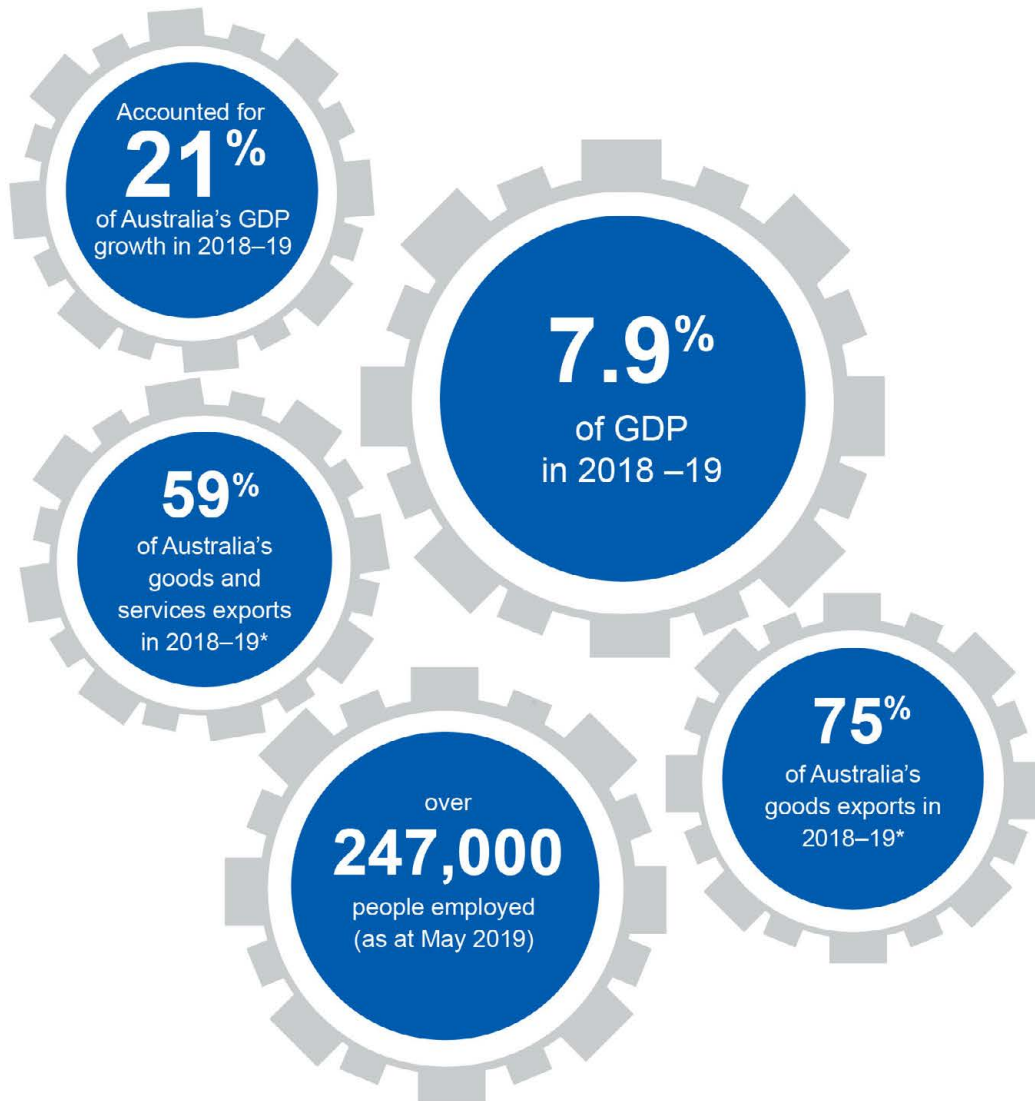


# Overview

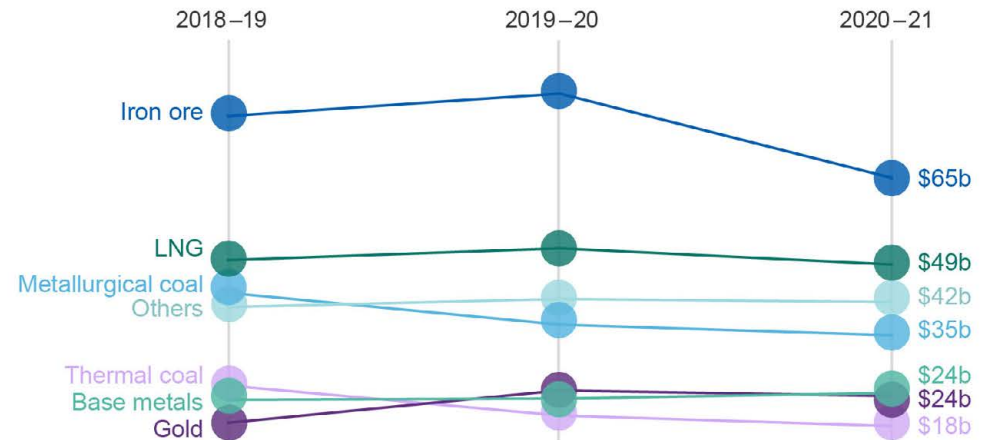
Resources and Energy Quarterly September 2019

