

Overview

Australia's mining sector



Contributes to around **10% of GDP**

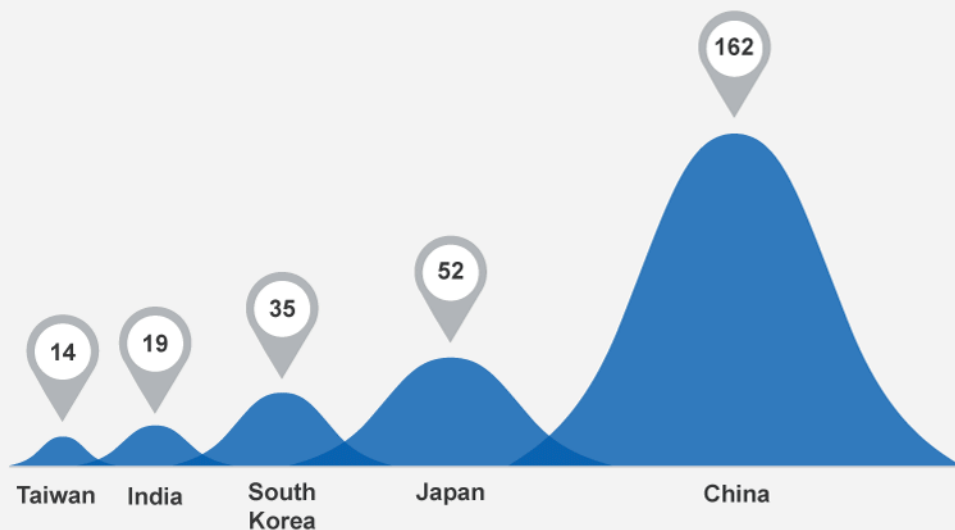


Over **two-thirds** of Australia's total merchandise exports

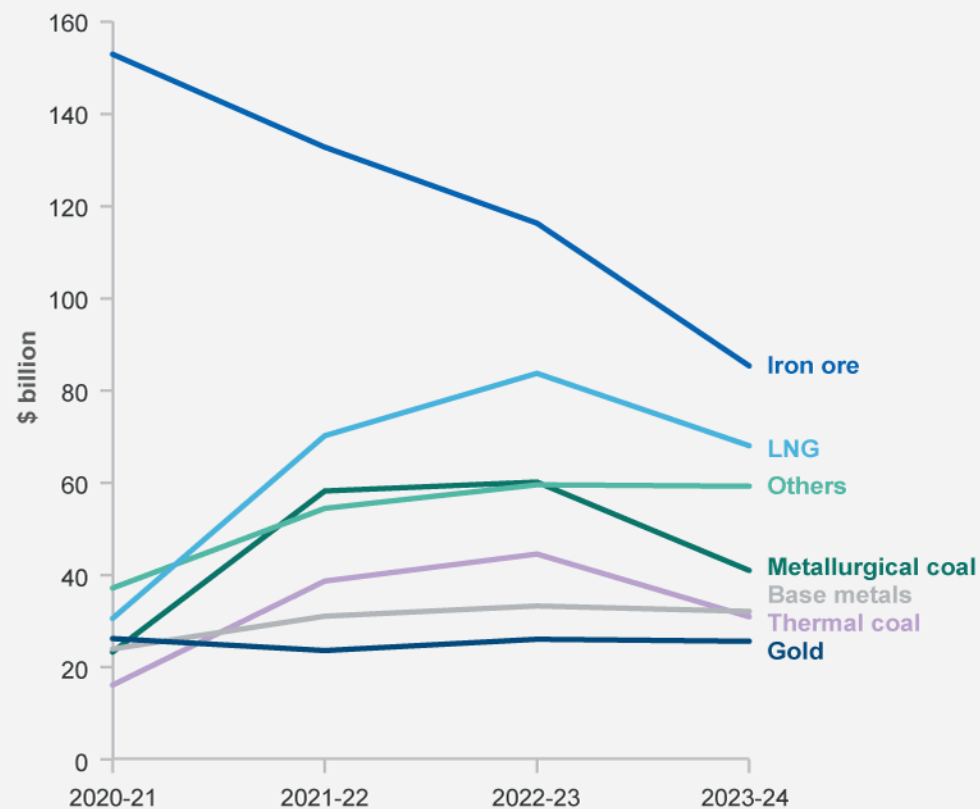


Directly employs **more than a quarter of a million people**

Major markets for Australia's resources and energy exports in 2021, A\$billion



Australia's resources and energy exports



1.1 Summary

- The outlook for Australia's mineral exports remains strong, as the world economy rebounds from the impact of the COVID-19 pandemic and energy shortages persist. High prices, good volume growth and a weak Australian dollar are driving a surge in export earnings. Some decline in prices is likely in 2023, as supply rises and demand growth moderates.
- Export earnings are estimated at a record \$405 billion in 2021–22, and forecast to be \$419 billion in 2022–23 and \$338 billion in 2023–24.
- Energy prices remain elevated, as the fallout from the Russian invasion of Ukraine exacerbates existing energy shortages. Commodity prices will likely fall in 2023 and 2024, as world supply recovers and demand cools.

