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Department of Industry, Science, Energy and Resources

Office of the Chief Economist

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Contents

Foreword

Australia's resource and energy export earnings are forecast to hit a record $425 billion in 2021–22. While this represents a significant increase on 2020–21, exports are expected to fall back to $370 billion in 2022–23 and then fall further in real terms over the period to 2027. Driving the fall will be the return of bulk commodity prices to more 'normal' levels, following the elevated levels experienced recently, including as a result of the Russian invasion of Ukraine.

Each March edition of the *Resources and Energy Quarterly* (REQ) provides an extended five-year outlook, rather than the usual two-year horizon. This allows us to consider additional structural factors and longer-term influences. Structural issues include the global energy transition and the reorganisation of world trade — as geopolitical alliances solidify.

There have been a few developments since the December 2021 REQ that have the potential to have a noticeable impact on the global resources and energy sector over the first half of the outlook period. The most significant has been the Russian invasion of Ukraine. As we go to print, the impact on world financial and commodity markets is still playing out. Sanctions are being applied on Russia, a major energy exporter, and there are potentially more in prospect. How long these sanctions stay in place is difficult to predict. As this happens, world trade (and associated investment flows) could see some bifurcation in line with geopolitical alliances over the outlook period.

China has relaxed macroeconomic policy in recent months, to allow economic growth to pick up from last year's slowdown. Other developments include a new (Omicron) variant of the COVID-19 virus which has swept the world, while wet weather has impacted on the output/export of bulk commodities. The La Niña weather pattern appears set to end in mid-2022, removing some of the threat to the supply of Australian thermal coal over much of the outlook period. With energy stocks in the Northern Hemisphere well below normal, supply disruptions will act to keep prices high in the short run.

Inflation has picked up in most major economies, and the major central banks have started to withdraw monetary support as the economic impact of the worst pandemic in 100 years recedes. Of high relevance to energy and resource markets, the IMF forecasts China's GDP growth to be 4.8% in 2022 and 5.2% in 2023. The Chinese Government has set a growth target of 5.5% for 2022, as it attempts to overcome new outbreaks of COVID-19. After a rise of 5.9% in 2021, the IMF forecasts world GDP growth to be 4.4% in 2022 and 3.8% in 2023. Growth of 3.0-3.5% is forecast over the remainder of the outlook period.

International coal and gas/LNG prices are at record levels — on the back of both supply and demand factors — which promises to boost Australia's export earnings sharply in the short term. However, these high prices will impact growth in nations that are net fossil fuel consumers, and provide an incentive to minimise exposure to a range of energy sources.

Australian iron ore earnings are forecast to decline noticeably in the outlook period. The global economic recovery and constrained supply saw prices exceed US$230 a tonne in mid-2021, but sharp cuts in Chinese steel output contributed to large price declines in the latter half of 2021. The ongoing recovery in Brazilian supply, and gains in output elsewhere, are set to push iron ore prices down over the outlook period. A stronger outlook for base metals and lithium partly offsets the impact of forecast lower iron ore export earnings.

The risks to the export earnings forecast for 2021–22 and 2022–23 are equally skewed. A severe disruption to commodity supply emanating from Russia's invasion of Ukraine could push prices up further. There is potential for a (related) further rise in global inflation, and a risk of tighter monetary policy in response. New, vaccine-resistant COVID-19 strains also pose risks. In the latter half of the outlook period, global efforts to build energy and transport systems based on lower emission sources, are expected to partly offset the impact of energy exports coming off their near-term highs.

About this edition

The *Resources and Energy Quarterly* (REQ) contains the Office of the Chief Economist's forecasts for the value, volume and price of Australia's major resources and energy commodity exports.

A 'medium term' (five year) outlook is published in the March quarter edition of the *Resources and Energy Quarterly*. Each June, September and December edition of the *Resources and Energy Quarterly* features a 'short term' (two year) outlook for Australia's major resource and energy commodity exports.

Underpinning the forecasts/projections contained in the *Resources and Energy Quarterly* is the Office of the Chief Economist's outlook for global resource and energy commodity prices, demand and supply. The forecasts/projections for Australia's resource and energy commodity exporters are reconciled with this global context.

The global environment in which Australia's producers compete can change rapidly. Each edition of the *Resources and Energy Quarterly* attempts to factor in these changes, and makes appropriate alterations to the forecasts/projections by estimating the impact on Australian producers and the value of their exports.

In this report, commodities are grouped into two broad categories, referred to as 'resources' and 'energy'. 'Energy' commodities comprise metallurgical and thermal coal, oil, gas and uranium. 'Resource' commodities in this report are all other mineral commodities.

Unless otherwise stated, all Australian and US dollar figures in this report are in nominal terms. Inflation and exchange rate assumptions are provided in tables 2.1 and 2.2 in the *Macroeconomic outlook* chapter.

Information in this edition of the *Resources and Energy Quarterly* is current as of 23 March 2022.

Resources and Energy Quarterly publication schedule

Publication	Expected release date	Outlook period final year
June 2022	4 July 2022	Australian data: 2023–24 World data: 2024
September 2022	4 October 2022	Australian data: 2023–24 World data: 2024
December 2022	19 December 2022	Australian data: 2023–24 World data: 2024
March 2023	3 April 2023	Australian data: 2027–28 World data: 2028

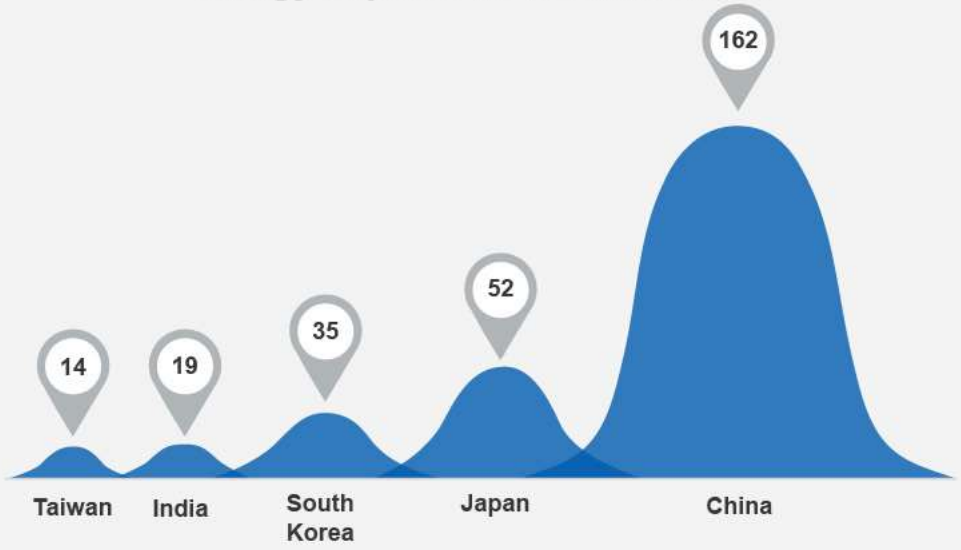
Source: Department of Industry, Science, Energy and Resources (2022)

