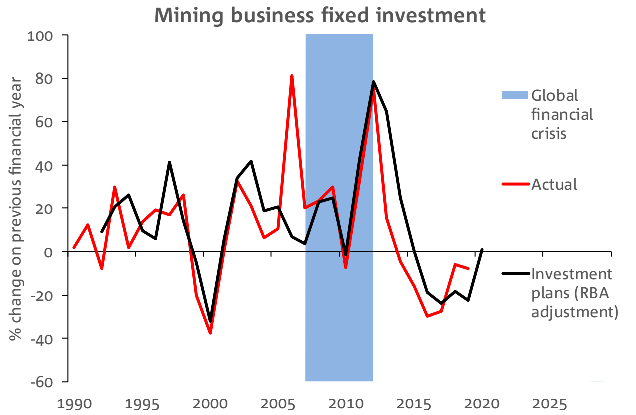
Early estimates of investment usually underestimate the amount of final spending undertaken by miners, but unfortunately there is no straightforward way to adjust investment plans for this bias.

- A simple adjustment, which corrects the numbers based on the bias in last year's investment plans, points to a very strong rebound in nominal spending of 21% in 2019-20.
- The adjustment favoured by the Reserve Bank, which corrects the data using the average bias over the long term, points to only a 1% gain in nominal investment next financial year.

At this early stage of the planning cycle it is very hard to distinguish between these very different forecasts given both adjustments yield highly imprecise estimates with an average absolute forecast miss of 16-17pp!

Chart 7: Different adjustments point to either a small or large rebound in mining business fixed investment





Note: The 2018-19 observation for investment is based on the sixth estimate of investment. The 2019-20 observation is based on the second estimate for investment. The simple adjustment of investment plans uses last year's realisation ratio. The RBA adjustment uses the long-term average realisation ratio.
Source: Australian Bureau of Statistics, National Australia Bank

The listing of major projects points to a modest rebound in spending

Comparing surveyed investment plans with the major resource projects tracked by the Department of Industry, the new project data suggest a modest gain in investment is likely over the next year or two.

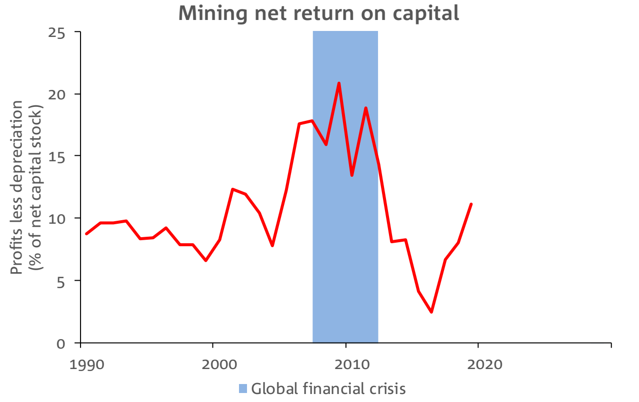
- **Publicly-announced projects** have increased, up 20% last year to $73b. These include: (1) new iron ore projects (Ularring and Balmoral South in Western Australia); (2) lithium hydroxide refineries (Wodogina and Mount Holland in Western Australia); (3) coal projects (Winchester South in Queensland); and (4) LNG import terminals (Victoria and New South Wales).
- **Feasible projects** are unchanged at $170b, although the number of projects has increased due to more small projects that require relatively little investment. These include rare earth projects (e.g. Sconi in Queensland) and a range of LNG projects (brownfield/backfill projects at existing LNG plants and an LNG train in Western Australia; LNG import terminals in South Australia, Victoria and New South Wales).
- **Committed projects** have fallen sharply down 75% to $30b as the remaining LNG gas projects were completed. The completed projects were dominated by Prelude, Wheatstone and Ichthys. There were new/expansion projects for iron ore and LNG in

Western Australia (Eliwana and Greater Enfield), while the Adani coal mine in Queensland will be counted as a committed project this year.

The net rate of return also points to a modest recovery in mining investment

While both approaches to adjusting miners' investment plans support the bank's view that investment could pick up next year, we think the recovery could be modest. This reflects the fact that investment is only slightly below depreciation on existing assets.We estimate that the net return on the capital stock reached 11% in 2018-19, only modestly above the pre-mining boom average of 9%.