1.2 Export values

Australia's export values are estimated at \$405 billion in 2021–22

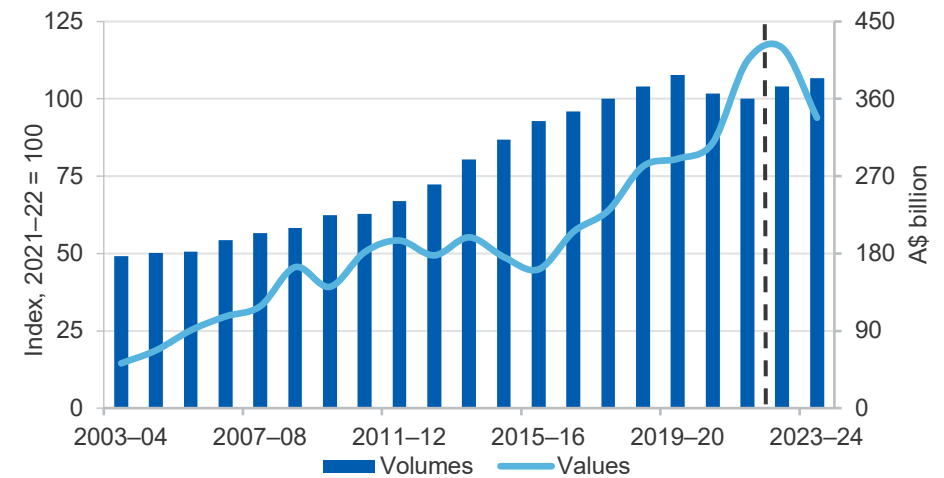
In the June quarter 2022, the Office of the Chief Economist's (OCE) Resources and Energy Export Values Index rose 23% from the June quarter 2021; a 0.4% rise in volumes added to a 22% gain in prices.

After an estimated \$405 billion of resource and energy exports in 2021–22, the coming financial year is likely to be even stronger, at \$419 billion (Figure 1.1). Exports are forecast to fall to \$338 billion in 2023–24, as the loss of some Russian fossil fuels and base metals from world markets is filled by other suppliers, cutting prices. Price, rather than volume-changes are forecast to drive most of the move in future earnings (Figure 1.2).

Energy shortages and supply deficit concerns to help boost earnings

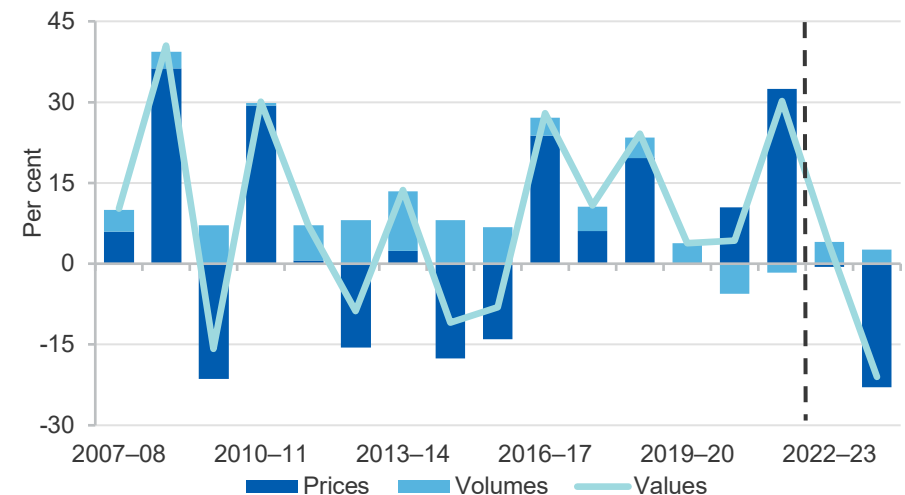
In Australian dollar terms, the OCE's Resources and Energy Commodity Price Index rose by 7% (preliminary estimate) in the June quarter 2022, and was up 22% on a year ago. In US dollar terms, the index rose by 7% in the quarter, and was 14% higher than a year ago. The index of prices for resource (mainly metals) commodity exports (Australian dollar terms) fell by 20% in the year to the June quarter 2022. Energy commodity prices rose by 131% (Figure 1.3) from the June quarter 2021, as the looming loss of some Russian supply intensified existing market shortages.

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



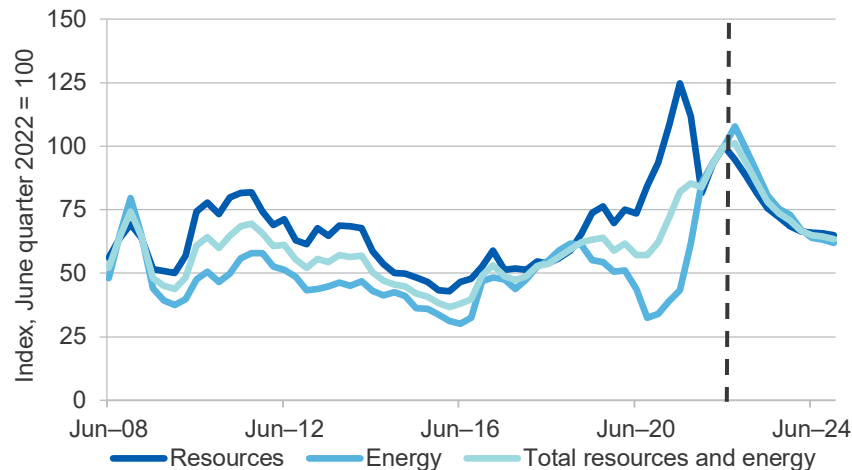
Source: ABS (2022) International Trade in Goods and Services, 5368.0; Department of Industry, Science and Resources (2022)

