

# AUSTRALIAN MARKETS WEEKLY

## Australia's bushfire tragedy



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### Analysis – Australia's bushfire tragedy

- The social cost of the bushfire disaster has been immense. There is no precise way to gauge the economic impact until official data become available, but a sensitivity analysis shows that the south-eastern regions, along with Kangaroo Island, account for 1% of national output. This means one month of lost production would take 0.4% off quarterly GDP and 0.1% of annual GDP.
- We think this is a reasonable starting point for estimating the economic effect, although the impact may end up larger given: (1) there is likely to be a negative effect on confidence encouraging more cautious spending; (2) other regions have been affected by fires; (3) it could take time for recovery to start in the affected areas; (4) there is the indirect effect of hazardous smoke in Canberra, Sydney and Melbourne; and (5) the bushfire season normally lasts until March. There will be rebuilding work, but this does not seem likely to be as large as the 2010-11 Queensland floods.
- We expect that the economic effect will be concentrated in the affected regions and greatest for: (1) households; (2) business, particularly tourism and insurance; and (3) agriculture, forestry and fishing, which accounts for 21% of the affected regions' output. Like the Queensland floods, the Reserve Bank is likely to downplay the implications of the bushfires for policy given their temporary economic effect, although note that NAB expects a rate cut in February given sub-trend growth and below-target inflation. The budgetary cost will be largely borne by the Commonwealth under disaster funding arrangements with the states.

### The week ahead – Australian home loans; NZ QSBO; China GDP; US CPI; German GDP

- In Australia, home loan approvals are due Thursday. Approvals have grown strongly in recent months alongside strong house price growth in late 2019. In NZ, Tuesday's NZIER QSBO will very likely register a bounce in business confidence, albeit still negative as a level, with a question of whether the activity indicators show a surer positive tone, after being patchy last quarter. Also due are key updates on electronic card transactions, the PMI, food prices, building consents, and the housing market.
- Internationally, the US-China phase 1 trade deal is set to be signed on Wednesday in Washington. In China, Q4 GDP on Friday is likely to show annual growth steady at 6.0%. Monthly activity indicators released the same day are also expected to remain solid. Also out are aggregate financing figures and the trade balance. In the US, Tuesday's December CPI is expected to reveal steady annual core CPI inflation of 2.3%, while the Empire Fed, Philly Fed, and industrial production reports should point to a struggling manufacturing sector. German GDP for Q4 2019 is released on Wednesday, where the consensus forecast is for growth of 0.6% over the year.

### Key markets over the past week

	Last	% chg week		Last	bp/% chg week
AUD	0.6915	-0.4	RBA cash	0.75	0
AUD/CNY	4.77	-1.3	3y swap	0.81	-1
AUD/JPY	75.8	0.8	ASX 200	6,894	2.4
AUD/EUR	0.621	0.3	Iron ore	93	0.4
AUD/NZD	1.040	0.0	Brent oil	64.9	-5.8

Source: Bloomberg

### Chart of the week: Dec/Jan bushfire-affected regions

GDP for 2018-19	\$b	% of Australia
<b>New South Wales</b>		
Blue Mountains	2.6	0.1
Shoalhaven	4.7	0.2
Snowy Mountains	1.2	0.1
South Coast	3.0	0.2
<b>Victoria</b>		
East Gippsland	1.9	0.1
Wodonga Alpine	3.8	0.2
Wellington	3.1	0.2
<b>South Australia</b>		
Fleurieu - Kangaroo Island	1.9	0.1
<b>Sub-total</b>	<b>22.2</b>	<b>1.1</b>
<b>Australia</b>	<b>1,947.2</b>	<b>100.0</b>

## Australia’s bushfire tragedy

- The social cost of the bushfire disaster has been immense. There is no precise way to gauge the economic impact until official data become available, but a sensitivity analysis shows that the south-eastern regions, along with Kangaroo Island, account for 1% of national output. This means one month of lost production would take 0.4% off quarterly GDP and 0.1% of annual GDP.
- We think this is a reasonable starting point for estimating the economic effect, although the impact may end up larger given: (1) there is likely to be a negative effect on confidence encouraging more cautious spending; (2) other regions have been affected by fires; (3) it could take time for recovery to start in the affected areas; (4) there is the indirect effect of hazardous smoke in Canberra, Sydney and Melbourne; and (5) the bushfire season normally lasts until March. There will be rebuilding work, but this does not seem likely to be as large as the 2010-11 Queensland floods.
- We expect that the economic effect will be concentrated in the affected regions and greatest for: (1) households; (2) business, particularly tourism and insurance; and (3) agriculture, forestry and fishing, which accounts for 21% of the affected regions’ output. Like the Queensland floods, the Reserve Bank is likely to downplay the implications of the bushfires for policy given their temporary economic effect, although note that NAB expects a rate cut in February given sub-trend growth and below-target inflation. The budgetary cost will be largely borne by the Commonwealth under disaster funding arrangements with the states.

### There have been unprecedented bushfires in south-east Australia

Bushfires have been under way for some months across much of Australia, with the fires intensifying in New South Wales, Victoria and South Australia over recent weeks. Tragically, the fires have claimed lives and destroyed homes, farms, businesses, livestock and wildlife.