Chart 8: The net return on the mining capital stock is only modestly above its pre-boom average



Note: The 2018-19 observation was estimated by NAB.
Source: Australian Bureau of Statistics, National Australia Bank

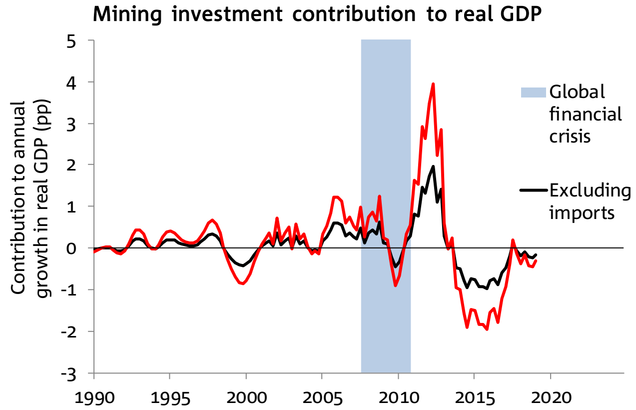
A recovery in mining investment may not mean much for the growth outlook

The rapid decline in mining investment over recent years meant that mining expenditure was a major drag on real GDP for some time. However, the worst of the adjustment was over by 2017 and the effect on growth was tempered by the fact that about half of mining investment is imported.[2] As a result, the 0.3pp drag from mining investment on growth over the past year only equates to a 0.1pp subtraction from growth after adjusting for imports.

By the same token, this means that a modest recovery in mining investment is unlikely to add much to growth as the accompanying rebound in imports will likely dilute the contribution.

All this suggests to us that a modest recovery in mining investment while welcome and a positive, is unlikely to have a material positive effect on the outlook.

Chart 9: Mining investment has not been much of a drag on growth over the past year



Note: The estimates prior to 2001 are experimental.
Source: Australian Bureau of Statistics, National Australia Bank

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[2] See Vanessa Rayner and James Bishop, *Industry dimensions of the resource boom: An input-output analysis*, Reserve Bank of Australia Research Discussion Paper RDP 2013-02, February 2013.

CALENDAR OF ECONOMIC RELEASES

Country	Economic Indicator	Period	Forecast	Consensus	Actual	Previous	GMT	AEST
Tuesday, 13 August 2019								
AU	RBA Assistant Governor (Financial markets) Kent speaks						22:00	8:-00
NZ	Food Prices MoM	Jul	1.0	--		-0.7	22.45	8.45
NZ	Rents (stock measure)	Jul	..	..		0.2	22.45	8.45
JN	PPI MoM	Jul		0.1		-0.5	23.50	9.50
JN	PPI YoY	Jul		-0.5		-0.1	23.50	9.50
AU	NAB Business Conditions	Jul		--		3	1.30	11.30
AU	NAB Business Confidence	Jul		--		2	1.30	11.30
GE	CPI MoM	Jul F		0.5		0.5	6.00	16.00
GE	CPI YoY	Jul F		1.7		1.7	6.00	16.00
UK	Jobless Claims Change	Jul		--		38	8.30	18.30
UK	ILO Unemployment Rate 3Mths	Jun		3.8		3.8	8.30	18.30
GE	ZEW Survey Current Situation	Aug		-6.3		-1.1	9.00	19.00
GE	ZEW Survey Expectations	Aug		-28		-24.5	9.00	19.00
US	NFIB Small Business Optimism	Jul		104		103.3	10.00	20.00
US	CPI MoM	Jul		0.3		0.1	12.30	22.30
US	CPI YoY	Jul		1.7		1.6	12.30	22.30
Wednesday, 14 August 2019								
JN	Core Machine Orders MoM	Jun		-1		-7.8	23.50	9.50
JN	Core Machine Orders YoY	Jun		-1.1		-3.7	23.50	9.50
AU	Westpac Consumer Conf Index	Aug		--		96.5	0.30	10.30
AU	Wage Price Index QoQ	2Q	0.5	0.5		0.5	1.30	11.30
AU	Wage Price Index YoY	2Q	2.3	2.3		2.3	1.30	11.30
CH	Fixed Assets Ex Rural YTD YoY	Jul		5.8		5.8	2.00	12.00
CH	Industrial Production YoY	Jul		6		6.3	2.00	12.00
CH	Industrial Production YTD YoY	Jul		6		6	2.00	12.00
CH	Retail Sales YoY	Jul		8.6		9.8	2.00	12.00
CH	Retail Sales YTD YoY	Jul		8.4		8.4	2.00	12.00
GE	GDP SA QoQ	2Q P		-0.1		0.4	6.00	16.00
GE	GDP WDA YoY	2Q P		0.1		0.7	6.00	16.00
AU	RBA Deputy Governor Debelle participates in a panel discussion on "Redefining conduct in FX markets"						7:30	17:30
UK	CPI Core YoY	Jul		1.8		1.8	8.30	18.30
UK	CPI YoY	Jul		1.9		2	8.30	18.30
UK	CPI Core YoY	Jul		1.8		1.8	8.30	18.30
EC	GDP SA QoQ	2Q P		0.2		0.2	9.00	19.00
EC	GDP SA YoY	2Q P		1.1		1.1	9.00	19.00
EC	Industrial Production SA MoM	Jun		-1.4		0.9	9.00	19.00
EC	Industrial Production WDA YoY	Jun		-1.5		-0.5	9.00	19.00
Thursday, 15 August 2019								
AU	RBA Deputy Governor Debelle speaks on "Risks to the outlook"						11:00	09:00
AU	Consumer Inflation Expectation	Aug		--		3.2	1.00	11.00
AU	Employment Change	Jul	15	14		0.5	1.30	11.30
AU	Unemployment Rate	Jul	5.3	5.2		5.2	1.30	11.30
AU	Participation Rate	Jul		66		66	1.30	11.30
JN	Industrial Production MoM	Jun F		--		-3.6	4.30	14.30
JN	Industrial Production YoY	Jun F		--		-4.1	4.30	14.30
UK	Retail Sales Inc Auto Fuel MoM	Jul		-0.2		1	8.30	18.30
UK	Retail Sales Inc Auto Fuel YoY	Jul		2.5		3.8	8.30	18.30
US	Empire Manufacturing	Aug		1.9		4.3	12.30	22.30
US	Philadelphia Fed Business Outlook	Aug		10		21.8	12.30	22.30
US	Retail Sales Advance MoM	Jul		0.3		0.4	12.30	22.30
US	Industrial Production MoM	Jul		0.1		0	13.15	23.15
Friday, 16 August 2019								
NZ	BusinessNZ Manufacturing PMI	Jul	51.3	--		51.3	22.30	8.30
NZ	RBNZ household inflation expectations	Q3					3:00	13:00
US	Housing Starts	Jul		1253		1253	12.30	22.30
Saturday, 17 August 2019								
US	U. of Mich. Sentiment	Aug P		97.4		98.4	14.00	0.00
US	U. of Mich. Expectations	Aug P		--		90.5	14.00	0.00
Upcoming Central Bank Interest Rate Announcements								
Australia, RBA		Sep 3	1.00	1.00		1.00		
Europe, ECB		Sep 12	-0.5	-0.5		-0.40		
Japan, BoJ		Sep 19	-0.10	-0.10		-0.10		
US, Federal Reserve		Sep 18	2/1.75	2/1.75		2.25/2		
UK, BOE		Sep 19	0.75	0.75		0.75		
New Zealand, RBNZ		Sep 25	1.00	1.00		1.00		