## Australia's mining sector

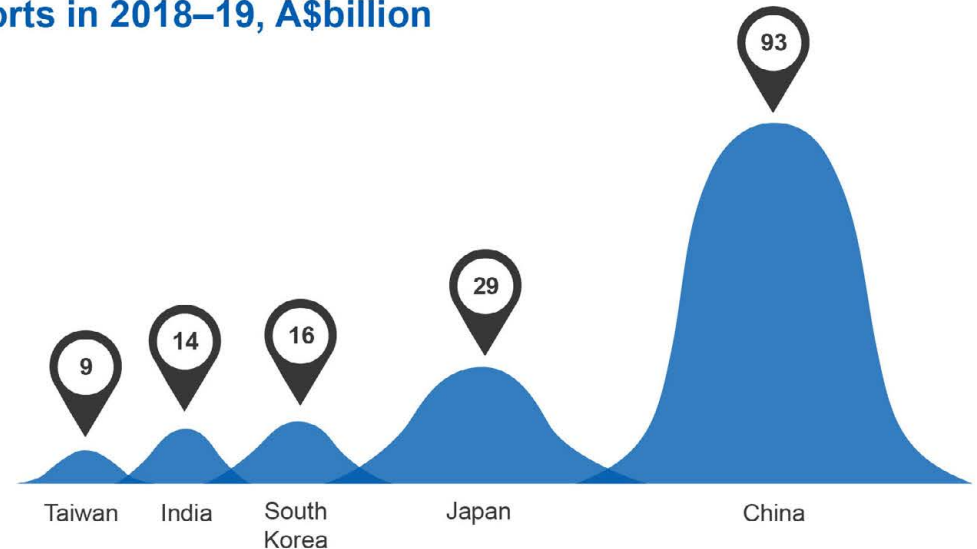


\*Export figures are for resources and energy (broader than mining sector)

## Australia's resources and energy exports 2018–19, A\$billion



## Major markets for Australia's resources and energy exports in 2018–19, A\$billion



## 1.1 Summary

- The world industrial production cycle has continued to slow in recent months, and looks set to slow further. The extent of any down-cycle in resource commodities largely depends on whether China can avoid a further slowing in growth, and a resolution of US-China trade tensions.
- The industrial production slowdown has seen the prices of Australia's major resource commodities decline noticeably from the 7-year highs set in the June quarter 2019. Prices are likely to drift down over the outlook period, due to softer demand and rising supply.
- Notwithstanding weaker prices, both higher export volumes and a lower than expected Australian dollar are likely to see Australia's resource and energy export earnings set a new record of \$282 billion in 2019–20 (Figure 1.1). Further price falls are likely to drive earnings down to \$258 billion in 2020–21.

## 1.2 Export values

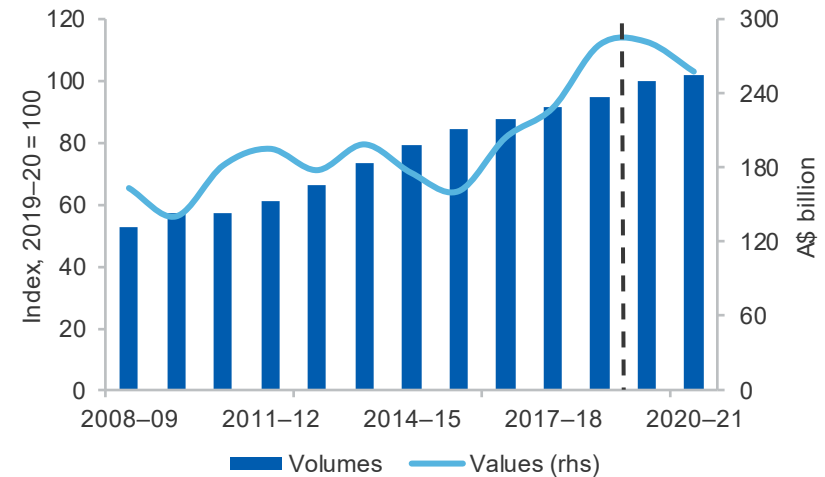
### Australia's export values expected to be \$282 billion in 2019–20

The Office of the Chief Economist's (OCE) Resources and Energy Export Values Index rose by 12.9 per cent in the year to the September quarter 2019. A 4.8 per cent rise in volumes added to an 8.5 per cent rise in prices. Figure 1.2 shows that in 2019–20, resource export values are forecast to rise by 0.8 per cent to \$282 billion, as a 5.5 per cent rise in volumes is largely offset by a 4.6 per cent fall in prices. In 2020–21, while export volumes are expected to rise by a further 1.9 per cent, a forecast rise in the Australian dollar and weaker commodity prices (down 10.8 per cent) will drive an 8.5 per cent fall in export earnings to \$258 billion.