The tragedy is ongoing, with massive fires still burning. At the worst point, New South Wales declared a state of emergency, while Victoria declared a state of disaster. Like past natural disasters, the defence forces have been deployed, with their tasks including fighting the fires and evacuations of residents in the path of the fires.

There have been larger fires in Australia’s history in terms of land mass, but, as state authorities have pointed out, the recent fires have been unprecedented in terms of their number, frequency and severity.

- The death toll is at least 27 across New South Wales, Victoria and South Australia.
- Over 2,000 homes have been destroyed in recent months over New South Wales, Victoria and South Australia.

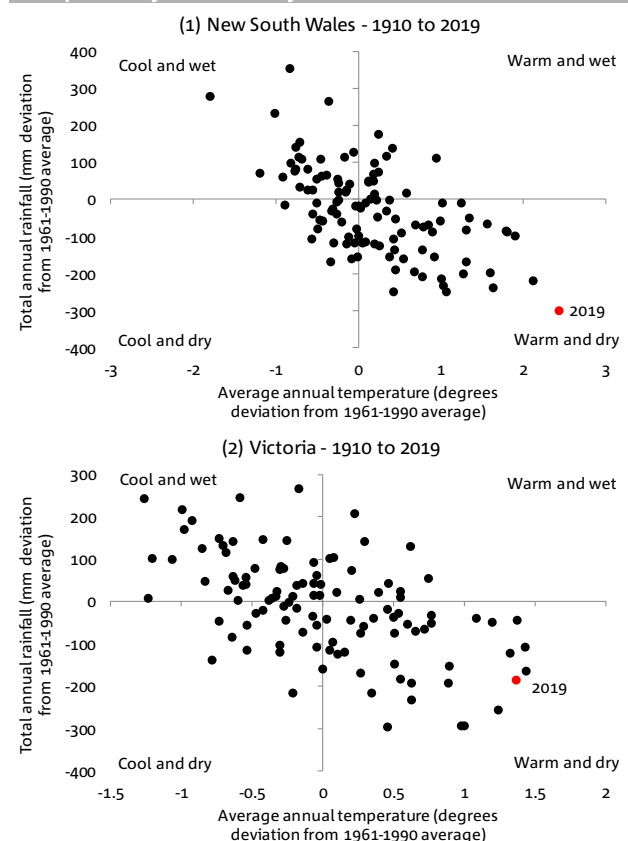
- Many fires are still burning with an estimated 10 million hectares of land burnt to date, including vast tracts of national parks, mostly in New South Wales and equating to 1.3% of Australia’s land mass.

### The bushfires reflect exceptionally warm and dry conditions in south-eastern Australia

The bushfire emergency reflects prolonged drought and a warming trend, with the Bureau of Meteorology highlighting the role of climate change in influencing the frequency and severity of dangerous bushfire conditions via temperature, environmental moisture, weather patterns and fuel conditions.<sup>1</sup>

In August last year, the Bushfire & Natural Hazard Co-operative Research Centre – the Commonwealth-sponsored body that takes input from the Bureau of Meteorology and the state emergency authorities – warned of the potential for an active fire season given very warm and dry current and expected conditions.<sup>2</sup> This is clear from weather data showing the exceptionally hot and dry conditions in New South Wales and Victoria in 2019.

Chart 1: New South Wales and Victoria have been exceptionally hot and dry



Source: Bureau of Meteorology, National Australia Bank

<sup>1</sup> See Bureau of Meteorology, *Bushfire weather*, 2020 at [www.bom.gov.au](http://www.bom.gov.au).

<sup>2</sup> See Bushfire & Natural Hazard Co-operative Research Centre, *Australian seasonal bushfire outlook: August 2019*, August 2019.

**We undertook a narrow sensitivity analysis on the impact of the most recent fires on national GDP**

The social cost of the bushfires has been immense. There is also an economic effect, which will prove temporary as the affected regions eventually recover, where we have undertaken a preliminary analysis of the potential impact of the disaster on GDP.

The analysis is preliminary because the scale of the disaster will only become clear as official data become available over the coming weeks and months, along with key private-sector indicators such as the National Australia Bank business survey. The December business survey, due in late January, may provide an early indication, while the January survey that is released in early February will include special questions on the subject.

There is no straightforward way to estimate the potential economic impact of this disaster based on history. This is because there is no simple method of standardising the impact of different natural disasters to compare them when gauging their economic effect.

With these key qualifications in mind, we undertook a simple sensitivity analysis of the potential direct impact of the bushfires on national activity using the regional split of GDP from SGS Economics and Planning.

We concentrated on the major fires in December and January in south-eastern Australia, as well as the fires in the Blue Mountains of New South Wales and Kangaroo Island in South Australia. Together these regions account for about 1% of national GDP.

This meant that the sensitivity analysis was incomplete because we excluded other key fires around the country, particularly the fires on the mid and north central coast and central tablelands of New South Wales. This decision was taken because we could not split cities/large towns that were not directly affected by the fires from the regional estimates.