Overview

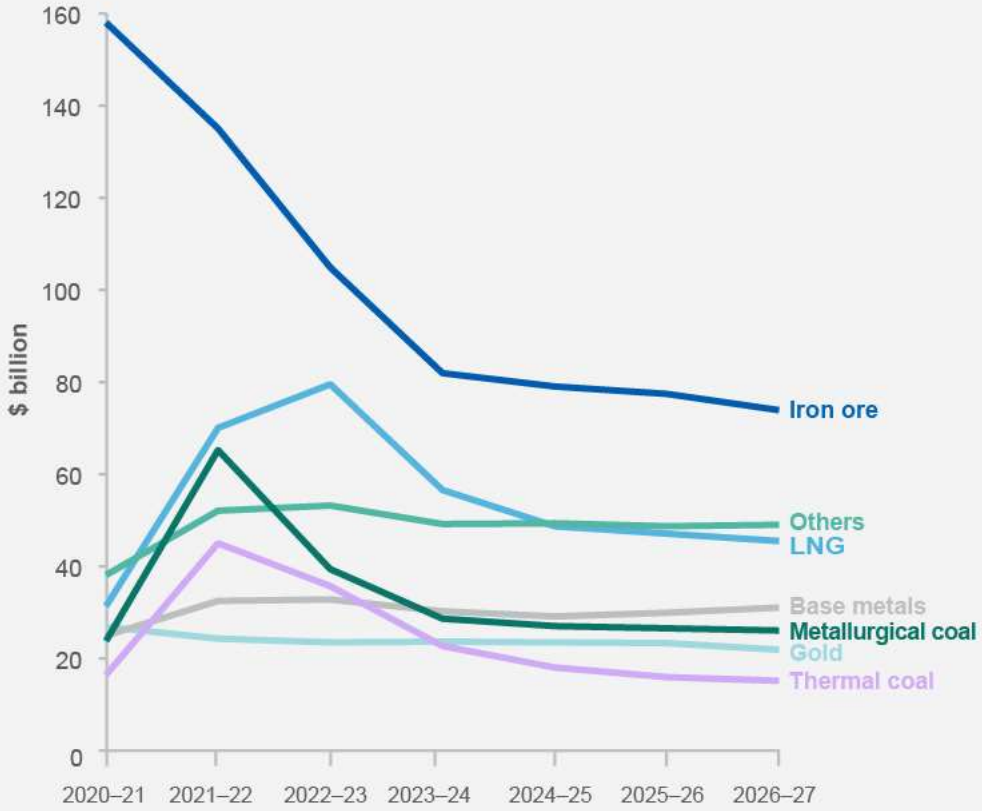
Australia's mining sector

- Around 10% of GDP
- More than **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 forecast to lift by 33% to a record $425 billion in 2021–22, then fall to $370 billion (in real terms) in 2022–23. Earnings should steady out at $263–293 billion over the rest of the outlook.
- Energy prices have jumped, on the prospect that the fallout from Russian invasion of Ukraine will intensify energy shortages. Commodity prices will settle back, as inventories rebuild and as world trade reorganises.

1.2 Export values

Australia's export values are estimated at $425 billion in 2021–22

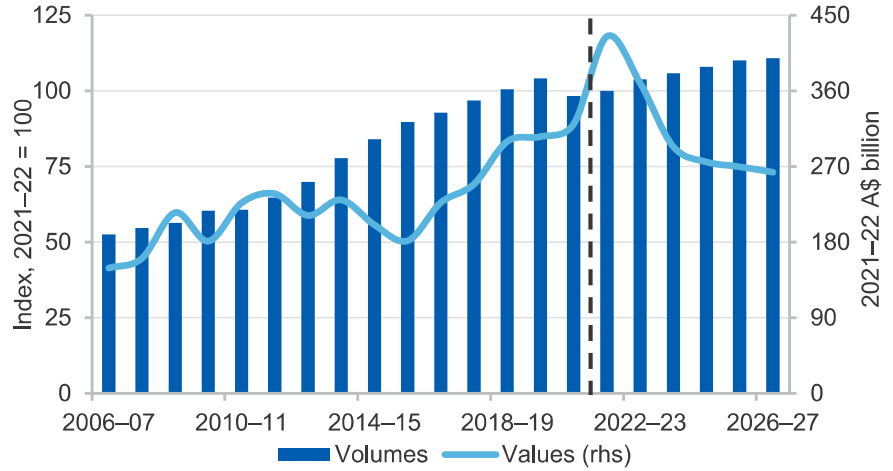
In the March quarter 2022, the Office of the Chief Economist's (OCE) Resources and Energy Export Values Index rose 49% from the March quarter 2021; a 6% rise in volumes added to a 42% gain in prices.

Exports are forecast at a record $425 billion in 2021–22, up from $320 billion in 2020–21 (Figure 1.1). Exports should fall to $370 billion (real terms) in 2022–23. With volumes growing modestly, price changes are forecast to account for much of the move in future earnings (Figure 1.2). Commodity prices are set to fall as demand growth slows and supply rises.

Energy shortages and supply deficit concerns to help boost earnings

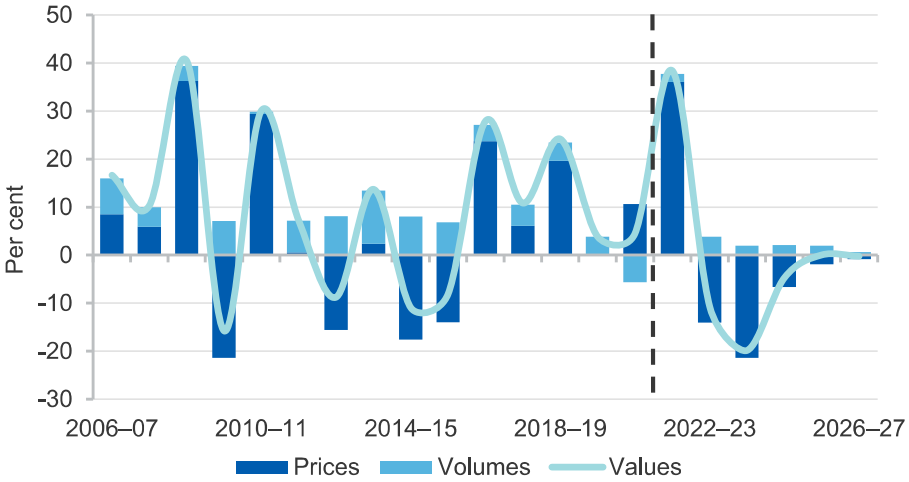
In Australian dollar terms, the OCE's Resources and Energy Commodity Price Index rose by 24% (preliminary estimate) in the March quarter 2022, and was up 49% on a year ago. In US dollar terms, the index rose by 22% in the quarter, and was 32% higher than a year ago. The index of prices for resource (mainly metals) commodity exports (Australian dollar terms) fell by 9% in the year to the March quarter 2022. Energy commodity prices rose by 171% (Figure 1.3) from March quarter 2021, as market deficit concerns (primarily due to supply problems) added to existing shortages.

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



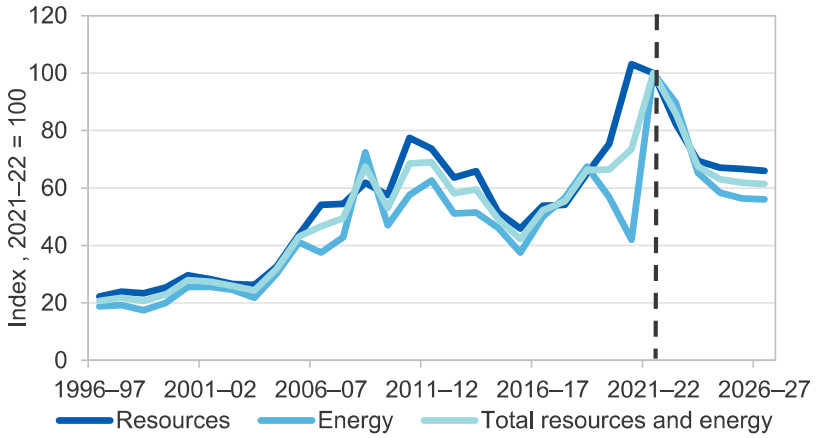
Source: ABS (2022) International Trade in Goods and Services, 5368.0; Department of Industry, Science, Energy and Resources (2022)

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, Energy 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, Energy and Resources (2022)

1.3 Macroeconomic, policy, trade and other factors

The recovery in world economic activity continues to be hampered by COVID-19 outbreaks and an energy shortfall in the Northern Hemisphere. The fallout from the Russian invasion of Ukraine poses a further risk to world growth in the short term: any disruption to Russian energy exports to the rest of the world is likely to keep energy prices high.

The Russian invasion of Ukraine has driven some consumers to switch from Russia as a supply source. In the short term, this may mean that more, rather than less, thermal coal will be consumed in Western nations, as Russian energy supply (mainly gas/LNG) is shunned. Efforts to reduce emissions are likely to come back into focus once energy security can be assured, impacting further on coal demand in developed nations over time.

Commodity trade is re-organising rapidly: Russian commodities that would normally head to developed nations are being shunned by some customers, and may be diverted to China and India; China and India may then have less need for non-Russian cargoes, and these could be diverted to developed nations. High prices will prompt a supply response if producers believe Russian supply will be locked out for some years. The supply of Iranian (and Venezuelan) oil could return to world markets, offsetting any loss of Russian supply. The strong rise in US LNG exports expected over the next few years is likely to displace Russian gas/LNG supply to the West, as these nations seek to avoid Russian supply.