### Ongoing weakness in the Australian dollar is boosting export earnings

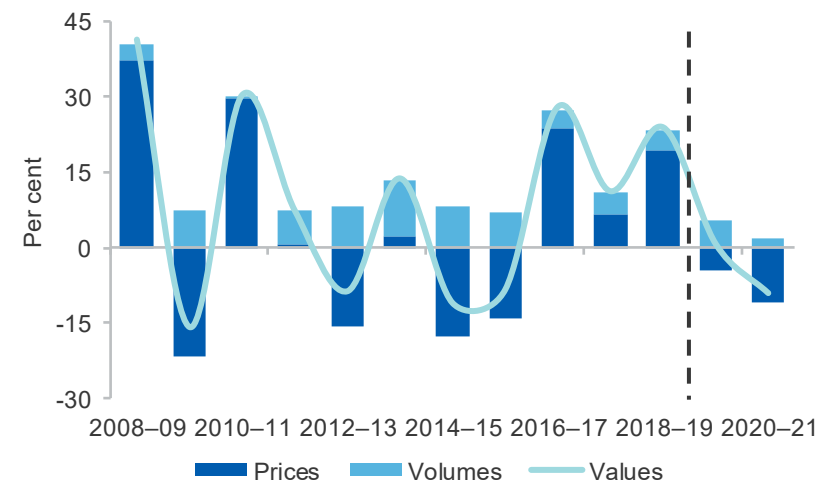
In Australian dollar terms, the OCE's Resources and Energy Commodity Price Index fell by 2.4 per cent (preliminary estimate) in the September quarter, though was still 8.5 per cent higher than a year ago. In US dollar terms, the index fell by 3.8 per cent in the quarter, but was still 2.3 per cent higher than a year before. Figure 1.3 shows that Australian dollar prices for resource commodities fell by 2.5 per cent in the September quarter, while prices of energy commodities fell by 2.0 per cent.

Figure 1.1: Australia's resource and energy export values/volumes



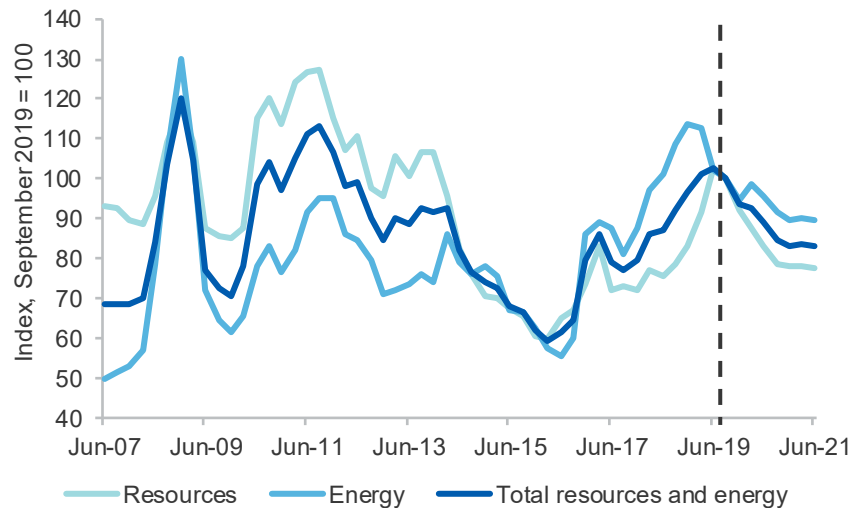
Source: ABS (2019) International Trade in Goods and Services, 5368.0; Department of Industry, Innovation and Science (2019)

Figure 1.2: Annual growth in Australia's resources and energy export values, contributions from prices and volumes



Source: Source: ABS (2019) International Trade in Goods and Services, 5368.0; Department of Industry, Innovation and Science (2019)

**Figure 1.3: Resource and energy export prices, AUD terms**



Notes: The export price index is based on Australian dollar export unit values (EUJs, export values divided by volumes); the export price index is a Fisher price Index, which weights each commodity's EUJ by its share of total export values.

Source: ABS (2019) International Trade in Goods and Services, 5368.0; Department of Industry, Innovation and Science (2019)

### 1.3 Macroeconomic factors and rising trade tensions

The past quarter has seen growth moderate in the world economy, and the signs are that a further modest slowdown is likely. The US-China trade tensions have played a significant part in this world slowdown, and the escalation of that tension in July-August is set to trigger a further slowdown in the level of world trade and economic activity, as global supply chains adjust to new tariff regimes in the US and China. Anecdotal evidence suggests that many US and Chinese firms had absorbed the impact of the first round of US tariffs (of 10 per cent) — delaying the economic fallout — but with the 1 September US tariff hike to 25 per cent, importers are now moving in earnest to pass them through.

The Chinese economy appears to have steadied at a lower pace of growth in the September quarter, as the impact of stimulatory measures — aimed

at offsetting the impact of the institution and escalation of US tariffs on Chinese goods — came through. Market concerns about the impact of the trade tensions has pushed the Chinese exchange rate below the 7 Yuan mark against the US dollar, partly shielding the Chinese trade sector from the US trade measures. Beijing is now rolling out further carefully targeted measures to cushion the impact of the trade tensions.

Growth has slowed in the other major economies, as the fallout from the US-China trade friction spreads. This spread reflects the growing influence of Chinese consumers in world goods and services markets, as China's population becomes wealthier and its middle class one of the world's most influential consumer blocs. Japan has been impacted by slowing exports to China, and trade tensions between South Korea and Japan threaten a further slowdown in North Asia. The Eurozone has slowed noticeably, as the German economy feels the impact of slower Chinese demand, and as 'Brexit' raises concerns in Europe. Central banks may have to ease monetary policy further in order to support economic growth.