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



Source: ABS (2022) International Trade in Goods and Services, 5368.0; Department of Industry, Science and Resources (2022)

Figure 1.3: Resource and energy export prices, AUD terms



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

Source: ABS (2022) International Trade in Goods and Services, 5368.0; Department of Industry, Science and Resources (2022)

1.3 Macroeconomic, policy, trade and other factors

World economic activity is being significantly hampered by high energy and food prices, and by COVID-19 outbreaks — especially in China. The former are mainly the result of the fallout from Russia's invasion of Ukraine: sanctions are now causing a scramble for substitutes to Russian energy exports. High energy/food prices are hurting consumer spending on other goods and services, and so impacting business profits adversely.

Beijing's 'zero COVID-19' policy is likely to continue to impact on economic activity in the second half of 2022, causing supply chain disruptions and constraining commodity demand. The Chinese Government is taking steps to boost growth in line with its target for 5.5% growth in 2022: financial conditions have been eased and other measures taken to boost growth.

The Russian invasion of Ukraine has driven some consumers to switch from Russia as an energy supply source. Until reliable supply can be secured elsewhere, more, rather than less, thermal coal will be consumed

in Western nations unable to procure LNG/gas from other sources. Record metallurgical coal prices threaten steel production, with flow-ons to the construction, automotive and white goods sectors.

Global commodity trade can be expected to re-organise further over the next year, as new sanctions are imposed on Russia: as developed Western nations shun Russian commodities, some of those are being diverted to China and India. As a result, China and India are now buying fewer cargoes of non-Russian energy commodities, enabling them to be diverted to developed nations. High prices will prompt a supply response now that it seems Russian exports will be banned by the West for the foreseeable future. The strong rise in US LNG exports expected over the next few years is likely to displace Russian gas/LNG supply to the West.

The US Federal Reserve has signalled a move further towards a neutral monetary policy stance over the second half of 2022 and early 2023, in an attempt to contain a sharper than expected surge in US inflation. The pace at which the US Fed acts will depend partly on the extent of the fallout of the Russia invasion of Ukraine, and partly on the strength of the US dollar.

Prior to the Russian invasion of Ukraine, the outlook was for strong growth in the world economy in 2022 and 2023, as COVID-19 vaccination rates and infection medications improved and became more accessible. The prospects for 2022 are now much more uncertain: high energy and food prices are impacting on growth and inflation. The OECD forecasts world GDP growth of 3.0% in 2022 and 2.8% in 2023, with China forecast to grow by 4.4% in 2022, rising to 4.9% in 2023.

Australian coal and LNG exports should achieve relatively high prices, as the shunning of Russian exports sees energy shortages persist. As global coal and LNG supply lifts and demand growth moderates, prices are expected to decline but the short term risks are skewed to the upside. Resource and energy export earnings likely reached \$405 billion in 2021–22. Earnings are forecast to lift to \$419 billion in 2022–23, but fall back to \$338 billion in 2023–24. Higher global interest rates — in response to persistent inflation — pose a downside risk to global economic activity, and hence resource and energy export earnings.

1.4 Prices

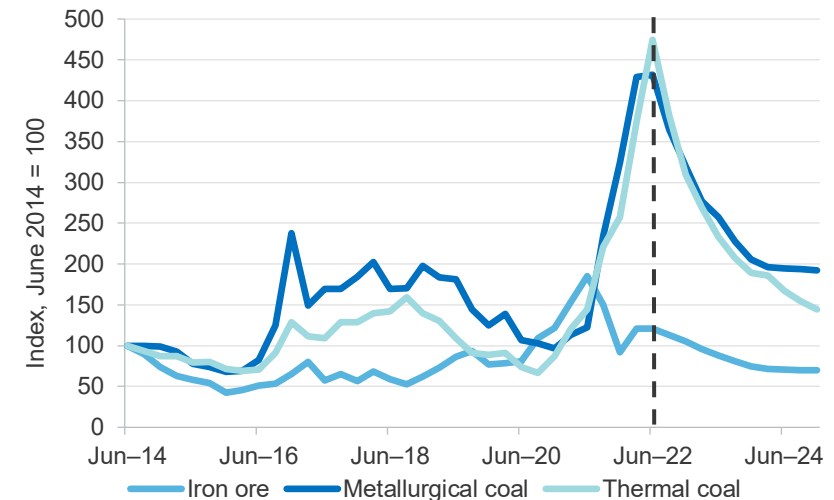
Since the March 2022 *Resources and Energy Quarterly*, the iron ore price has made modest further gains from the November 2021 cycle low, but is still well below mid-2021 levels. The prospect of improved Chinese demand (due to government stimulus measures) has added to the impact of weather and COVID-19 related supply problems in major exporting nations (Figure 1.4). Prices are likely to ease over the outlook period, as Brazilian supply slowly recovers and growth in world demand moderates.