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	1.5	2.2	2.3	0.4	0.8	0.3	0.4	0.3	0.3	0.4	0.7	0.6	0.5	0.5	0.5	0.6	0.6	0.5	0.6
Underlying Business Investment	0.9	0.9	4.3	3.6	0.6	-1.0	-2.1	0.0	0.6	1.0	0.8	1.8	0.3	1.8	0.4	1.4	0.4	1.0	0.8	1.4
Residential Construction	4.7	-8.2	-8.3	-1.6	4.1	1.7	0.7	-2.9	-2.5	-3.3	-3.0	-2.2	-2.0	-1.8	-1.9	-0.8	-0.2	0.5	0.2	0.8
Underlying Public Spending	5.0	5.4	4.5	4.1	1.4	0.4	2.5	1.6	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0
Net Exports (a)	0.7	0.6	-0.3	-0.4	0.5	0.2	0.3	-0.2	0.2	0.3	0.1	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Inventories (a)	0.1	-0.2	-0.1	0.0	-0.1	0.2	-0.3	0.2	-0.1	-0.1	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Domestic Demand (q/q %)	--	--	--	--	0.9	0.6	0.5	0.4	0.1	0.3	0.4	0.7	0.6	0.7	0.5	0.7	0.6	0.7	0.7	0.8
Dom Demand (y/y %)	2.9	1.4	2.3	2.7	3.4	3.2	2.8	2.4	1.6	1.3	1.2	1.6	2.0	2.4	2.5	2.5	2.5	2.6	2.7	2.8
Real GDP (q/q %)	--	--	--	--	1.0	0.9	0.3	0.2	0.4	0.4	0.4	0.8	0.5	0.6	0.5	0.6	0.5	0.6	0.5	0.7
Real GDP (y/y %)	2.8	1.7	2.3	2.3	3.1	3.1	2.8	2.4	1.8	1.3	1.5	2.1	2.2	2.3	2.4	2.2	2.2	2.3	2.3	2.4
CPI headline (q/q %)	--	--	--	--	0.4	0.4	0.4	0.5	0.1	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	1.6	1.8	2.2	1.9	2.1	1.9	1.8	1.4	1.7	1.6	1.6	1.9	1.7	1.8	1.9	2.0	2.2	2.3	2.3
CPI underlying (q/q %)	--	--	--	--	0.5	0.5	0.3	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 %)	1.8	1.4	1.5	1.9	1.9	1.7	1.7	1.7	1.4	1.4	1.4	1.3	1.5	1.4	1.5	1.6	1.8	1.9	2.0	2.0
Private wages (q/q %)	--	--	--	--	0.5	0.6	0.6	0.5	0.5	0.6	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	2.2	2.3	2.4	2.3	2.3	2.4	2.5	2.5	2.6	2.6	2.7	2.7	2.8	2.8
Unemployment Rate (%)	5.3	5.2	5.3	5.4	5.5	5.5	5.1	5.0	5.1	5.2	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.4	5.5	5.5
Terms of trade	1.8	2.9	-3.8	-1.5	3.2	-1.2	1.1	2.9	3.1	-1.1	-2.6	-1.4	-0.6	-1.0	0.4	-0.2	-0.2	-0.8	-0.8	-0.5
Current Account (% GDP)	-2.0	-0.9	-1.8	-2.4	-2.2	-2.5	-2.1	-1.3	-0.6	-0.5	-1.1	-1.4	-1.5	-1.8	-1.8	-1.9	-2.0	-2.3	-2.6	-2.8