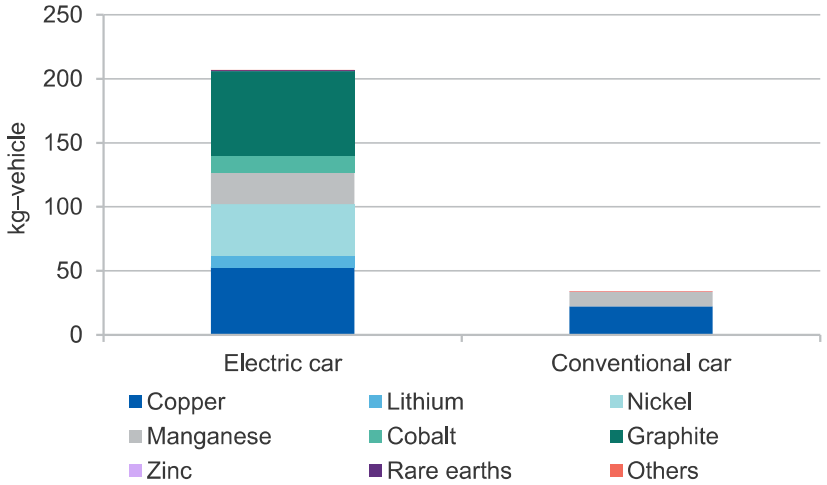
Late in 2021 and in early 2022, the Chinese Government took measures to improve Chinese economic growth. The measures came after a noticeable slowing in growth in 2021. Beijing's 'zero COVID-19' policy is likely to continue to impact on economic activity in 2022, causing supply chain disruptions and constraining commodity demand. Chinese industrial activity is likely to pick up with the Beijing Winter Olympics now completed. The pace of Chinese economic growth will remain an important driver of resource and energy commodity demand over the outlook period. However, the absolute size of China's economy (and thus its appetite for commodities) now means that the prospect of Chinese economic growth of 4–6% doesn't constitute the same concern to commodity markets as it would have done 7 or 8 years ago — when growth was consistently 7–9%.

The US Federal Reserve appears likely to move towards a more neutral monetary policy stance over 2022, as US inflation becomes a concern and the economic recovery continues. However, the pace at which the US Fed moves will depend on the extent of the fallout of the Russia invasion of Ukraine.

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 latest IMF forecasts put world GDP growth at 4.4% in 2022 and 3.8% in 2023, after growth of 5.9% in 2021. World economic growth returns to 3.0–3.5% in the 2024–27 period. The prospects for 2022 are now more uncertain, with much depending on the length and depth of sanctions on Russia.

Surging electric vehicle (EV) sales in the major nations have implications for a range of critical minerals and metals in the outlook period. In addition to using about 9kg of lithium, the average light EV requires around 200kg of other key minerals and metals (Figure 1.4) — about 6 times the volume used in a car with an internal combustion engine.

Figure 1.4: Key minerals used in electric vehicles



Source: IEA (2021)

Resource commodity demand should thus show significant growth over the outlook period. Australian coal and LNG exporters should achieve high prices, as energy shortages persist and Russian exports are shunned. However, after 2022, as global coal and LNG supply lifts and demand growth moderates, prices are likely to slide noticeably.

Our projections suggest that resource and energy export earnings will reach $425 billion in 2021–22, but then decline to $370 billion in real terms in 2022–23. Earnings should steady out at $263–293 billion over the rest of the outlook period.

Higher global interest rates — in response to persistent inflation — pose a downside risk to global economic activity, and hence the resource and energy export forecasts.

1.4 Prices

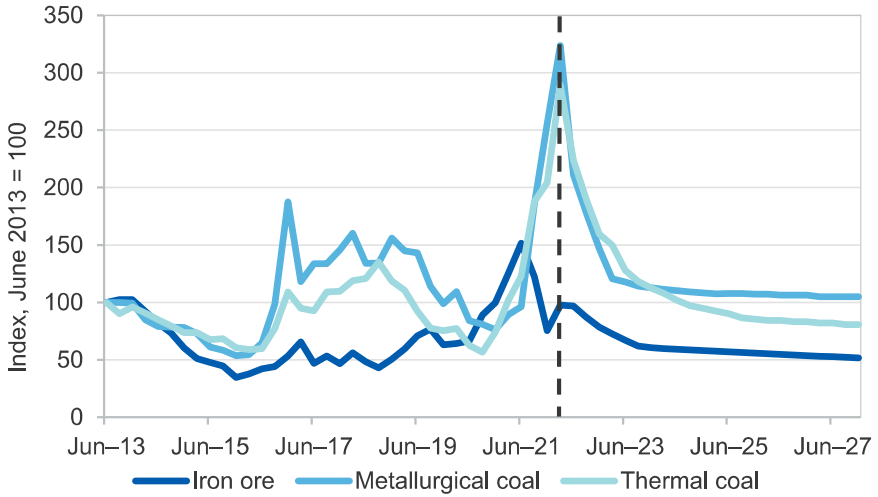
Since the December 2021 *Resources and Energy Quarterly*, the iron ore price has made modest gains but is well below mid 2021 levels. The likelihood of improved Chinese demand has added to the impact of supply problems in major exporting nations (Figure 1.5). Prices are expected to ease over the outlook period, as Brazilian supply recovers and growth in world demand moderates.

Australian metallurgical coal prices are at, or close to, record highs as bad weather in Australia impacts production and transportation. Prices are expected to ease over the outlook period, as supply recovers. Thermal coal prices are also at record levels: with rebounding economic activity and utilities shunning Russian supply, buyers are scrambling to rebuild stocks. Prices are likely to hold at relatively strong levels in the short term but decline from 2023, as demand falls back and supply expands (Figure 1.5).

Oil prices recently hit their highest level since 2008, as the market anticipates the loss of some Russian supply against a backdrop of low world inventories. The oil price seems capable of further short term gains but is then likely to fall back, as an improvement in global supply more than matches the recovery in demand. Contract LNG prices are forecast to ease, as oil prices settle. Spot LNG is likely to be high for some time.

Gold briefly rose above US$2,000 an ounce as Russia's invasion of Ukraine saw flows into safe havens. Gold also seems highly capable of more short term gains, but is then likely to fall in the next few years, as the withdrawal of widespread central bank stimulus lifts real bond yields. In mid-March 2022 — as in mid-December 2021 — all 6 base metals traded on the London Metal Exchange were in backwardation — where spot prices exceed some/all prices further out on the futures curve. This reflects tight supply: inventories have recently stayed very low or fallen further, as supply disruptions added to the impact of strong demand (following the rebound in economic activity). Base metal usage should rise, as world industrial activity recovers and as the energy transition continues. Prices should fall as supply slowly catches up with demand and stockpiles build.

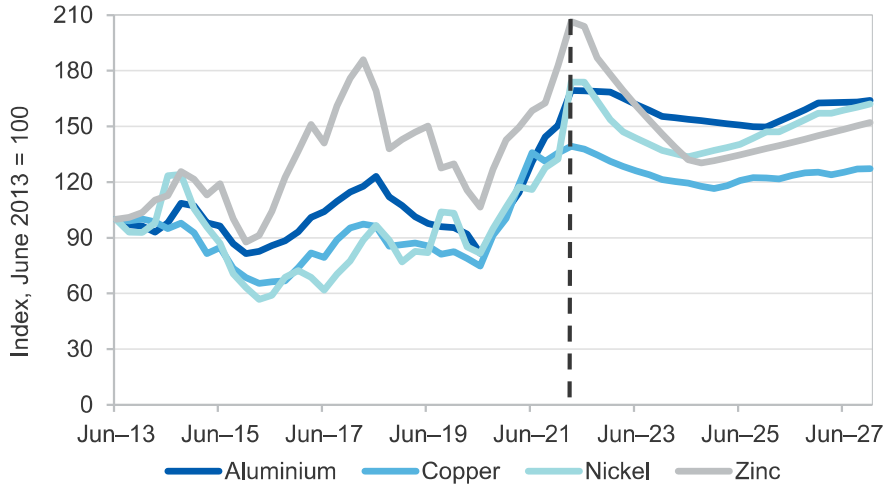
Figure 1.5: Bulk commodity prices



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

Source: Bloomberg (2021); Department of Industry, Science, Energy and Resources (2022)