**Table 1: Regions affected by the December/January bushfires account for about 1% of national GDP**

GDP for 2018-19	\$b	% of Australia
<b>New South Wales</b>		
Blue Mountains	2.6	0.1
Shoalhaven	4.7	0.2
Snowy Mountains	1.2	0.1
South Coast	3.0	0.2
<b>Victoria</b>		
East Gippsland	1.9	0.1
Wodonga Alpine	3.8	0.2
Wellington	3.1	0.2
<b>South Australia</b>		
Fleurieu - Kangaroo Island	1.9	0.1
<b>Sub-total</b>	<b>22.2</b>	<b>1.1</b>
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Source: Australian Bureau of Statistics, SGS Economics and Planning, National Australia Bank

Assuming these regions were economically “out of action” for a month, this could subtract about 0.4pp from national GDP spread over the end of Q4 and into Q1. As activity recovers to more normal levels when the bushfires are extinguished and power, fuel and basic services are restored and roads reopened, the impact on annual GDP would be smaller at 0.1%.

**Table 2: A month of lost production in these select regions would subtract 0.4pp from quarterly GDP and 0.1pp from annual GDP**

Potential impact on national GDP	Months of lost production:			
	1	2	3	4
- \$b	-1.9	-3.7	-5.6	-7.4
- % of Q3 2019 GDP	-0.4	-0.7	-1.1	-1.5
- % of annual GDP	-0.1	-0.2	-0.3	-0.4

Source: SGS Economics and Planning, National Australia Bank

We regard this estimate as a reasonable starting point, although the temporary impact is likely to be somewhat larger given:

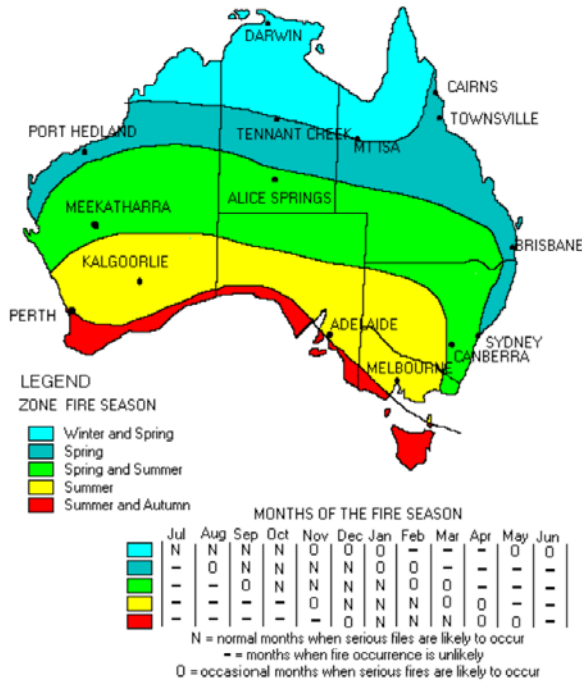
- There is likely to be a negative effect on confidence encouraging households to be more cautious with their spending.
- There is the direct impact of other fires on the rest of Australia. For example, as mentioned, we excluded fires in in other parts of Australia, where the additional New South Wales regions affected accounted for a further 2% of national GDP;
- It could take more time for affected areas to be declared safe, essential services to be restored and recovery to start;
- There is the indirect effect of hazardous smoke haze in Canberra, Sydney and Melbourne (for example, some building sites were closed on some days in Sydney over recent weeks); and
- The bushfire season normally lasts until March.

Partly offsetting these negative effects, there will be rebuilding work as damaged and destroyed homes, farms and infrastructure are repaired and replaced, but this may not provide a large boost to GDP as other natural disasters given the early information discussed in the next section.

In comparison, we note that SGS Economics and Planning have used their macroeconomic regional model to calculate a similar early estimate of the impact of the fires. SGS estimates that the fires could take about 0.15pp off annual GDP, with the effect concentrated in Q1. SGS's estimate also includes the spillover of smoke pollution.<sup>3</sup>

<sup>3</sup> See Jessica Irvine, *Economic cost of bushfires estimated at \$2 billion and rising*, Sydney Morning Herald, 7 January 2020.

Chart 2: The bushfire season normally lasts until March



Source: Australian Bureau of Statistics, National Australia Bank

**The impact of the bushfires is likely to be greatest for households, retail, tourism, insurance and agriculture/forestry/ fishing**

At this early stage, we expect that the economic effect of the bushfires is likely to be concentrated in the affected regions and greatest for:

- Households, covering consumer spending and residential construction;
- Businesses, particularly small- and medium-sized businesses exposed to retail and tourism, and insurers; and
- Agriculture, forestry and fishing.

There is also some impact on infrastructure, including road and rail, but so far this does not seem to be on the scale of the Queensland floods in 2010-11, where there was extensive flooding of coal mines and broader damage to the transport network.