Australian metallurgical coal prices are at record highs, as sanctions on Russian exports and bad weather in Australia and COVID-19 workforce impacts hit supply. Prices are expected to ease over the outlook period, as trade flows reorganise and supply recovers. Thermal coal prices are also at record levels: with rebounding economic activity and weather-related problems adding to the loss of some Russian supply from world markets. Prices are likely to drift down but average relatively high levels over the next year, as demand falls back and global supply rises (Figure 1.5).

Oil prices have surged to their highest level in a decade, as the market reacts to looming sanctions on exports of Russian oil and oil products by the EU. OPEC+ has moved to increase supply, but most of the group's members have limited scope to increase supply noticeably. The oil price is likely to fall back, as an improvement in global supply gradually outpaces the recovery in demand. Contract LNG prices are forecast to ease from high levels, as oil prices settle. Spot LNG is likely to be very high for some time, as the world struggles to replace reduced Russian gas/LNG exports.

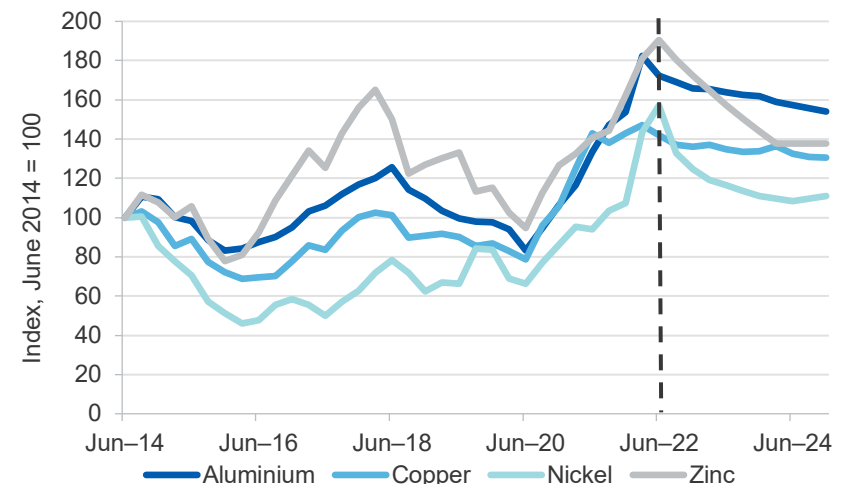
The price of gold has eased back to around US\$1,800 an ounce, hurt by US dollar strength and rising bond yields. However, gold has been given some support by safe haven demand, as geopolitical tensions flare. The price is likely to fall in the next two years, as the withdrawal of widespread central bank stimulus lifts real bond yields. Base metal prices are relatively high, boosted by the prospect of stronger demand from China and the likely loss of some Russian supply (especially nickel and aluminium) from world markets. Inventories generally remain low. Prices should fall, as supply slowly catches up with demand and stockpiles build.

Figure 1.4: Bulk commodity prices



Notes: Prices are in US dollars, and are the international benchmark prices
Source: Bloomberg (2021); Department of Industry, Science and Resources (2022)

Figure 1.5: Base metal prices



Notes: Prices are in US dollars, and are the international benchmark prices
Source: Bloomberg (2021); Department of Industry, Science and Resources (2022)

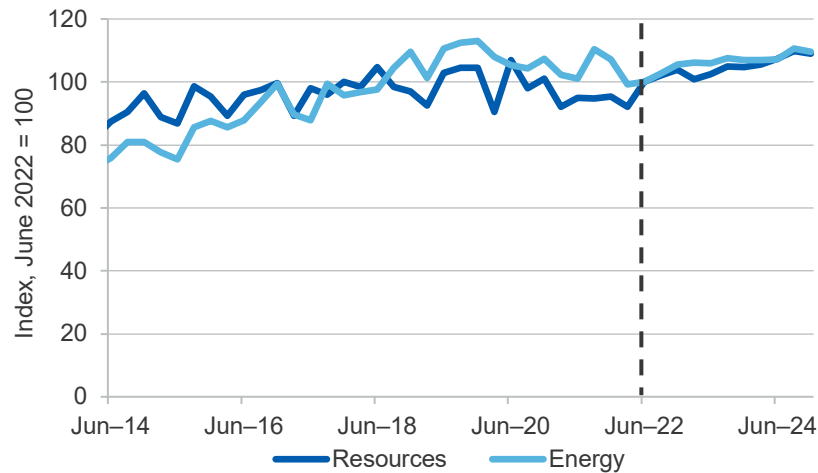
1.5 Export volumes

June quarter export volumes rose, driven by resource exports

The OCE's Resources and Energy Export Volumes Index (preliminary estimate) rose by 6% in the June quarter 2022 from the March quarter, and was 2% higher than a year before (Figure 1.6). Within this total, resource commodity volumes rose by 7% in the year to the June quarter 2022, while energy commodity volumes were flat. Energy exports were impacted by production problems: operational, weather and COVID-19 related workforce issues were central to these.