The slowdown in world economic growth in the middle of 2019 has led to a sharp drop in global bond yields and the inversion of the US yield curve has sparked concerns of a US recession.

The major risk to world growth is a further escalation of protectionist trade measures between China, Europe, Japan, South Korea and the US. Ongoing uncertainty over the United Kingdom (UK) leaving the European Union customs system is expected to add to business and consumer uncertainty in the UK and the Eurozone, and to add to disruptions in global supply chains. Excess global savings relative to investment — partly caused by ageing populations — threaten to intensify if consumers and businesses adopt a more cautionary stance in reaction to the US-China trade tensions.

Aerial attacks on Saudi Arabian oil facilities have unsettled world oil markets. Tensions in the Middle East could add significantly to the risk premium on the oil price. The looming northern hemisphere winter will impact on energy commodity usage as 2019 ends and 2020 begins.

## 1.4 Prices

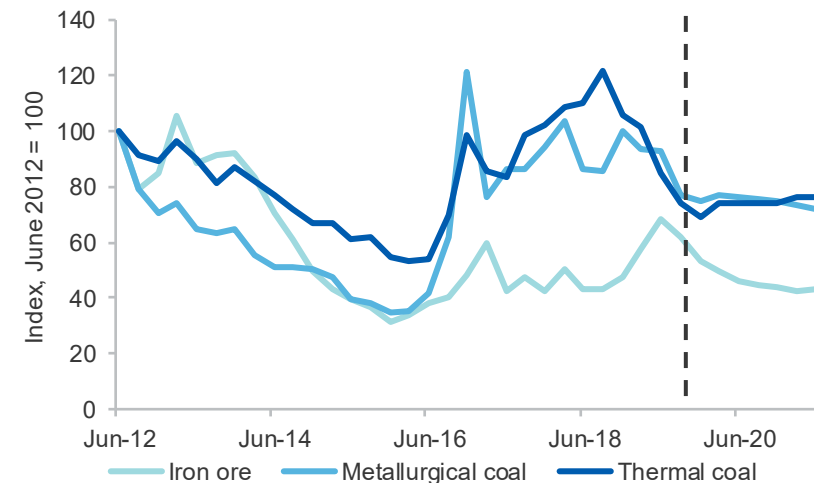
The iron ore price has swung sharply since the June 2019 *Resources and Energy Quarterly*; at one stage, the price exceeded US\$120 a tonne, as Chinese steel mills scrambled for supply, before buying fell away and the price fell sharply. The price fell to US\$83 a tonne in late August, but then rebounded as Chinese steel mills restocked. The price is forecast to fall over the next two years (Figure 1.4), as growth in Chinese steel output eases and supply recovers.

The prices of metallurgical and thermal coal declined sharply in the September quarter. The metallurgical coal price was impacted by rising supply and concerns of weaker demand. The latter relate to the weaker global economic outlook, seasonally weak Indian demand and Chinese import policies. The metallurgical coal price is likely to ease modestly further over the outlook period. Weaker demand has placed downward pressure on the thermal coal price. Persistently low spot LNG prices have also encouraged coal-to-gas switching — mainly in Europe — adding to weak thermal coal demand. Concurrently, large amounts of thermal coal have entered the seaborne market since 2018. Prices are forecast to be subdued during the outlook period, as oversupply persists (Figure 1.4).

Oil prices have recently declined noticeably, on the back of deteriorating economic conditions. Nevertheless, on the expectation that the benchmark Brent price holds above the US\$65 a barrel mark, Australia's growing oil, condensate and LNG exports (of which, the vast majority are linked to oil prices) should result in record petroleum and LNG revenues in 2019–20.

Gold pushed above the US\$1,500 an ounce mark in the first half of August, propelled by safe-haven buying. In (currency neutral) IMF Special Drawing Right terms, gold has recently equalled the all-time high set in late 2012. Gold is forecast to benefit from strong central bank, investor and jewellery demand over the coming year or two. Base metal prices have generally weakened over the past quarter, as US-China trade tensions spark worries over base metal demand. With the exception of nickel, base metals are expected to be weak over 2019–20 (Figure 1.5), as the impact of a world economic slowdown outweighs supply concerns.

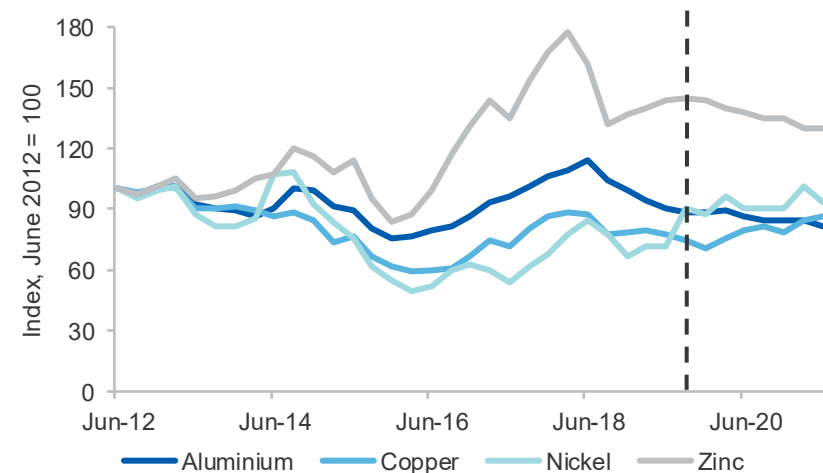
Figure 1.4: Bulk commodity prices



Notes: Prices are in US dollars, and are the international benchmark prices

Source: Bloomberg (2019)