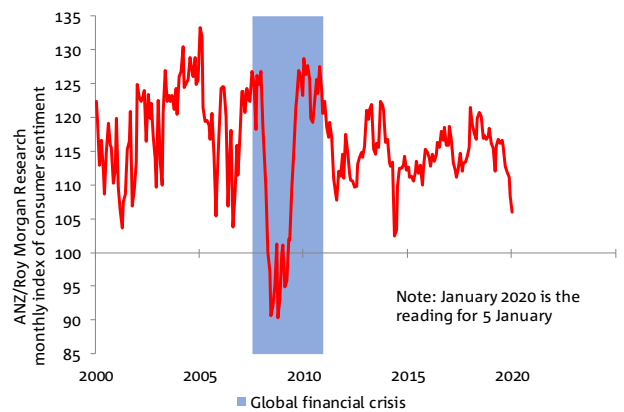
We do not have a clear sense yet of many of these effects, but in terms of partial information and media reports:

- **Consumer spending.** Household spending would have ground to a halt in the affected regions given the scale and intensity of the disaster, with widespread evacuations amid the danger to life and severe disruptions to utilities. At the time of writing there are still some power outages across south-eastern Australia.

Nationally, the only partial indicator released that covers consumers has been the ANZ/Roy Morgan Research measure of weekly consumer sentiment, which fell further in the first week of January, reaching the lowest level since 2015.

The decline was driven by the assessment of the economy, with current economic conditions now at the lowest level since the global financial crisis, while sentiment toward the economic outlook was the lowest since 1994, back when the economy was recovering from recession. That said, we note the Reserve Bank normally focuses on the personal finances component of sentiment, which was little changed from late last year. It will be important in coming weeks to see the extent to which this fall is sustained or unwound.

Chart 3: Consumer confidence fell further in early January



Source: ANZ Bank/Roy Morgan Research, National Australia Bank

- **Residential investment.** The media reports over 2,000 homes have been destroyed, which compares with 10.4 million homes nationwide. This figure may rise given that tragedy is still under way.
- **Business, including tourism and insurance.** We will get feedback from firms on the effect of the crisis on business conditions, confidence and hiring with the December National Australia Bank business survey, due 28 January, and the January survey, due 11 February (as noted above, the January survey will include special questions on the bushfires). A weighted combination of the Australian Industry Group construction, manufacturing and services headline business indicators fell from 51 in November to 46 in December. This might indicate some impact from the bushfires, although this indicator tends to be more volatile than the National Australia Bank measure of business conditions.

The ANZ Bank measure of job ads fell by 7% in December. Excluding an 8% fall coinciding with last year’s federal election, this was the largest monthly fall since the global financial crisis. The ANZ Bank thought that the “escalating bushfire crisis had an impact” on ads, but we are more cautious given the ANZ series is more volatile than the alternative SEEK measure of job ads.<sup>4</sup>

As for **tourism**, south-eastern Australia, including the Blue Mountains, is an important destination for domestic tourists over summer and will see a large

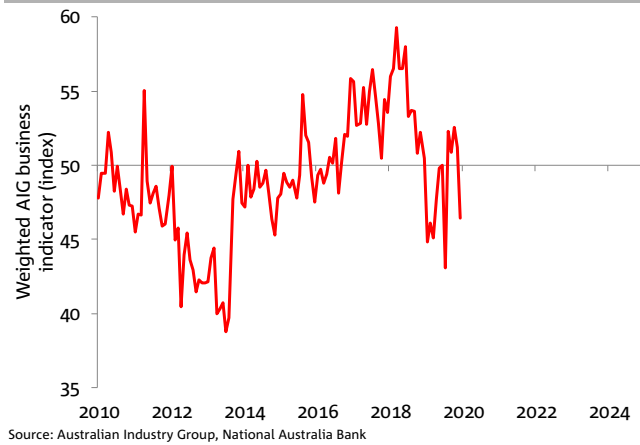
<sup>4</sup> See ANZ Research, *December job ads impacted by fires*, ANZ Australian job advertisement series media release, 7 January 2020.

negative impact on activity, particularly given some accommodation and attractions have been either destroyed or damaged. The smoke haze in the capital cities, which received extensive coverage in the international press, may also affect international tourism in coming months (for example, the US recently upgraded its travel warning for Australia to “Level 2 – exercise increased caution” because of the bushfires).

In terms of anecdotes, the Accommodation Association of Australia has said hotel bookings fell 3% in Sydney in December and by up to 10% in regional New South Wales.<sup>5</sup> Canberra bookings are reportedly down 15% for January.<sup>6</sup> Tourism Australia has paused its advertising campaign in the UK, while there are reports that recent bookings from Singapore have held up, but that enquiries for March have dropped sharply.<sup>7</sup> Kangaroo Island tourism operators have reported cancellations out to April.<sup>8</sup>

According to the Insurance Council of Australia, **insurance** losses currently stand at \$0.7b since September, or less than 0.1% of GDP, although this figure is widely expected to rise significantly as the fires recede. The treasurer reports that 20% of claims to date have been processed and half settled. In comparison, normalised insurance losses from the Ash Wednesday fires in the early 1980s and the Brisbane/Lockyer Valley flooding of 2010 were both \$2.3b, while the nominal loss from the 2009 bushfires was \$1b.<sup>9</sup>

Chart 4: The weighted AIG business surveys fell sharply in December



- **Agriculture, forestry and fishing.** Nationally primary production has fallen to only a 1.5% share of GDP given the toll from the severe drought. In south-eastern Australia, primary production is far more

important, accounting for 21% of regional GDP on the SGS Economics and Planning estimates.