In volume terms, resource exports are likely to show further significant growth over the outlook period. Economic growth and industrial production continue to recover amongst our main trading partners, increasing the demand for Australia's ferrous and non-ferrous metals. The production of EVs and new energy technologies will see growing demand for metals such as copper, aluminium, lithium and nickel. The volume of energy exports is forecast to show similar growth during the outlook period. Supply constraints should ease, and high prices will encourage expansion.

Figure 1.6: Resource and energy export volumes



Source: Department of Industry, Science and Resources (2022)

1.6 Contribution to growth and investment

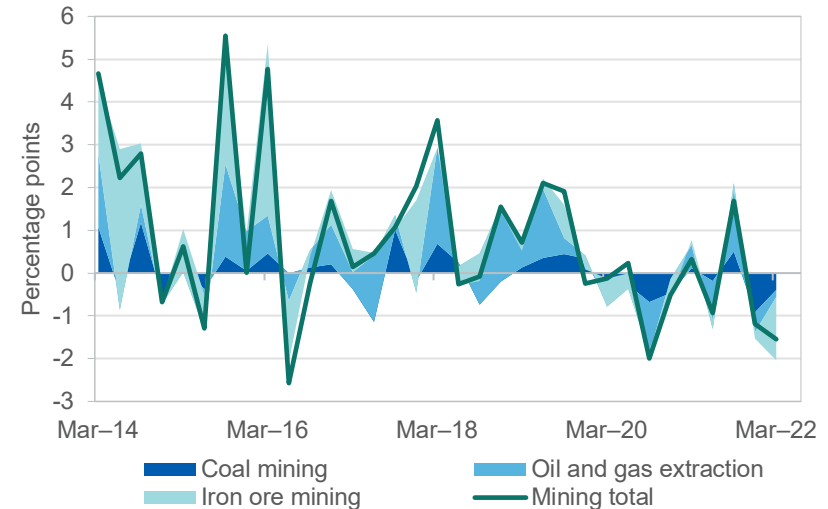
Mining industry contracted while the overall economy expanded

Australia's real Gross Domestic Product rose by 0.8% in the March quarter 2022, and was up 3.3% over the year since the March quarter 2021.

Mining value-added fell by 1.5% in the March quarter, and was down 2.0% over the previous twelve months (Figure 1.7). COVID-19 disruptions impacted most sectors to some extent, and coal and iron ore mining was also impacted by bad weather. The oil/gas sector had some operational problems, notably at Shell's Prelude FLNG facility (see Gas Chapter).

In the coming two years, it is likely that the resources and energy sectors will make a significant contribution to real GDP growth. In the short run, coal producers will lift output and exports in response to high prices and margins. Non-ferrous metal production should experience healthy growth, as the global energy transition gathers pace.

Figure 1.7: Contribution to quarterly growth, by sector

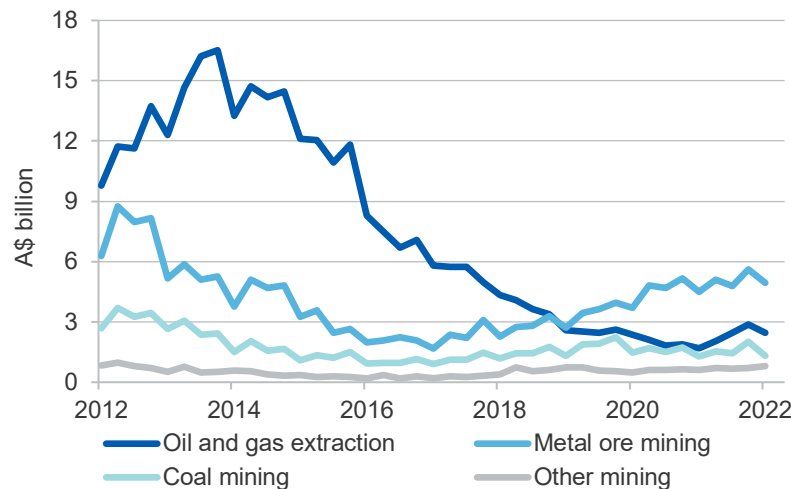


Source: ABS (2022) Australian National Accounts, 5206.0

Mining investment is picking up

The ABS Private New Capital Expenditure and Expected Expenditure survey for the March quarter 2022 shows that Australia's mining industry invested \$10.6 billion in the quarter. This was up by 2.1% in the quarter (seasonally adjusted), and up 18% from the March quarter 2021. Strong iron ore prices supported growth in investment by the 'metal ore' mining sector during 2021, though growth has now become more broadly based (Figure 1.8).