Figure 1.5: Base metal prices



Notes: Prices are in US dollars, and are the international benchmark prices

Source: Bloomberg (2019)

## 1.5 Export volumes

### Export volumes to grow, driven by growing energy exports

The OCE's Resources and Energy Export Volumes Index (preliminary estimate) rose by 4.5 per cent in the September quarter 2019 year-on-year, but was down slightly from the June quarter record high. Energy commodity volumes rose by 8.4 per cent and resource commodity volumes rose by 1.0 percent. Volumes are expected to show solid growth (largely across-the-board) in 2019–20, but more tepid growth in 2020–21.

## 1.6 Contribution to growth and investment

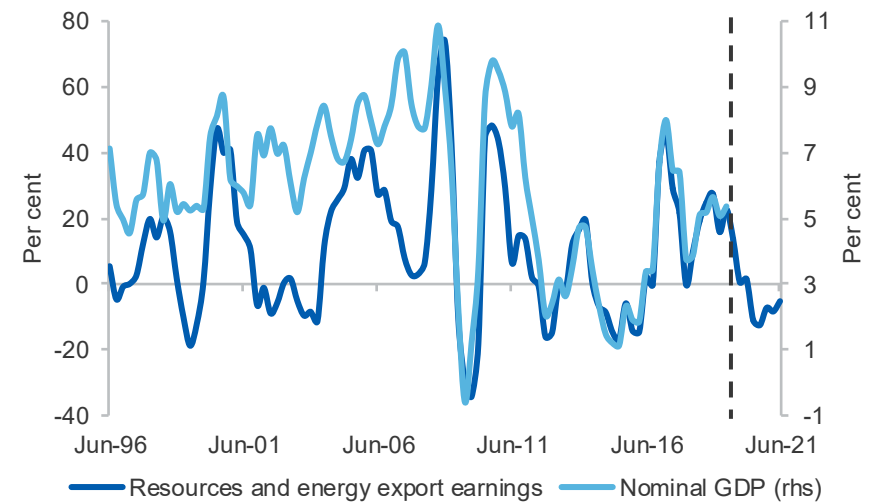
### Mining industry continues to support overall economic growth

Australia's real Gross Domestic Product (GDP) grew by 0.5 per cent in the June quarter 2019, and by 1.4 per cent over the year. The mining industry directly accounted for a third of the growth in Australia's GDP in the year to the June quarter 2019. Mining value-added rose by 1.5 per cent in the June quarter to be 3.4 per cent higher over the year, driven by growth in oil and gas extraction and bulk commodity mining.

Oil and gas extraction has been the largest contributor to mining industry value-added growth in the last few years, propelled by growing export volumes associated with the LNG export boom. In the coming few years, with ramp-up in the large LNG projects complete, lower export growth and relatively low investment in the oil and gas production sector are expected to provide a much smaller contribution to Australia's GDP growth.

Since the global financial crisis, swings in Australian resource and energy export earnings have correlated very closely with swings in nominal GDP (Figure 1.6). The rising share of resource and energy commodity export earnings in Australia's nominal GDP — driven by favourable gains in our terms of trade and the fruits of the resource commodity investment boom — appears to have made resource exports a significant swing factor in the economy. With growth in resource export values forecast to have peaked in the first three quarters of 2019, if the correlation persists, a slowing in resource export growth could see nominal GDP growth weaken noticeably over the next year — though from a high base.

**Figure 1.6: Australia's nominal GDP vs resource and energy commodity export earnings, annual per cent change**



Source: Department of Industry, Innovation and Science (2019), ABS (2019)

### Mining investment is picking up

The ABS Private New Capital Expenditure and Expected Expenditure survey June quarter 2019 shows that investment by the Australia's mining industry was \$8.6 billion in the June quarter 2019, down 3.9 percent over the year. Over 2018–19 as a whole, at \$33.4 billion, investment fell by 8.3 per cent, the smallest annual decline in over five years. This annual spending compares with almost \$95 billion at the height of the LNG boom in 2012–13.

Increased capital expenditure (capex) in the June quarter 2019 was driven by higher investment in metal ores and coal mining (Figure 1.7).

Oil and gas extraction capex appears to be bottoming out, after 6 years of decline. New LNG projects, such as Woodside's Browse and Scarborough developments, are likely to see the level of capex in the oil and gas extraction recover in the 2020s.