Most of Australia’s **milk production** takes place in the south-east, with the bushfires in regions that account for 27% of national production of 8.8b litres in 2018-19 (Gippsland in Victoria accounts for 21% of output, with the south coast of New South Wales accounting for 6%). The extent to which the fires have affected production is unclear, although the press has speculated about milk shortages in New South Wales on the back of livestock losses and lack of feed.<sup>10</sup> Milk processing infrastructure appears to be intact, with Bega Cheese reporting its two sites at Bega in New South Wales were not directly impacted by fire.

As for **livestock** more generally, there are 3.5m sheep in east Gippsland and south-east New South Wales, or 5% of the national flock, and 0.5m beef cattle, or 2% of Australia’s herd. Stock losses are still being estimated, with the New South Wales government forecasting 10-20k cattle and sheep have been lost.

**Apple production** may not be significantly impacted by the bushfires. Batlow in New South Wales produces 8% of Australia’s apples with national production valued at nearly \$0.5b in 2017-18. So far reports suggest damage to orchards is minor, although a full assessment is yet to be done. Apple orchards in Victoria’s Gippsland may have been affected, where Victoria overall produces 45% of Australia’s apples.

State-run **timber plantations** are in forests exposed to the recent fires, near Tumut, Tumbarumba and Bombala in New South Wales and Kangaroo Island in South Australia. The New South Wales government estimates that 20% of the state’s forestry assets have been affected. The Eden woodchip mill was also damaged. Wood and product manufacturing was worth \$2.4b annually in New South Wales, 75% of sawn timber in Australia used in residential construction, with 20% used in the furniture industry and 5% used in the kitchen industry. The extent of the damage to forestry assets means there is potential for timber supply for residential construction to be affected, at least temporarily.

**Fishing** is likely to have been disrupted by logistical challenges in transporting goods on land, as well as the use of fishing boats to rescue and shelter trapped residents. Fisheries in New South Wales account for 6% of total production worth \$2b annually, with the key commercial fishing ports of Ulladulla and Bermagui accounting for 15% of the

<sup>5</sup> See Andrew Taylor, ‘People aren’t stupid’: bushfire crisis scorches Australia’s image, Sydney Morning Herald, 5 January 2020.

<sup>6</sup> See Laura Tingle, Morrison can’t stop the shockwaves from bushfires, 5 January 2020.

<sup>7</sup> See Rachel Phua, Flights, tour bookings from Singapore unaffected by Australia bushfires, Channel News Asia, 3 January 2020.

<sup>8</sup> See ABC, Kangaroo Island businesses urge tourists not to abandon them after fire catastrophe, ABC News, 8 January

2020 and AAP, ‘Australia is open’: PM Scott Morrison wants tourists to keep coming, stuff.co.nz, 9 January 2020.

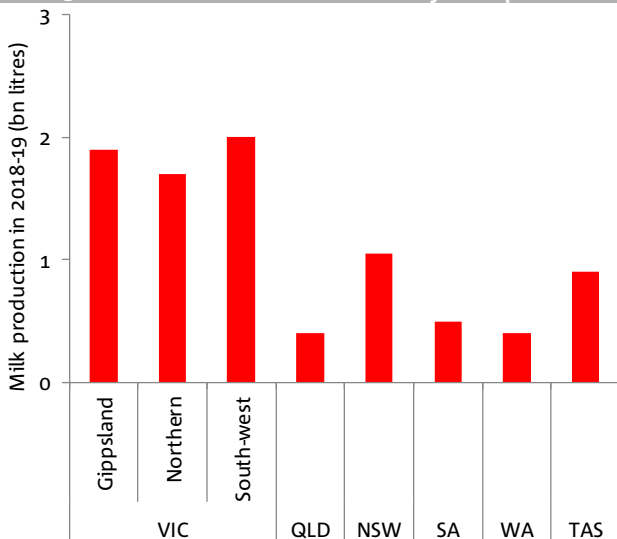
<sup>9</sup> The normalised losses adjust for the change in construction costs over time. See John McAnaney, Benjamin Sandercock, Ryan Crompton, Rade Musulin, Roger Pielke Jr and Andrew Gissing, Normalised insurance losses and weather-related Australian natural disasters: 1966-2017, Risk Frontiers, 2018.

<sup>10</sup> See Victoria Pengilly, Milk shortage fears amid Australian bushfires as dairy farmer fears devastation from animal deaths, ABC News, 6 January 2020.

eastern fishing fleet.

Finally, on a technical note, the **treatment of agricultural assets** in the official statistics depends on their end-use. Dairy cattle, sheep raised for wool, and tree/crop/plants yielding repeat products are capitalised as investment in “cultivated biological resources”. Stock losses on such assets do not have a direct impact on GDP, instead subtracting from the capital stock. In contrast, beef cattle and sheep raised for meat are treated as “work-in-progress” and counted in the GDP measure of inventories until slaughtered. Consequently, losses of beef cattle would likely see a small impact on farm inventories as measured in GDP.