Figure 1.8: Mining capex by commodity, not seasonally adjusted

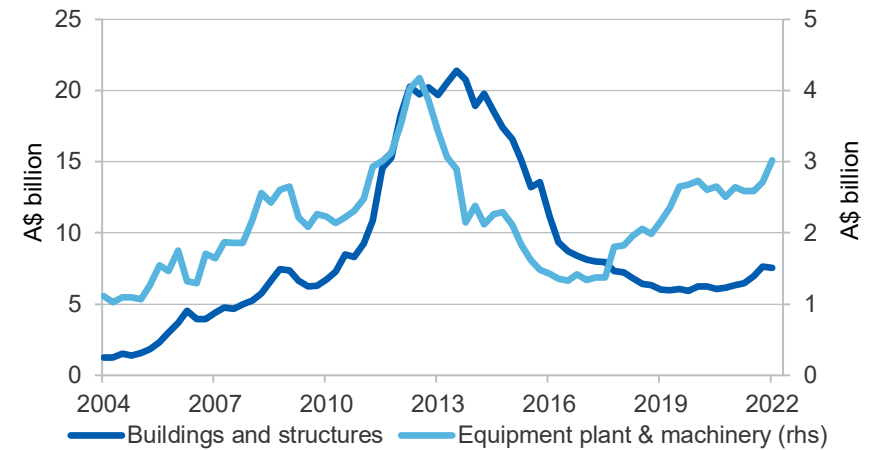


Notes: Other mining includes non-metallic mineral mining and quarrying and exploration and other mining support services; chart data is in nominal, original terms

Source: ABS (2022) Private New Capital Expenditure and Expected Expenditure, 5625.0

In the March quarter 2022, expenditure on equipment plant and machinery lifted strongly, while expenditure on buildings and structures levelled out (Figure 1.9). Spending in both categories has risen in recent quarters, and forward expectations suggest that investment in 2021–22 and 2022–23 will be slightly higher than in 2020–21 (Figure 1.10). Strong prices for gold and various minerals used in low-emissions energy generation have been leading to new investment plans, including the re-opening of mines.

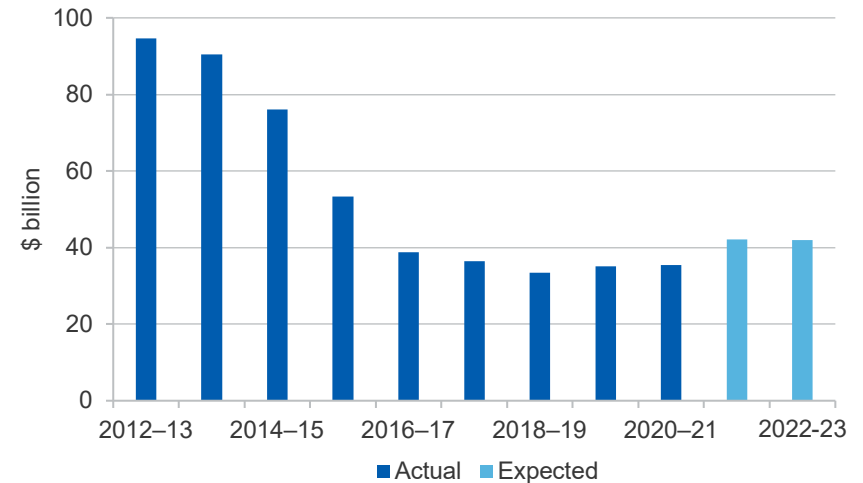
Figure 1.9: Mining industry capital expenditure by type, quarterly



Notes: Chart data is in nominal terms, seasonally adjusted.

Source: ABS (2022) Private New Capital Expenditure and Expected Expenditure, 5625.0

Figure 1.10: Mining industry capital expenditure, fiscal year

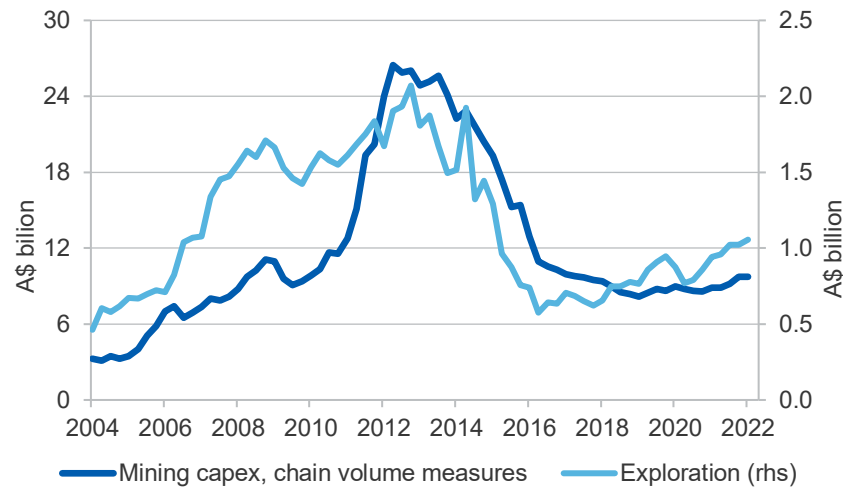


Notes: Chart data is in nominal terms

Source: ABS (2022) Private New Capital Expenditure and Expected Expenditure, 5625.0

Data on exploration spending suggests that mining capital expenditure continues to rise (Figure 1.11). Exploration spending (adjusted for inflation) edged up to \$1.1 billion in the March quarter. Exploration has risen for seven consecutive quarters, representing a sustained lift from the recent low of \$769 million in the June quarter 2020.