Figure 1.6: Base metal prices



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

Source: Bloomberg (2021); Department of Industry, Science, Energy and Resources (2022)

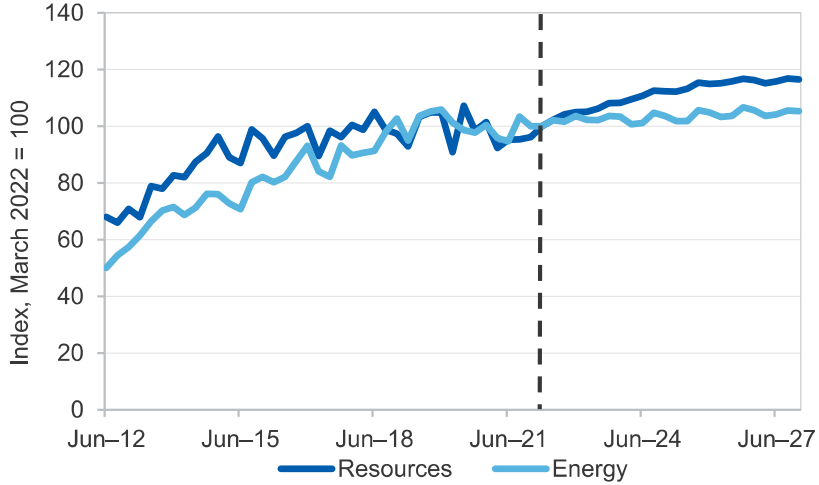
1.5 Export volumes

March quarter export volumes rose, driven by resource exports

The OCE's Resources and Energy Export Volumes Index (preliminary estimate) rose by 2% in the March quarter 2022 from the last quarter of 2021, and was 6% higher than a year before (Figure 1.7). Within this total, resource commodity volumes rose 8% in the year to the March quarter 2022, and energy commodity volumes rose by 4%. The improvement in energy exports was driven by the rebound in demand, as world activity (and thus power demand) recovered from the impact of COVID-19.

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 demand for our ferrous and non-ferrous metals. The production of electric vehicles and new energy technologies will see growing demand for commodities such as copper, aluminium, lithium and nickel. The volume of energy exports is forecast to show only minor growth during the outlook period. Record high prices will impact adversely on near-term demand.

Figure 1.7: Resource and energy export volumes



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

1.6 Contribution to growth and investment

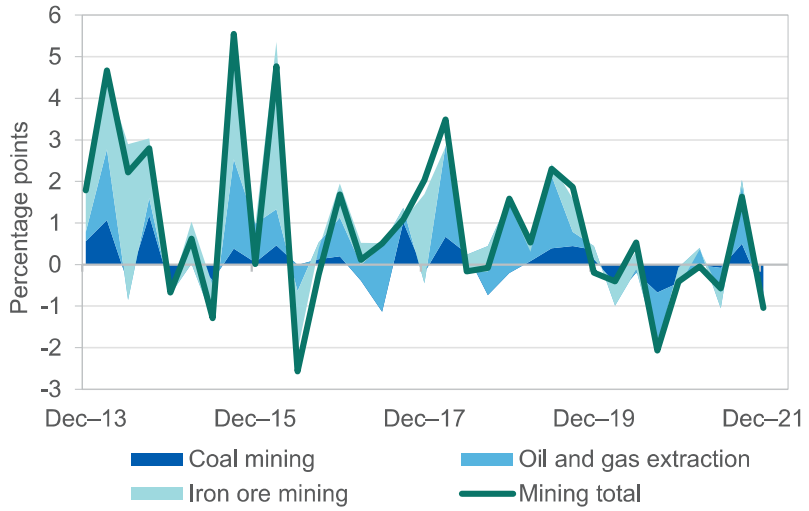
Mining industry expanded while the overall economy contracted

Australia's real Gross Domestic Product (GDP) rose by 3.4% in the December quarter 2021, and was up 4.2% over the year since the December quarter 2020.

Mining value-added fell by 1.0% in the December quarter, and was down 0.1% over the previous twelve months (Figure 1.8). Coal mining was impacted by bad weather, and the oil/gas sector by operational problems.

In the coming five 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. However, absent significant investment, coal production is likely to struggle to grow significantly in the latter half of the outlook period. Ferrous and non-ferrous metal production should show stronger growth than energy production, as the global energy transition gathers pace.

Figure 1.8: Contribution to quarterly growth, by sector

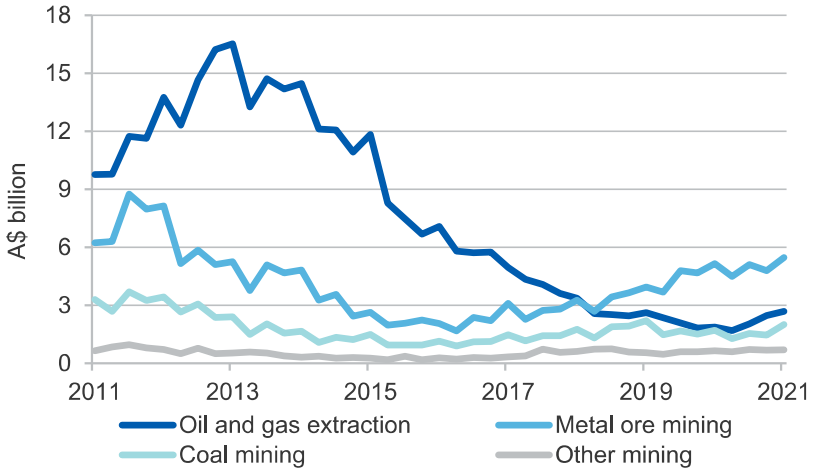


Source: ABS (2022) Australian National Accounts, 5206.0

Mining investment is picking up

The ABS Private New Capital Expenditure and Expected Expenditure survey of December quarter 2021 shows that Australia's mining industry invested $10.9 billion in the quarter. This was up by 15% in the quarter, and 16% from the December quarter 2020. 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 1.9).

Figure 1.9: Mining industry capital expenditure by commodity

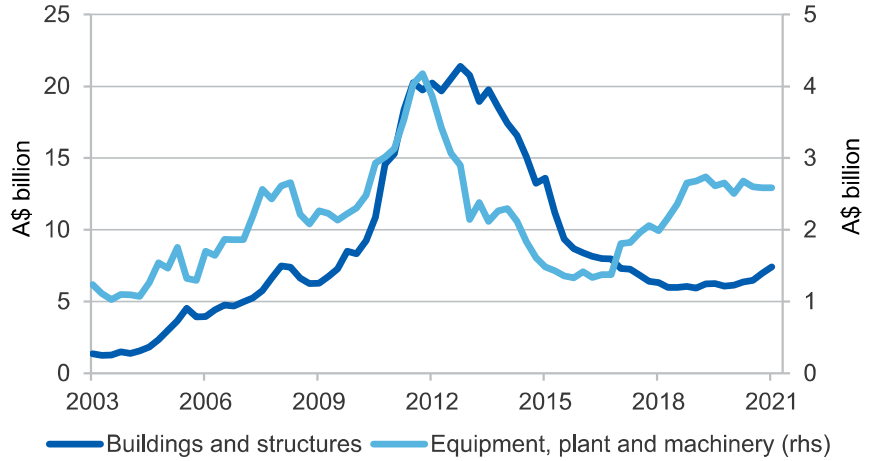


Notes: Other mining includes non-metallic mineral mining and quarrying and exploration and other mining support services; chart data is in nominal, original terms

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

Expenditure lifted slightly for buildings and structures, while holding steady for machinery and equipment in the December quarter 2021 (Figure 1.10). Spending on plant and equipment remains well above its average level of recent years, though the reverse trend has been evident in buildings and structures. Forward expectations suggest that investment in 2021–22 and 2022–23 will be slightly higher than in 2020–21 (Figure 1.11). Strong prices for gold and various minerals used in low-emissions energy have been leading to new investment plans, including the re-opening of mines.