**Figure 1.7: Mining industry capital expenditure by commodity**

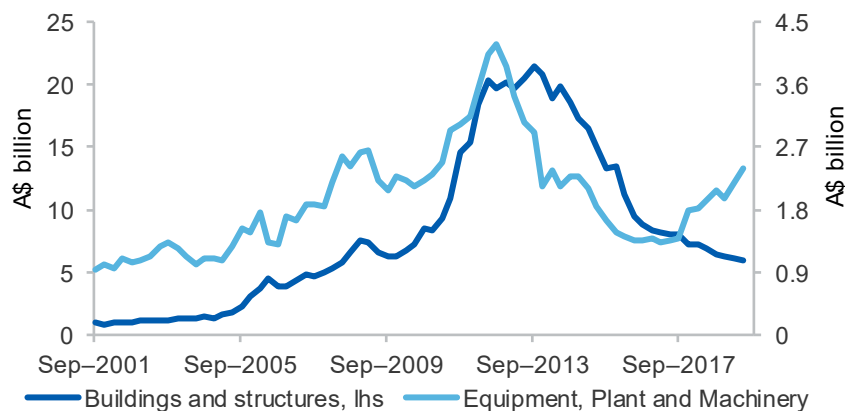


Notes: Other mining includes non-metallic mineral mining and quarrying and exploration and other mining support services; chart data is in nominal terms

Source: ABS (2019) Private New Capital Expenditure and Expected Expenditure, 5625.0

Plant and equipment spending continues to recover strongly, with capex at a 5-year high in the June quarter 2019 (Figure 1.8).

**Figure 1.8: Mining industry capital expenditure by type, quarterly**



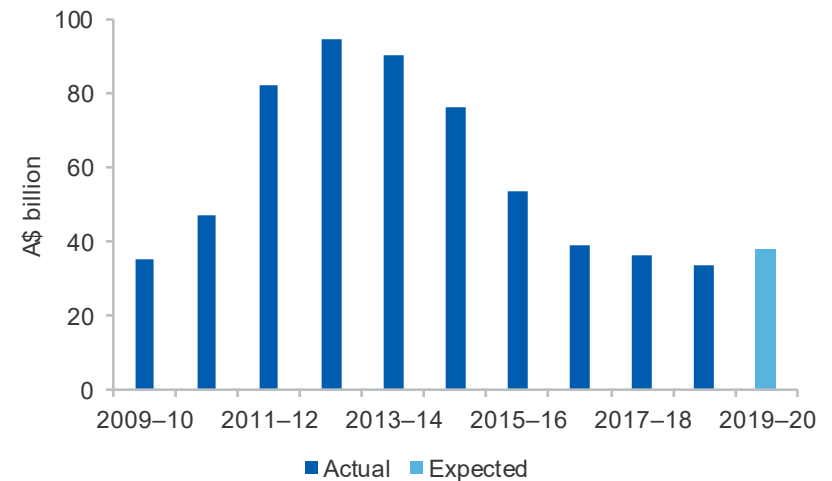
Notes: Chart data is in nominal terms

Source: ABS (2019) Private New Capital Expenditure and Expected Expenditure, 5625.0

Higher commodity prices in the past two years appear to have encouraged miners in Australia to replace ageing plant and equipment and to expand their fleets. Buildings and structures edged further lower in the June quarter, just holding above the \$6 billion mark.

Provisional indications (Figure 1.9) support the likelihood that the March quarter 2019 represented the low point of the mining investment cycle. Expectations for capex suggest a rise of around 14 per cent in 2019–20, to just over \$38 billion. New investment is likely being drawn by the recent rebound in bulk commodity prices and new prospects for lithium and other critical minerals.

**Figure 1.9: Mining industry capital expenditure, fiscal year**

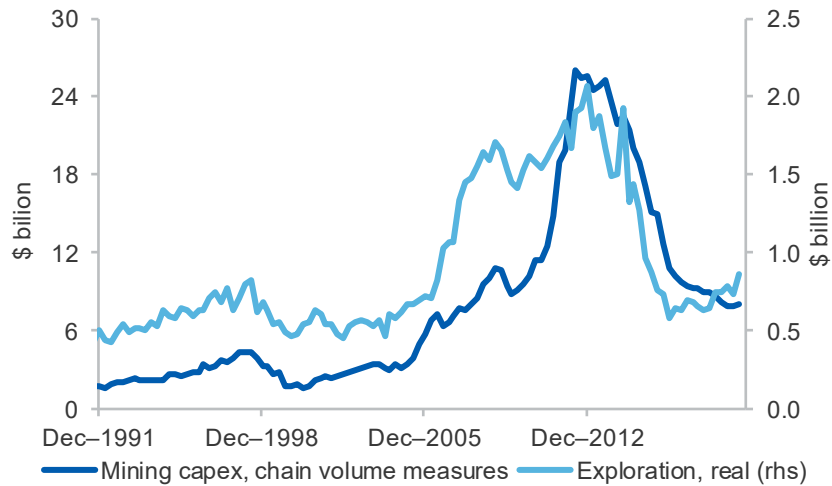


Notes: Chart data is in nominal terms

Source: ABS (2019) Private New Capital Expenditure and Expected Expenditure, 5625.0

Data on exploration spending (adjusted for inflation) supports the survey data that a recovery in mining capital expenditure is under way (Figure 1.10).