Figure 1.11: Mining capital expenditure vs exploration, quarterly



Source: ABS (2022) Private Capital Expenditure Survey, Chain Volume measure, 5625.0

1.7 Revisions to the outlook

At \$405 billion, the estimate for Australia’s resources and energy exports in 2021–22 is \$20 billion lower than the forecast contained in the March quarter 2022 *Resources and Energy Quarterly*. Workforce problems (related to COVID-19) and bad weather, have continued to hurt Australian mine production and exports (especially coal) noticeably in recent months. The rise in prices that was partly caused by those lower export volumes has been insufficient to fill the gap.

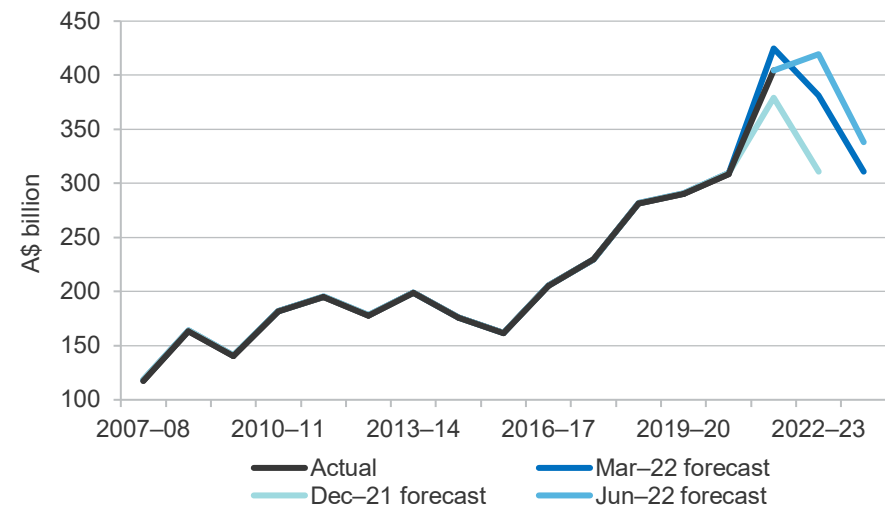
The forecast for \$419 billion in R&E export earnings in 2022–23 has risen \$38 billion from the March 2022 REQ, and the forecast for 2023–24 is up by about \$28 billion (Figure 1.12). The fallout from the Russian invasion of

Ukraine has been the main factor driving the upward revisions to the forecasts for 2022–23 and 2023–24. The likelihood is that energy prices will remain higher than expected, as the exclusion of a significant amount of Russian oil, gas and coal exports from the global market leaves noticeable shortages.

Iron ore earnings in 2022–23 have been revised up by \$8 billion: global supply is not rising as fast as expected — as bad weather and COVID-19 adversely affect mining and transport operations — and Chinese demand looks likely to rebound, as Beijing looks to (bring forward plans to) build more infrastructure to offset the impact of the COVID-19 lockdowns.

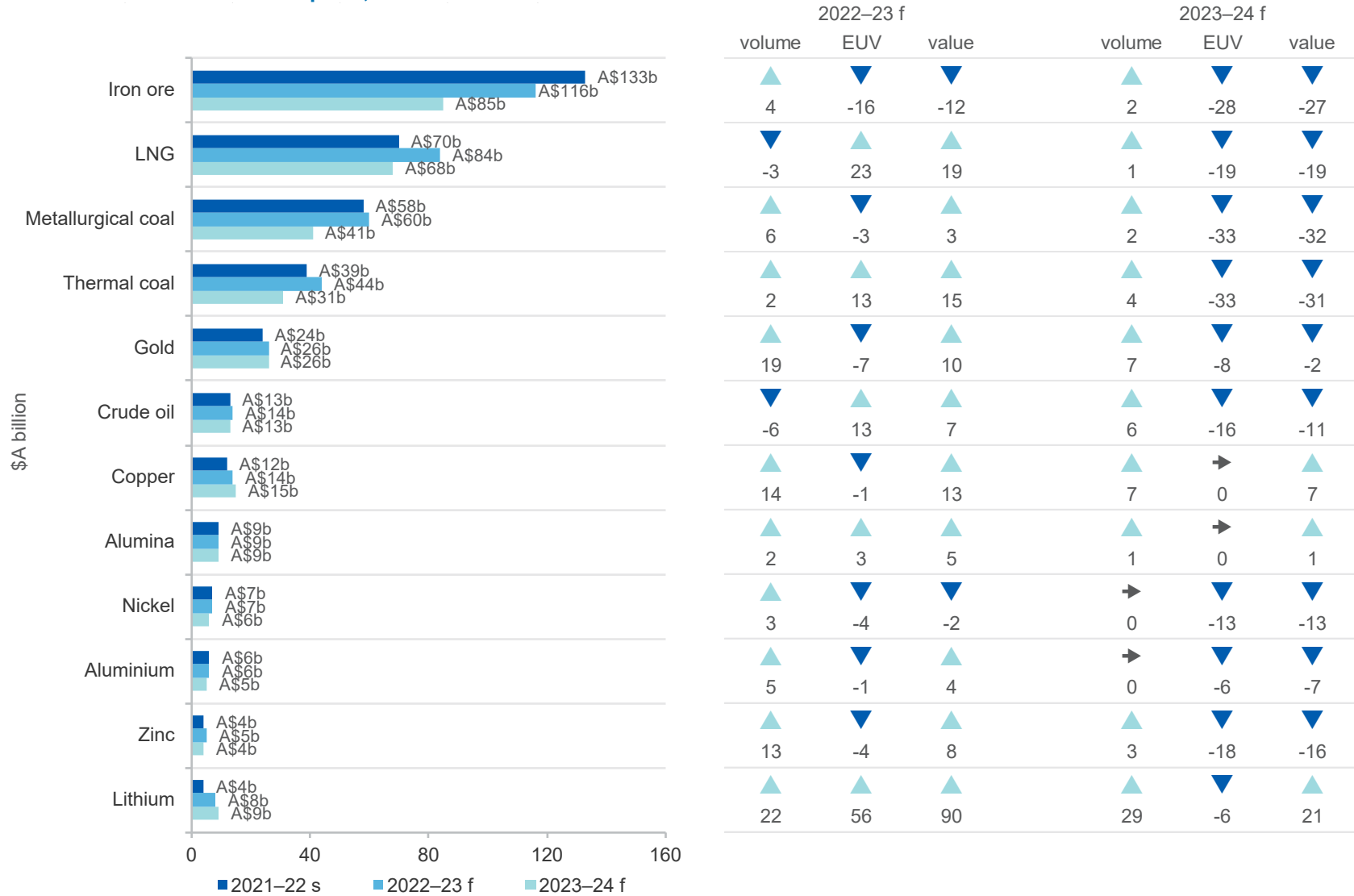
LNG earnings in 2022–23 and 2023–24 have been revised up by \$5 billion and \$6.5 billion, respectively. The revisions reflect the impact of forecast higher LNG prices.