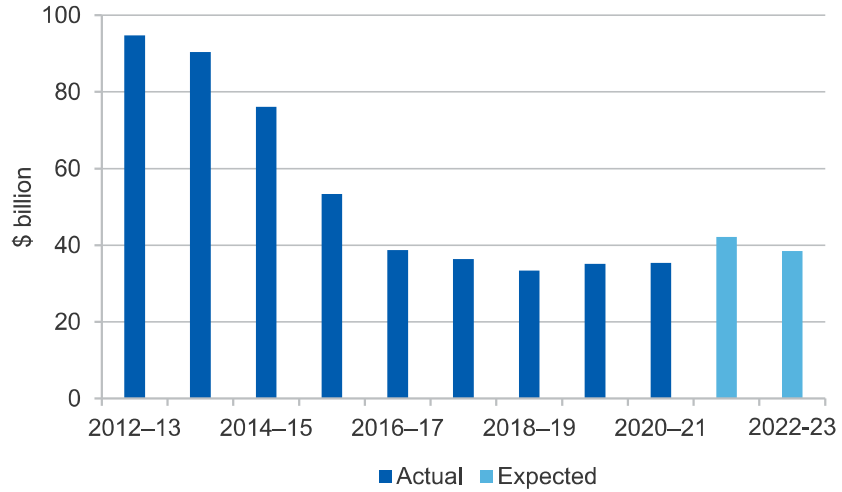
Figure 1.10: Mining industry capital expenditure by type, quarterly



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

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

Figure 1.11: Mining industry capital expenditure, fiscal year

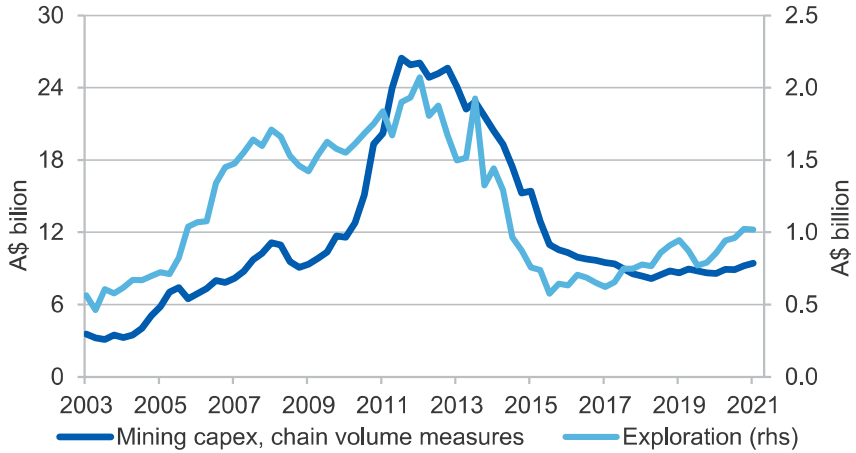


Notes: Chart data is in nominal terms

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

Data on exploration spending (adjusted for inflation) suggests that mining capital expenditure continues to build up (Figure 1.12). Exploration spending was largely steady in the December quarter at $1.0 billion. This follows five consecutive quarterly rises, representing a sustained lift from the recent low of $769 million in the June quarter 2020.

Figure 1.12: Mining capital expenditure vs exploration, quarterly



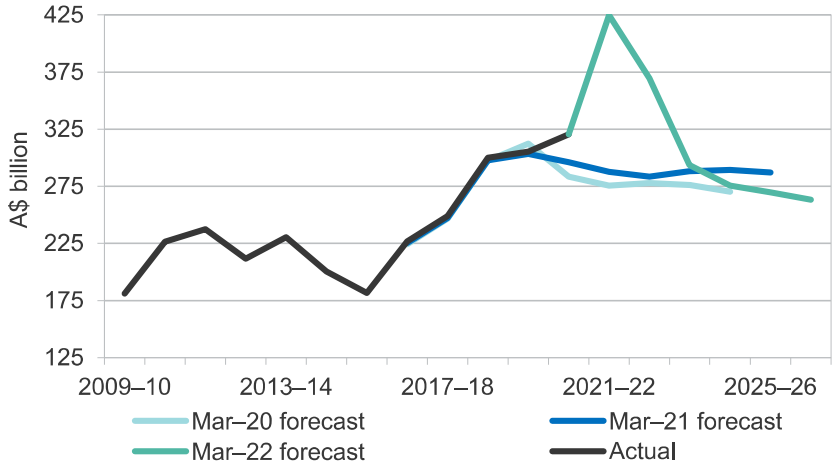
Source: ABS (2022) Private Capital Expenditure Survey, Chain Volume measure, 5625.0

1.7 Revisions to the outlook

At $425 billion, the forecast for Australia's resources and energy exports in 2021–22 is $46 billion higher (in nominal terms) than those contained in the December quarter 2021 *Resources and Energy Quarterly* (REQ). The Russian invasion of Ukraine has seen an unprecedented surge in metallurgical and thermal coal and LNG prices in 2021–22. Iron ore earnings have benefited from a rebound in prices, as world demand rises and bad weather affects supply.

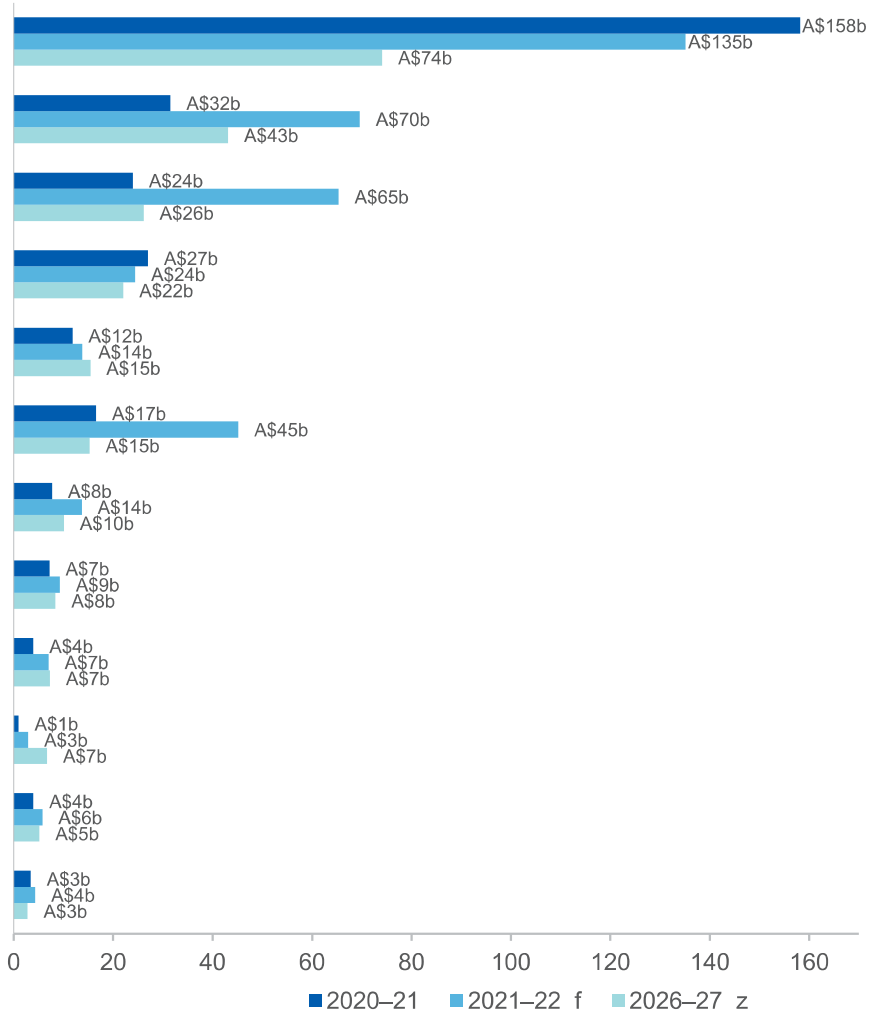
The forecast for $372 billion (nominal terms) in export earnings in 2022–23 is up around $62 billion from the December quarter 2021 REQ. The likelihood that energy prices will remain higher than expected — as the exclusion of a significant amount of Russian oil, gas and coal exports from world markets leaves shortages — has driven the upward revision.