**Chart 5: South-eastern Australia is a key milk producer**



Source: Dairy Australia, National Australia Bank

**The Reserve Bank is likely to downplay the impact of the bushfires on monetary policy**

Based on the experience of the 2010-11 Queensland floods, the Reserve Bank is likely to downplay the short-term impact of the bushfires on monetary policy. For example, the February 2011 Board minutes reported that “the recent floods would have significant short-term effects on output and prices, [but] members considered that the focus of monetary policy should remain on the medium-term outlook for economic activity and inflation.”

This is important considering that the Queensland floods were a huge natural disaster; 75% of the state was affected with 36 lives lost, 5,900 people evacuated and 28,000 homes destroyed, with an estimated damage bill of almost \$2.5b. Critical rail infrastructure was destroyed, disrupting coal production and driving an estimated \$4b in losses across mining, agriculture and tourism industries.<sup>11</sup>

That said, the Reserve Bank toned down its rhetoric as it became clear that the floods were having a greater economic effect than it had initially assumed. Immediately following the floods, the bank downgraded

<sup>11</sup> See Reserve Bank of Australia, *Statement on monetary policy*, February and May 2011.  
<sup>12</sup> See Prime Minister Morrison, *Transcript of press conference*, Canberra, 6 January 2020.

its forecast for quarterly GDP growth in Q1 from 0.9% to 0.4%, while also expecting a large 2% rebound in Q2. However, GDP actually *fell* by 0.3% in the quarter (initially reported as a 1.2% decline), before rebounding by 1.2% in Q2. The Reserve Bank’s statements on monetary policy show the bank underestimated the impact on mining, where a fall in bulk commodity exports subtracted around 1¾ percentage points from growth.

**The Commonwealth government should ultimately bear most of the budgetary cost of the bushfires**

It is too early to gauge the impact of the bushfires on government budgets, although most of the cost will initially be borne by the New South Wales, Victoria and South Australia governments before being reimbursed by the Commonwealth. New South Wales has already committed \$1.2b of funding for bushfire assistance and infrastructure repair.

Under Commonwealth-state disaster recovery funding arrangements, the Commonwealth will fund up to 75% of state financial assistance to disaster-affected communities, including the reconstruction of essential public assets.

The Commonwealth will also provide direct assistance to communities via:

- Existing social welfare and disaster arrangements; and
- The newly-established National Bushfire Recovery Agency, which has initial funding of \$2b over three years directed by state governments.

Importantly, the prime minister has also said that the government would do “whatever it takes, to do whatever it costs” to support the bushfire recovery effort, adding that the “surplus is [now] of no focus to me”.<sup>12</sup> This is a very positive development, although given disaster funding arrangements the impact of the bushfires on the budget will be felt over several years.

**The impact on the labour force survey**

Finally, focusing on the impact of the bushfire disaster on the labour force survey, the survey would normally be polled for two weeks starting from Sunday, 12 January, but the Bureau of Statistics has said that “occasionally, circumstances that present significant operational difficulties for survey collection can result in a change to the normal pattern for the start of interviewing”.<sup>13</sup>

The scale of the disaster raises the possibility that the bureau may not be able to contact some survey respondents, such that there is more uncertainty around the estimates than usual. With that in mind, there could be some loss of employment and increase in unemployment, although it may be hard to distinguish from the normal volatility of the monthly numbers. There should be a clearer effect on total hours worked.

**Kieran Davies, Tapas Strickland, Kaixin Owyong**

<sup>13</sup> See Australian Bureau of Statistics, *Labour force, November 2019*, December 2019.