Figure 1.12: Resource and energy exports, by forecast release



Source: Department of Industry, Science and Resources (2022)

Figure 1.13: Australia's major resources and energy commodity exports, nominal



Notes: f forecast. EUV is export unit value.

Source: ABS (2021) International Trade in Goods and Services, 5368.0; Department of Industry, Science and Resources (2022)

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

Exports (A\$m)	2020–21	2021–22 ^s	2022–23 ^f	2023–24 ^f	Percentage change			
					2020–21	2021–22 ^s	2022–23 ^f	2023–24 ^f
Resources and energy	308,563	404,527	419,425	337,948	6.3	31.1	3.7	–19.4
– real ^b	321,935	404,527	400,663	312,527	4.6	25.7	–1.0	–22.0
Energy	81,229	185,936	208,643	157,702	–29.7	128.9	12.2	–24.4
– real ^b	84,749	185,936	199,310	145,840	–30.8	119.4	7.2	–26.8
Resources	227,334	218,591	210,782	180,246	30.1	–3.8	–3.6	–14.5
– real ^b	237,185	218,591	201,353	166,687	28.0	–7.8	–7.9	–17.2

Notes: **b** In 2020–21 Australian dollars; **f** forecast; **r** Compound annual growth rate for forecast period.

Source: ABS (2022) International Trade in Goods and Services, 5368.0; Department of Industry, Science and Resources (2022)

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

	Unit	Prices			Unit	Export volumes			Export values, A\$b		
		2021–22 ^s	2022–23 ^f	2023–24 ^f		2021–22 ^s	2022–23 ^f	2023–24 ^f	2021–22 ^s	2022–23 ^f	2023–24 ^f
Iron ore	US\$/t	119	99	74	Mt	876	911	929	133	116	85
LNG	A\$/GJ	16.2	19.9	16.1	Mt	82	80	80	70	84	68
Metallurgical coal	US\$/t	400	343	232	Mt	161	171	174	58	60	41
Thermal Coal	US\$/t	241	216	136	Mt	195	199	207	39	44	31
Gold	US\$/oz	1,831	1,783	1,691	t	282	336	359	24	26	26
Crude oil	US\$/bbl	91	101	87	Kb/d	280	265	280	13	14	13
Copper	US\$/t	9,670	9,245	9,099	Kt	807	916	977	12	14	15
Alumina	US\$/t	384	379	362	Kt	17,792	18,188	18,280	8.9	9.4	9.4
Nickel	US\$/t	23,609	22,750	20,438	Kt	259	265	266	6.7	6.6	5.8
Aluminium	US\$/t	2,947	2,986	2,881	Kt	1,385	1,449	1,443	5.7	5.9	5.5
Zinc	US\$/t	3,515	3,498	2,953	Kt	1,211	1,367	1,403	4.2	4.6	3.8
Lithium	US\$/t	1,729	2,265	2,180	Kt	1,843	2,287	2,952	4.1	7.8	9.4
Uranium	US\$/lb	46	57	61	t	4,705	5,480	5,495	0.5	0.7	0.8

Notes: **a** Export data covers both crude oil and condensate; **f** forecast; **s** estimate. **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 Newcastle 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 (2022) 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, Science and Resources (2022)