Figure 1.13: Resource and energy exports, by forecast release



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

Figure 1.14: Australia's major resources and energy commodity exports, 2021–22 dollars



	% change from 2020–21			CAGR % change from 2020–21		
	2021–22			2026–27 z		
	volume	EUV	value	volume	EUV	value
Iron ore	▲ 3	▼ -17	▼ -15	▲ 3	▼ -15	▼ -12
LNG	▲ 6	▲ 108	▲ 121	▲ 1	▲ 5	▲ 5
Metallurgical coal	→ 0	▲ 172	▲ 173	▲ 1	→ 0	▲ 1
Gold	▲ 1	▼ -10	▼ -9	▲ 5	▼ -8	▼ -3
Copper	▼ -7	▲ 25	▲ 17	▲ 1	▲ 3	▲ 5
Thermal coal	▲ 7	▲ 154	▲ 173	▲ 1	▼ -3	▼ -1
Oil & condensate	▲ 2	▲ 75	▲ 78	▲ 2	▲ 2	▲ 5
Alumina	▼ -2	▲ 31	▲ 29	→ 0	▲ 3	▲ 3
Nickel	▲ 51	▲ 19	▲ 79	▲ 10	→ 0	▲ 11
Lithium	▲ 19	▲ 149	▲ 197	▲ 19	▲ 16	▲ 38
Aluminium	▲ 4	▲ 42	▲ 48	▲ 1	▲ 3	▲ 5
Zinc	▼ -11	▲ 41	▲ 25	▼ -2	▼ -1	▼ -3

Notes: f forecast. EUV is export unit value.
Source: ABS (2021) International Trade in Goods and Services, 5368.0; Department of Industry, Science, Energy and Resources (2021)

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

Exports (A$m)	2020–21	2021–22[f]	2022–23[f]	2023–24[f]	2024–25[z]	2025–26[z]	2026–27[z]	CAGR[f]
Resources and energy	309,863	424,855	381,175	310,848	299,151	300,157	300,159	-0.5
– real[b]	320,333	424,855	369,635	293,614	275,566	269,749	263,171	-3.2
Energy	81,229	200,317	180,061	130,926	117,992	115,495	115,481	6.0
– real[b]	83,974	200,317	174,610	123,667	108,689	103,794	101,250	3.2
Resources	228,634	224,538	201,114	179,923	181,159	184,662	184,678	-3.5
– real[b]	236,360	224,538	195,025	169,947	166,877	165,955	161,921	-6.1

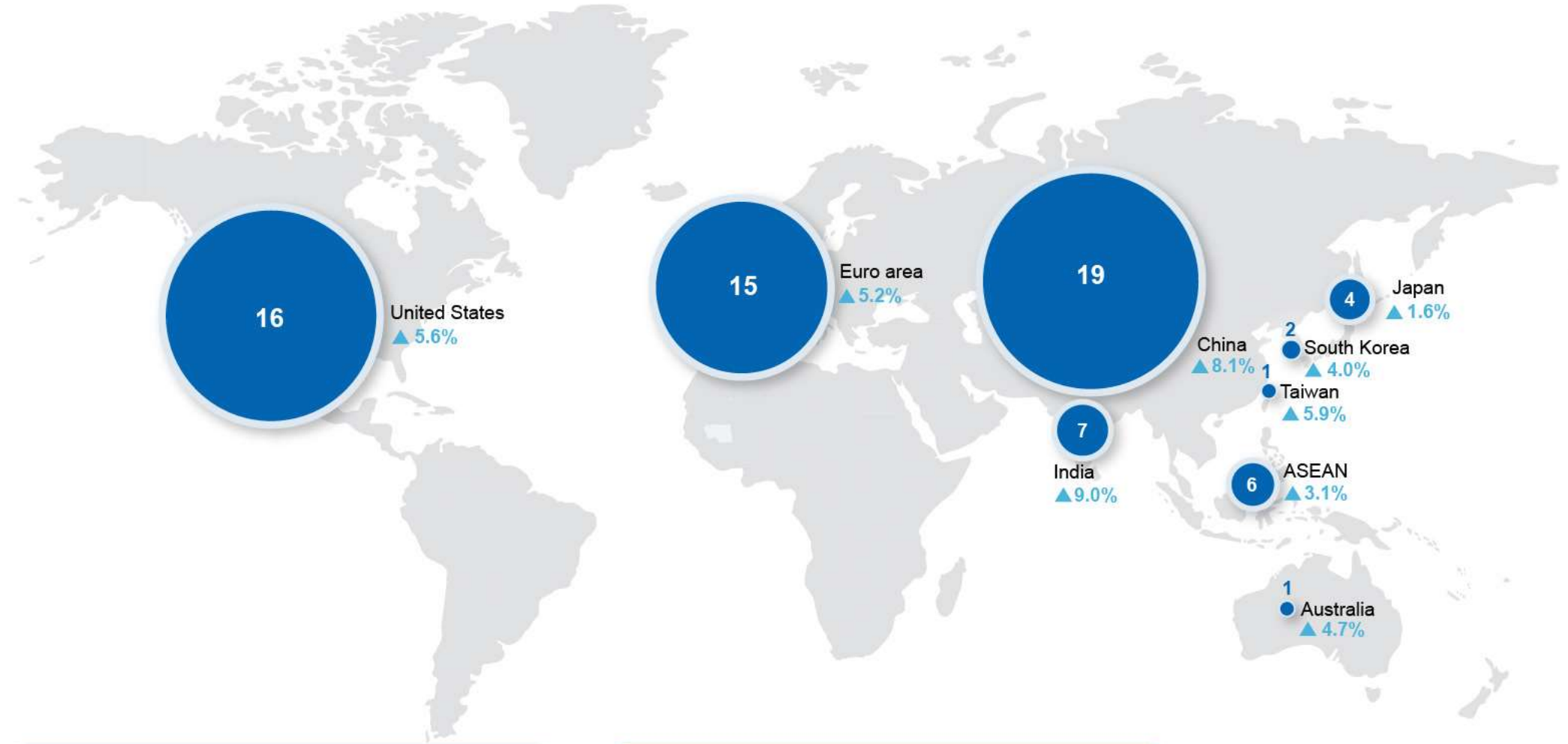
Notes: **b** In 2020–21 Australian dollars; **f** forecast; **r** Compound annual growth rate for forecast period; **z** projection.
Source: ABS (2021) International Trade in Goods and Services, 5368.0; Department of Industry, Science, Energy and Resources (2021)

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

	Prices				Export volumes				Export values, A$b		
	Unit	2020–21	2021–22[f]	2026–27[z]	Unit	2020–21	2021–22[f]	2026–27[z]	2020–21	2021–22[f]	2026–27[z]
Iron ore	US$/t	140	118	64	Mt	867	897	1,044	158	135	74
LNG	A$/GJ	7	16	12	Mt	77	82	80	32	70	46
Gold	US$/oz	1,850	1,789	1,576	t	283	285	372	27	24	22
Metallurgical coal	US$/t	123	348	151	Mt	171	171	184	24	65	26
Thermal coal	US$/t	76	193	71	Mt	192	206	209	17	45	15
Copper	US$/t	7,971	9,716	8,926	Kt	896	834	965	12	13	14
Crude oil	US$/bbl	54	92	71	Kb/d	276	281	316	7.7	13.8	10.1
Alumina	US$/t	282	382	372	Mt	18,600	18,250	18,314	7.2	9.2	8.4
Nickel	US$/t	16,267	22,736	23,438	Kt	181	273	326	3.9	7.0	7.3
Zinc	US$/t	2,657	3,476	2,684	Kt	1,392	1,234	1,217	3.4	4.3	2.8
Aluminium	US$/t	2,029	2,905	2,969	Kt	1,357	1,417	1,474	3.9	5.8	5.1
Lithium	US$/t	448	1,043	806	Kt	1,628	1,936	4,668	1.0	2.8	6.7
Uranium	US$/lb	30	42	53	t	6,166	4,944	5,980	0.6	0.5	0.7

Notes: **a** Export data covers both crude oil and condensate; **f** forecast; **z** projection. **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 (2021) 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, Energy and Resources (2021)

Macroeconomic Outlook



In 2021, global economic activity increased by 5.9%. Growth is expected to slow to 4.4% in 2022 due to ongoing impacts from the Omicron variant of the COVID-19 pandemic as well as the persistence of supply chain disruptions.

Risks include the impacts of Russian invasion of Ukraine on global growth, the potential for new variants of the pandemic, as well as the persistence of supply chain disruptions through the year. Inflationary price pressures are also expected to weigh heavily on markets through 2022.