# CALENDAR OF ECONOMIC RELEASES

Country	Economic Indicator	Period	Forecast	Consensus	Actual	Previous	GMT	AEDT
<b>Monday 13 January 2020</b>								
AU	Melbourne Institute Inflation MoM / YoY	Dec		--	0.3 / 1.4	0 / 1.5	0.00	11.00
UK	Industrial Production YoY	Nov		-1.2		-1.3	9.30	20.30
UK	Monthly GDP (MoM)	Nov		0		0	9.30	20.30
US	Fed's Rosengren speaks on economic outlook						15.00	2.00
US	Fed's Bostic speaks on economic outlook and policy						17.40	4.40
<b>Tuesday 14 January 2020</b>								
CH	Trade Balance	Dec		45.25		38.73	14 Jan	
CH	Exports YoY / Imports YoY	Dec		1.9 / 9.5		-1.1 / 0.3	14 Jan	
NZ	QSBO survey	Q4		--		-40	21.00	8.00
NZ	Building Permits MoM	Nov		--		-1.1	21.45	8.45
JN	BoP Current Account Balance	Nov		--		1816.8	23.50	10.50
US	NFIB Small Business Optimism	Dec		104.8		104.7	11.00	22.00
US	CPI MoM / YoY	Dec		0.2 / 2.3		0.3 / 2.1	13.30	0.30
US	Fed's Williams speaks on behavioural science						14.00	1.00
US	Fed's George speaks						18.00	5.00
<b>Wednesday 15 January 2020</b>								
NZ	Food Prices MoM	Dec	-0.2	--		-0.7	21.45	8.45
EC	Industrial Production WDA YoY	Nov		-1.3		-2.2	10.00	21.00
US	Empire Manufacturing	Jan		4		3.5	13.30	0.30
US	PPI Final Demand YoY	Dec		1.3		1.1	13.30	0.30
US	Fed's Harkat speaks						16.00	3.00
US	Fed's Kaplan speaks						17.00	4.00
US	Fed releases beige book						19.00	6.00
<b>Thursday 16 January 2020</b>								
NZ	Electronic card transactions	Dec	0.1	--		1	21.45	8.45
JN	PPI YoY	Dec		--		0.1	23.50	10.50
JN	Core Machine Orders YoY	Nov		--		-6.1	23.50	10.50
AU	Home loan approvals	Nov		--		2.2	0.30	11.30
GE	CPI YoY	Dec F		1.5		1.5	7.00	18.00
US	Retail Sales Advance MoM	Dec		0.3		0.2	13.30	0.30
US	Philadelphia Fed Business Outlook	Jan		3.4		0.3	13.30	0.30
<b>Friday 17 January 2020</b>								
NZ	BusinessNZ Manufacturing PMI	Dec		--		51.4	21.30	8.30
CH	GDP YoY	4Q		6		6	2.00	13.00
CH	Retail Sales YoY	Dec		7.8		8	2.00	13.00
CH	Fixed Assets Ex Rural YTD YoY	Dec		5.2		5.2	2.00	13.00
CH	Industrial Production YoY	Dec		5.9		6.2	2.00	13.00
UK	Retail Sales Inc Auto Fuel YoY	Dec		2		1	9.30	20.30
EC	CPI YoY	Dec		1.3		1	10.00	21.00
US	Housing Starts	Dec		1376		1365	13.30	0.30
US	Industrial Production MoM	Dec		0.1		1.1	14.15	1.15
US	U. of Mich. Expectations	Jan P		--		88.9	15.00	2.00
US	U. of Mich. Sentiment	Jan P		99.3		99.3	15.00	2.00
<b>Upcoming Central Bank Interest Rate Announcements</b>								
Japan, BoJ		Jan 21	-0.10	-0.10		-0.10		
Canada, BoC		Jan 22	1.75	1.75		1.75		
Europe, ECB		Jan 23	-0.50	-0.50		-0.50		
US, Federal Reserve		Jan 29	1.5/1.75	1.5/1.75		1.5/1.75		
UK, BOE		Jan 30	0.75	0.75		0.75		
Australia, RBA		Feb 4	0.50	0.75		0.75		
New Zealand, RBNZ		Feb 12	1.00	1.00		1.00		

GMT: Greenwich Mean Time; AEDT: Australian Eastern Daylight Time

# FORECASTS

Economic Forecasts																				
	Annual % change				Quarterly % change															
	2018	2019	2020	2021	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	2.7	1.4	1.4	2.0	0.5	0.8	0.3	0.4	0.3	0.3	0.1	0.2	0.3	0.5	0.6	0.5	0.4	0.4	0.5	0.6
Underlying Business Investment	1.3	-3.0	-2.4	3.2	1.0	-1.0	-1.4	-0.4	0.9	-1.2	-2.9	-1.3	-0.1	-0.1	0.5	0.9	0.9	0.9	0.9	1.0
Residential Construction	4.7	-7.1	-7.8	-0.7	3.4	2.5	0.4	-3.0	-1.6	-3.7	-1.7	-2.4	-2.2	-2.0	-1.2	-0.4	0.4	-0.2	0.6	0.7
Underlying Public Spending	4.4	4.8	4.6	3.6	1.4	-0.5	2.0	0.7	1.0	1.7	1.7	0.8	1.1	1.1	0.9	0.9	0.9	0.9	0.8	0.8
Net Exports (a)	0.9	1.4	0.1	0.0	0.6	0.0	0.4	-0.1	0.4	0.5	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inventories (a)	0.1	-0.3	0.1	0.0	-0.1	0.3	-0.3	0.1	-0.1	-0.4	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	0.3	0.5	0.1	0.3	0.3	0.2	0.1	0.3	0.4	0.6	0.6	0.6	0.6	0.7	0.7
Dom Demand (y/y %)	2.9	1.0	1.4	2.4	3.7	3.3	2.6	1.8	1.2	1.2	0.9	0.9	1.0	1.0	1.4	2.0	2.3	2.4	2.5	2.6
Real GDP (q/q %)	-	-	-	-	0.9	0.7	0.3	0.2	0.5	0.6	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7
Real GDP (y/y %)	2.7	1.8	2.0	2.4	3.1	3.2	2.5	2.1	1.7	1.6	1.7	2.0	1.9	1.8	1.9	2.1	2.2	2.3	2.4	2.5
CPI headline (q/q %)	-	-	-	-	0.4	0.4	0.4	0.5	0.0	0.6	0.5	0.6	0.4	0.4	0.5	0.6	0.5	0.5	0.6	0.7
CPI headline (y/y %)	1.9	1.6	2.0	2.2	1.9	2.1	1.9	1.8	1.3	1.6	1.7	1.8	2.2	1.9	1.9	1.9	2.1	2.2	2.3	2.4
CPI underlying (q/q %)	-	-	-	-	0.5	0.5	0.4	0.4	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5
CPI underlying (y/y %)	1.8	1.4	1.6	2.0	1.9	1.8	1.8	1.8	1.5	1.4	1.4	1.4	1.6	1.6	1.7	1.7	1.8	1.9	2.0	2.1
Private wages (q/q %)	-	-	-	-	0.5	0.6	0.5	0.6	0.5	0.5	0.5	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	2.2	2.2	2.3	2.5	2.6	2.6	2.7	2.7	2.8	2.8
Unemployment Rate (%)	5.3	5.3	5.5	5.6	5.5	5.6	5.1	5.0	5.1	5.2	5.4	5.4	5.4	5.4	5.5	5.6	5.6	5.5	5.6	5.6
Terms of trade	1.8	5.4	-6.5	-1.8	3.3	-1.2	0.7	2.6	3.3	1.4	0.3	-4.5	-1.9	-1.9	0.0	-1.9	-0.3	0.2	0.2	0.6
Current Account (% GDP)	-2.1	0.7	-0.1	-0.5	-2.1	-2.6	-2.1	-1.3	-0.4	0.9	1.6	0.7	0.4	0.0	-0.1	-0.5	-0.6	-0.5	-0.5	-0.4