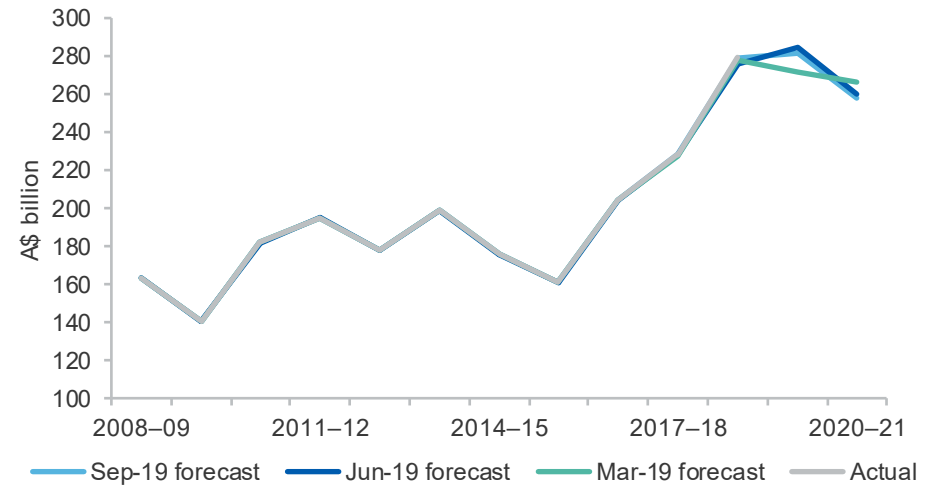
**Figure 1.10: Mining capital expenditure vs exploration, quarterly**



Notes: Chart data is in real terms

Source: ABS (2019) Private Capital Expenditure Survey, Mining, Chain Volume measure, 5625.0

**Figure 1.11: Resource and energy exports, by release**



Notes: Chart data is in nominal terms

Source: Department of Industry, Innovation and Science (2019)