● = Share of global GDP

▲ = Economic growth in 2021

▼ = Economic contraction in 2021

2.1 Summary

- The global recovery is expected to continue in 2022, but at a slower pace than in 2021. This slower growth will reflect the ongoing impacts from the Omicron variant of the COVID-19 pandemic across major nations as well as the persistence of supply chain disruptions into 2022.
- The world economy is forecast to grow by 4.4% in 2022 and 3.8% in 2023. Global growth is then expected to trend toward lower, longer-run levels from 2024 as the pent up demand impulse recedes, and as stimulatory fiscal and monetary policies are scaled back.
- Risks to global growth in the short term remain skewed to the downside. This reflects the flow-on impacts from Russian invasion of Ukraine, the potential for new variants of the pandemic, as well as the persistence of supply chain disruptions through the year. Inflationary price pressures are also expected to weigh heavily on markets through 2022.

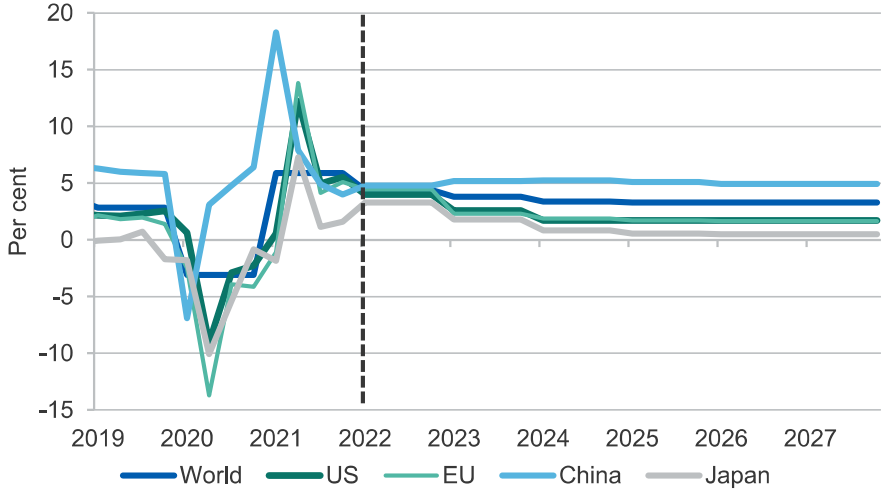
2.2 World economic outlook

The pace of the global recovery likely to slow in 2022

In its January 2022 Outlook, the International Monetary Fund (IMF) projects the world economy to grow by 4.4% in 2022 (Figure 2.1). This is a downward revision of half a percentage point from its October 2021 update. The downward revision reflects ongoing impacts from the Omicron variant of the COVID-19 pandemic across many major economies; as well as the persistence of global supply chain constraints — in both seaborne trade and onshore logistic networks — that have continued to build through the second half of 2021 and into 2022.

The US, China, Euro area and the United Kingdom have all had 2022 growth projections revised down from the October 2021 Outlook, due to outbreaks of the Omicron variant, and the impact of supply chain disruptions on industrial output. These economies are now expected to have stronger growth in 2023 than previously forecast, as they emerge from these challenges.

Figure 2.1: GDP growth forecasts



Source: Bloomberg (2022); IMF (2022)

World economic growth is expected to continue to ease over the outlook period. Global growth is forecast at 3.8% in 2023, and is expected to fall to longer-run trend levels of 3.3% by 2027, as pent up demand recedes globally and government support is removed.

Tighter monetary policy has been signalled across major economies such as the US and Europe in 2022 in response to persistent price pressures that have built through 2021. Tighter monetary policy should act as a drag on economic growth over the first half of the outlook period. An additional consideration weighing on assessments of the pace of monetary tightening will be the extent of the wider economic fallout of the Russian invasion of Ukraine. Moreover, this tightening cycle may be at least partially offset by more expansionary monetary conditions in China this year.

In the latter half of the five year outlook period, growth should receive a boost from investment in the global energy transition as governments and businesses focus on 2030 emissions targets.

There are a number of key risks to the outlook. Heightened geopolitical tension and flow-on impacts from the Russian invasion of Ukraine and associated sanctions represents the biggest downside risk to the global outlook. In March, IMF analysis on the economic impacts of the invasion stated the global outlook was subject to 'extraordinary uncertainty' and that the ongoing war and associated sanctions will have a severe impact on the global economy. The IMF signalled it would be downgrading growth projections, but still expected world growth to be positive. As the IMF growth forecasts discussed throughout this chapter were prepared in January they predate the invasion. Updated IMF forecasts are scheduled for release in April.

An indication of the potential scale of impacts is provided by recent OECD scenario analysis that considers shocks to commodity and financial markets following the onset of the Russian invasion of Ukraine. This analysis indicates a large hit to global GDP over the next 12 months — of at least 1 percentage point — and an increase in global CPI of 2.5 percentage points, with far greater impacts if the war intensifies.

In addition to the humanitarian crisis, the economic impacts of the invasion have been widespread, affecting global markets for food, energy, industrial metals and bulk commodities. The invasion is also amplifying wider risks associated with supply shortages, shipping and transport delays and price pressures in many countries, particularly given the potential for further sanctions and actions taken in response by major economies. (See *Box 8.1: Impact of Russia's invasion of Ukraine on global oil and gas markets*).

Liquidity pressures in China's residential property market could also continue to constrain economic growth in China in 2022, with implications for global resource and commodity markets over the early outlook period.

Easing growth in global trade and production after a historic 2021

Following a historic peak in early 2021, global merchandise trade continued to trend lower for much of the second half of 2021. However, growth of 7.1% year-on-year in December, suggests this slowdown may now be stabilising. Global goods trade is forecast to grow by more than 4.0% in 2022. This reflects supply disruptions that are expected to continue to hamper industrial production in the near term, as well as a slackening global demand for merchandise imports in recent months. However, the trade outlook for Australia's major trading partners remains positive, with GDP growth forecast to reach 4.4% in 2022[1].

Global industrial production also showed signs of stabilisation in December 2021, growing by 4.1% year-on-year (Figure 2.2). Global industrial output is forecast to grow by 4.3% in 2022. While this is consistent with a return to more moderate, longer-run growth rates, it also reflects the near-term disruptions that persisted in many economies in 2021 as a result of the COVID-19 pandemic and supply chain issues.

Figure 2.2: World industrial production, trade and PMI

Notes: PMI data is to February 2022; IP and trade data only available to December 2022
Source: IHS Markit (2022); CPB Netherlands Bureau for Economic Policy Analysis (2022)

[1] RBA Statement on Monetary Policy – February 2022

The Global Manufacturing Purchasing Managers Index (PMI) was 53.6 in February 2022. While this marked the 20th month of expansionary conditions from the COVID-lows, the February reading, up from 53.2 in January, was also the joint second-lowest reading over the past 16 months. Supply chains continued to show signs of strain in February, however supplier delivery times increased at the lowest rate in over a year. Input costs and output charges saw a mild re-acceleration in February, with inflation stronger in developed countries than emerging markets.

Global services trade growth slowed to a 3-month low in December 2021, in response to rising cases of the Omicron variant (particularly consumer services). Service industries remain susceptible to renewed outbreaks over the outlook period.

Supply chain disruptions to persist in 2022

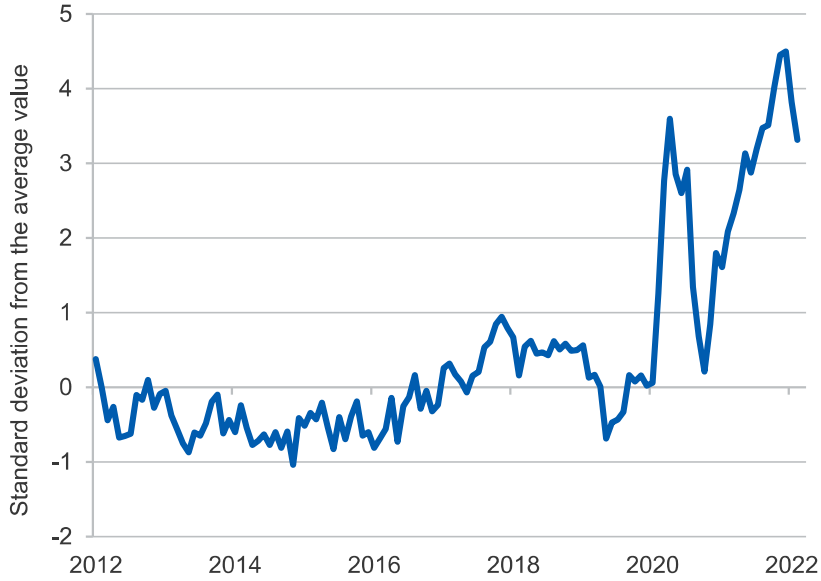
A strong recovery in world trade and industrial production in 2021 has seen building pressure on global supply chains over the last 12 months. IMF modelling suggests supply disruptions lowered global growth in 2021 by as much as 0.5 to 1.0 percentage points.