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

Exchange Rate Forecasts						
	13-Jan	Mar-20	Jun-20	Sep-20	Dec-20	Mar-21
<b>Majors</b>						
AUD/USD	0.692	0.68	0.69	0.70	0.71	0.71
NZD/USD	0.66	0.65	0.65	0.66	0.67	0.67
USD/JPY	109.6	109	109	108	110	108
EUR/USD	1.11	1.14	1.16	1.16	1.17	1.17
GBP/USD	1.30	1.35	1.35	1.35	1.33	1.36
USD/CNY	6.90	7.05	7.00	6.90	6.85	6.85
USD/CAD	1.30	1.31	1.30	1.30	1.31	1.32
USD/CHF	0.97	0.98	0.96	0.96	0.96	0.96

Australian Cross Rates						
	13-Jan	Mar-20	Jun-20	Sep-20	Dec-20	Mar-21
AUD/NZD	1.04	1.05	1.06	1.06	1.06	1.06
AUD/JPY	75.8	74	75	76	78	77
AUD/EUR	0.62	0.60	0.59	0.60	0.61	0.61
AUD/GBP	0.53	0.50	0.51	0.52	0.53	0.52
AUD/CNY	4.77	4.79	4.83	4.83	4.86	4.86
AUD/CAD	0.90	0.89	0.90	0.91	0.93	0.94
AUD/CHF	0.67	0.67	0.66	0.67	0.68	0.68

Interest Rate Forecasts						
	13-Jan	Mar-20	Jun-20	Sep-20	Dec-20	Mar-21
<b>Australian Rates</b>						
RBA cash rate	0.75	0.50	0.25	0.25	0.25	0.25
3 month bill rate	0.90	0.60	0.35	0.35	0.35	0.35
3 Year Swap Rate	0.81	0.65	0.50	0.45	0.35	0.45
10 Year Swap Rate	1.35	1.15	1.02	1.02	0.92	1.02
<b>Offshore Policy Rates</b>						
US Fed funds	1.75	1.75	1.75	1.75	1.75	1.75
ECB deposit rate	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50
BoE repo rate	0.75	0.75	0.75	0.75	1.00	1.00
BoJ excess reserves rate	-0.10	-0.20	-0.30	-0.30	-0.30	-0.30
RBNZ OCR	1.00	1.00	1.00	1.00	1.00	1.00
China 1yr lending rate	4.35	4.10	4.10	4.10	4.10	4.10
China Reserve Ratio	12.5	12.0	12.0	12.0	12.0	12.0
<b>10-year Bond Yields</b>						
Australia	1.21	1.00	0.90	0.90	0.80	0.90
United States	1.82	1.80	1.80	1.80	1.80	1.90
New Zealand	1.46	0.95	1.05	1.10	1.30	1.45

Sources: NAB Global Markets Research; Bloomberg; ABS

Global GDP				
	2018	2019	2020	2021
Australia	2.7	1.8	2.0	2.4
United States	2.9	2.3	1.7	1.8
Eurozone	1.9	1.2	1.1	1.4
United Kingdom	1.4	1.3	1.0	1.5
Japan	0.3	1.1	0.6	0.9
China	6.6	6.1	5.9	5.8
India	7.4	5.1	6.2	7.1
New Zealand	2.8	2.2	2.2	2.0
World	3.6	3.0	3.2	3.5

Commodity prices (\$US)						
	13-Jan	Mar-20	Jun-20	Sep-20	Dec-20	Mar-21
Brent oil	65.0	65	66	67	68	68
Gold	1556	1490	1510	1520	1540	1550
Iron ore	na	79	76	72	68	71
Hard coking coal*	150	145	150	152	150	153
Thermal coal	66	72	70	68	70	72
Copper	6172	5700	5725	5750	5850	5900
Aus LNG**	10	11	11	11	11	11

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

\*\* Implied Australian LNG export prices



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