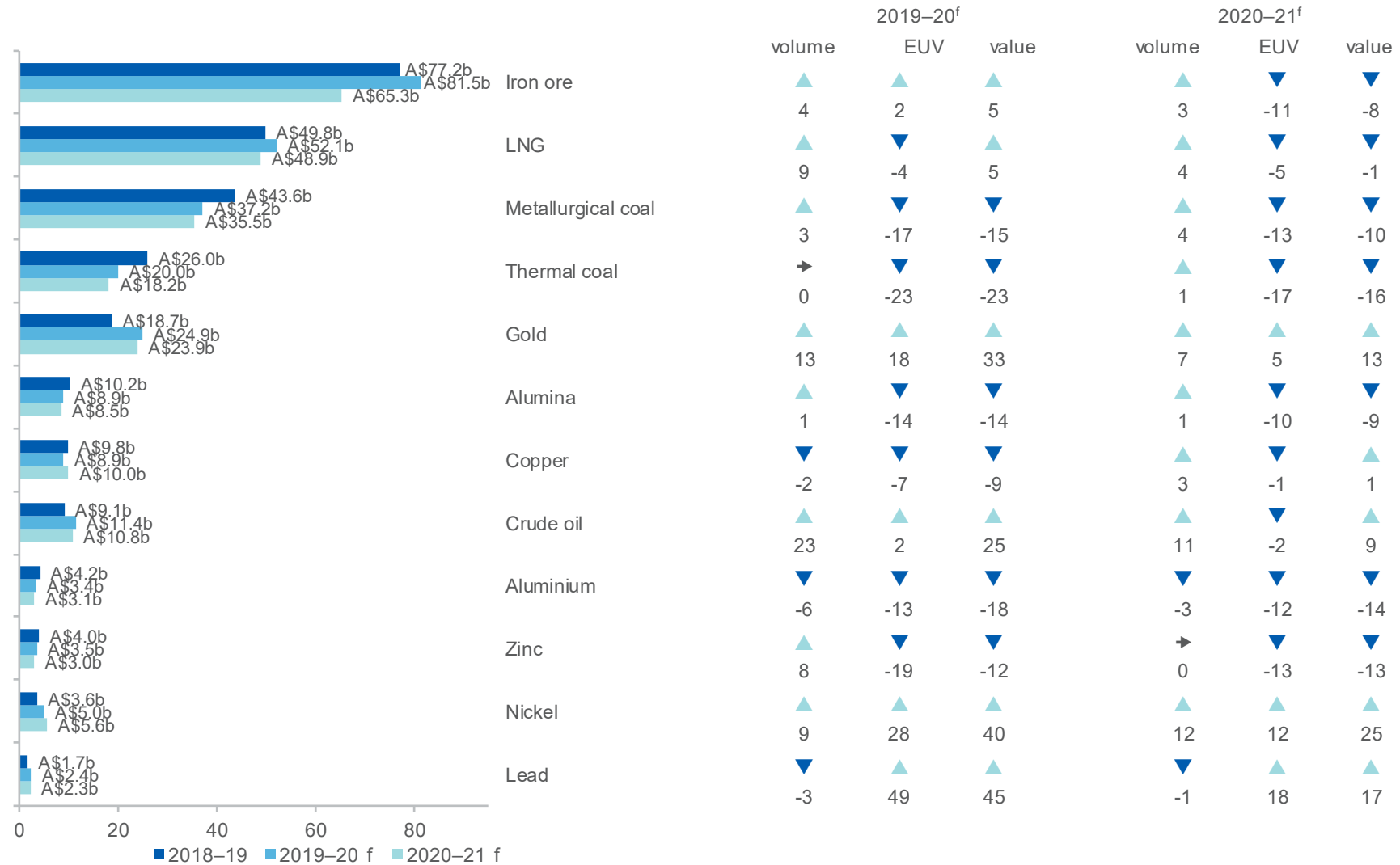
## 1.7 Revisions to the outlook

At \$282 billion, the new estimate for Australia’s resources and energy export earnings in 2019–20 is down slightly from the \$285 billion estimate in the June 2019 *Resources and Energy Quarterly* (Figure 1.11).

Commodity prices have weakened noticeably, and the impact of that decline has more than outweighed the impact of the adoption of a weaker exchange rate (Australian dollar against the US dollar) profile than in our June forecasts.

In 2020–21, weaker prices — virtually across the board — and a rising exchange rate, will drive a significant fall in export earnings. Export earnings are now forecast to be \$258 billion, down from \$261 billion forecast in the June 2019 *Resources and Energy Quarterly*.

Figure 1.12: Australia's major resource & energy commodity exports



Notes: f forecast.

Source: ABS (2019) International Trade in Goods and Services, 5368.0; Department of Industry, Innovation and Science (2019)



**Table 1.1: Outlook for Australia's resources and energy exports in nominal and real terms**

Exports (A\$m)	2017–18	2018–19	2019–20 <sup>f</sup>	2020–21 <sup>f</sup>	Annual percent change		
					2018–19	2019–20 <sup>f</sup>	2020–21 <sup>f</sup>
Resources and energy	228,027	279,327	281,588	257,571	22.5	0.8	–8.5
– real <sup>b</sup>	236,752	285,314	281,588	251,542	20.5	–1.3	–10.7
Energy	101,958	132,610	126,196	115,711	30.1	–4.8	–6.1
– real <sup>b</sup>	106,125	135,793	126,196	115,756	28.0	–6.8	–8.3
Resources	126,068	146,718	155,392	139,040	16.4	5.9	–10.5
– real <sup>b</sup>	131,221	150,239	155,392	135,786	14.5	3.7	–12.6

Notes: **b** In 2019–20 Australian dollars. **f** forecast.

Source: ABS (2019) International Trade in Goods and Services, 5368.0; Department of Industry, Innovation and Science (2019)

**Table 1.2: Australia's resource and energy exports, selected commodities**

	Unit	Prices			Unit	Export volumes			Export values, A\$b		
		2018–19	2019–20 <sup>f</sup>	2020–21 <sup>f</sup>		2018–19	2019–20 <sup>f</sup>	2020–21 <sup>f</sup>	2018–19	2019–20 <sup>f</sup>	2020–21 <sup>f</sup>
Iron ore	US\$/t	72	70	58	Mt	820	852	869	77	81	65
Metallurgical coal	US\$/t	205	168	163	Mt	183	188	198	44	37	35
LNG	A\$/GJ	12.6	12	11	Mt	75	82	81	50	52	49
Thermal coal	US\$/t	98	68	71	Mt	210	211	214	26	20	18
Gold	US\$/oz	1,264	1,470	1,462	t	326	368	375	19	25	24
Alumina	US\$/t	438	347	333	Mt	17,619	17,803	17,839	10	8.9	8.5
Copper	US\$/t	6,151	5,905	6,493	Kt	934	919	985	9.8	8.9	10
Oil <sup>a</sup>	US\$/bbl	69	68	67	Kb/d	254	312	311	9.1	11	11
Aluminium	US\$/t	1,920	1,748	1,657	Kt	1,451	1,362	1,373	4.2	3.4	3.1
Zinc	US\$/t	2,658	2,468	2,400	Kt	1,326	1,436	1,319	4.0	3.5	3.0
Nickel	US\$/t	12,352	15,675	16,112	Kt	223	243	280	3.6	5.0	5.6
Lithium	US\$/t	773	613	594	Kt	1,324	1,504	1,593	1.4	1.3	1.3
Uranium	US\$/lb	27	28	35	t	6,773	7,240	6,500	0.6	0.6	0.6

Notes: **a** Export data covers both crude oil and condensate. **f** forecast. **Price information:** Iron ore fob (free-on-board) at 62 per cent iron content estimated netback from Western Australia to Qingdao China; Metallurgical coal premium hard coking coal fob East Coast Australia; Thermal coal fob New castle 6000 kc (calorific content); LNG fob Australia's export unit values; Gold LBMA PM; Alumina fob Australia; Copper LME cash; Crude oil Brent; Aluminum LME cash; Zinc LME cash; Nickel LME cash; Lithium spodumene ore.

Source: ABS (2019) International Trade in Goods and Services, Australia, Cat. No. 5368.0; LME; London Bullion Market Association; The Ux Consulting Company; US Department of Energy; Metal Bulletin; Japan Ministry of Economy, Trade and Industry; Department of Industry, Innovation and Science (2019)