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

Exchange Rate Forecasts

	12-Aug	Sep-19	Dec-19	Mar-20	Jun-20	Sep-20
Majors						
AUD/USD	0.675	0.67	0.65	0.66	0.67	0.69
NZD/USD	0.64	0.64	0.62	0.62	0.63	0.65
USD/JPY	105.2	105	104	104	105	106
EUR/USD	1.12	1.10	1.12	1.11	1.13	1.14
GBP/USD	1.21	1.17	1.20	1.18	1.20	1.22
USD/CNY	7.06	7.25	7.40	7.40	7.30	7.20
USD/CAD	1.32	1.33	1.36	1.38	1.38	1.36
USD/CHF	0.97	0.96	0.97	0.95	0.96	0.96
Australian Cross Rates						
AUD/NZD	1.05	1.05	1.05	1.06	1.06	1.06
AUD/JPY	71.1	70	68	69	70	73
AUD/EUR	0.60	0.61	0.58	0.59	0.59	0.61
AUD/GBP	0.56	0.57	0.54	0.56	0.56	0.57
AUD/CNY	4.77	4.86	4.81	4.88	4.89	4.97
AUD/CAD	0.89	0.89	0.88	0.91	0.92	0.94
AUD/CHF	0.66	0.64	0.63	0.63	0.64	0.66

Interest Rate Forecasts

	12-Aug	Sep-19	Dec-19	Mar-20	Jun-20	Sep-20
Australian Rates						
RBA cash rate	1.00	1.00	0.75	0.75	0.75	0.75
3 month bill rate	0.97	1.10	0.85	0.85	0.85	0.85
3 Year Swap Rate	0.70	0.80	0.80	1.10	1.25	1.40
10 Year Swap Rate	1.13	1.38	1.38	1.53	1.63	1.73
Offshore Policy Rates						
US Fed funds	2.25	2.00	2.00	2.00	2.00	2.00
ECB deposit rate	-0.40	-0.60	-0.60	-0.60	-0.60	-0.60
BoE repo rate	0.75	0.75	0.75	0.75	0.75	0.75
BoJ excess reserves rate	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
RBNZ OCR	1.00	1.00	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	13.5	13.00	12.50	12.00	12.00	12.00
10-year Bond Yields						
Australia	0.96	1.20	1.20	1.35	1.45	1.55
United States	1.69	1.90	1.90	2.00	2.10	2.20
New Zealand	1.09	1.60	1.65	1.85	2.00	2.20

Sources: NAB Global Markets Research; Bloomberg; ABS

Global GDP

	2018	2019	2020	2021
Australia	2.8	1.7	2.3	2.3
United States	2.9	2.4	1.7	1.7
Eurozone	1.9	1.2	1.3	1.4
United Kingdom	1.4	1.3	1.3	1.5
Japan	0.8	0.7	0.4	0.9
China	6.6	6.3	6.0	5.8
India	7.1	6.7	7.2	7.1
New Zealand	2.9	2.4	2.6	2.5
World	3.6	3.2	3.3	3.5

Commodity prices ($US)

	12-Aug	Sep-19	Dec-19	Mar-20	Jun-20
Brent oil	58.0	68	70	70	75
Gold	1502	1334	1382	1393	1398
Iron ore	91	79	76	72	68
Hard coking coal*	157	178	170	165	160
Thermal coal	71	85	90	93	90
Copper	5732	6400	6300	6225	6150
Aus LNG**	9	12	12	12	12

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

*** Implied Australian LNG export prices*

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