After easing slightly in late 2021 container shipping and air freight rates have hit record highs, with ocean freight rates up to 10 times higher than pre-pandemic levels. Congestion at major destination ports in Europe and the US, and issues with onshore logistics networks have continued to intensify. This is contributing to increased delivery delays and rising input costs. The Global Supply Chain Pressure Index — a new measure developed by the Federal Bank of New York measuring cross-border transportation costs, delivery times, and order backlogs — hit its highest levels on record in December 2021 (Figure 2.3).

The Russian invasion of Ukraine is driving further upheaval to global shipping, with the International Chamber of Shipping warning that combined, both countries account for 15% of the global seafaring workforce. Recent sanctions, including countries closing their ports to Russian ships, as well as difficulties for vessels obtaining insurance, will worsen global supply chain problems in coming months. How quickly global shipping can reorganise is unclear, with the International Maritime Organisation holding emergency sessions in March to discuss the situation.

The comparatively higher demand for goods (relative to services) that was seen throughout the pandemic may recede somewhat in 2022, which would help to alleviate supply chain pressures. However, some critical market segments are expected to see further supply chain disruption in 2022. For example, many are now expecting the shortage in semiconductor chips — responsible for as many as 7.7 million fewer vehicles being made in 2021 — to persist into 2023. Some chipmakers, such as Toshiba, have warned that the Russian invasion of Ukraine will further delay supplies due to the latter's role as the world's major supplier of purified gases such as neon, which are essential in chip manufacture. Similar issues are emerging due to disruption to supply of automotive wiring harnesses produced in Ukraine which is restricting vehicle production in European factories.

Figure 2.3: Global Supply Chain Pressure Index

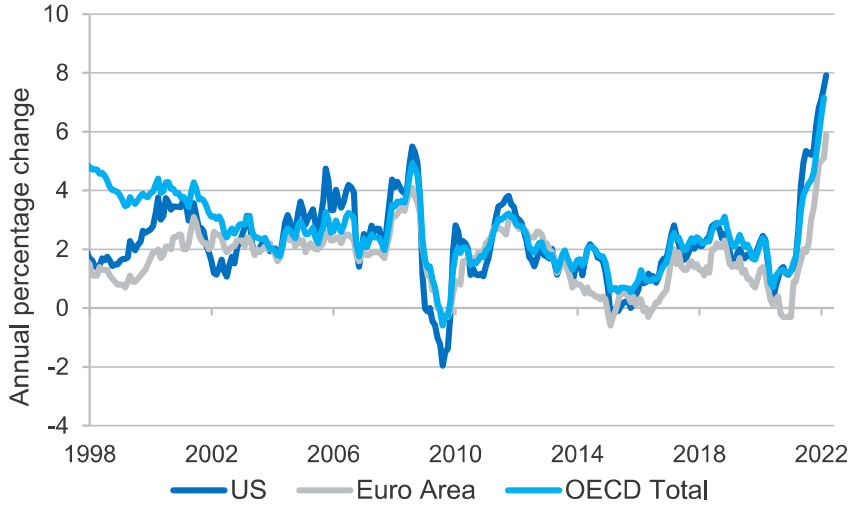


Source: Bloomberg (2022); New York Federal Reserve (2022)

Inflationary price pressures to spur further monetary tightening in 2022

High energy and food prices, and global supply chain disruptions, led to significant inflationary price pressures across both advanced and emerging economies through 2021 and early 2022. This saw US CPI reach 7.9% year-on-year in February 2022 — a 40-year high, and inflation in the Euro zone reach 5.9% — the highest on record (Figure 2.4).

Figure 2.4: Consumer Price Indices – US, Europe and OECD



Source: Bloomberg (2022); Board of Governors of the Federal Reserve System (2022); U.S. Bureau of Economic Analysis (2022); OECD (2022)

These price pressures have already seen some major economies raise interest rates, with tighter monetary conditions expected across a number of major economies through 2022.

In the US, the Federal Reserve approved its first interest rate increase in more than three years in March, and stated it anticipated that ongoing increases in the target range would be appropriate. This followed January's announcement of an accelerated end to quantitative easing due to strong price and wage pressures. Surveys of market analysts suggest the US tightening cycle may peak in 2023 or early 2024. Much depends on the success of the US Fed in bringing inflation back to target levels of around 2.0%.

Re-organisation of commodity trade flows

World commodity trade is likely to re-organise significantly over the outlook period. As more US LNG capacity comes online, Western Europe is likely to switch away from Russian supply to United States exports. As a result, Russian gas exports may increasingly flow to China, although additional infrastructure would need to be built. The European Commission is discussing proposals to reduce the EU's dependence on Russian gas by two thirds before the end of 2022 as part of a plan to become independent from all Russian fossil fuels before 2030. With European LNG import terminals now approaching capacity, transition away from Russian gas will depend on the rate at which new LNG import capacity can be built.

2.3 Major trading partners' economic outlook

China expected to see more moderate growth in 2022

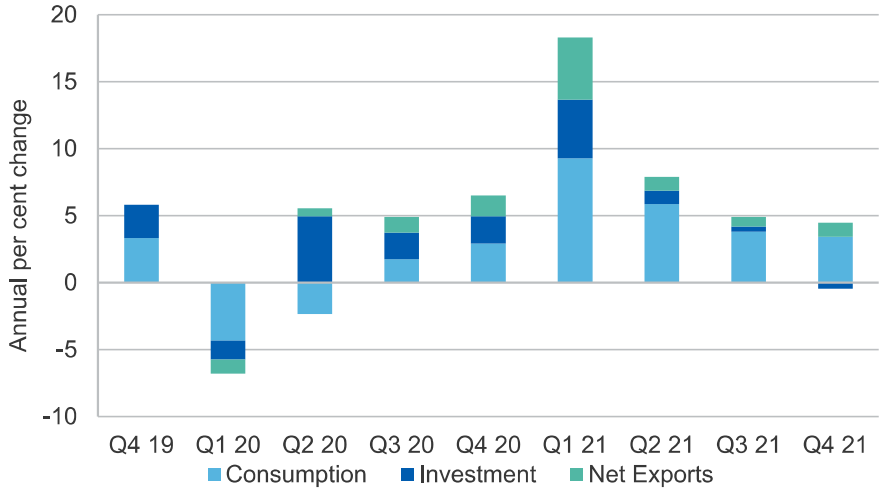
China's economy grew by 4.0% year-on-year in the December 2021 quarter, the slowest quarterly rate in 18 months (Figure 2.5). New outbreaks of the pandemic, combined with a zero-COVID containment strategy, inhibited economic activity in the second half of 2021. This was further exacerbated by acute energy shortages and ongoing weakness in the residential property sector. For calendar 2021, China's economy grew by 8.1% year-on-year.

Manufacturing grew by 3.1% year-on-year in the December 2021 quarter, the lowest growth since March 2020. The construction and real estate sectors also saw further weakness, recording a second consecutive period of contraction (declines of 2.1% and 2.9% year-on-year respectively).

China's industrial output grew by 7.5% year-on-year in February, down from 14.1% growth in March 2021. Industrial activity in the March quarter 2022 has been dampened by production curbs that had been placed on Northern provinces in preparation for the Beijing Winter Olympics. New cases of the Omicron variant and the first province-wide lockdowns since

the Wuhan outbreak in early 2020 have also dampened output. China's official Manufacturing PMI in February was 50.2 and the Caixin-Markit Manufacturing PMI — a broader-based survey of over 500 companies — increased to 50.4 in February, up from 49.1 in January. However, conditions remain subdued with new orders and external demand, the big drivers of industrial output and economic growth in 2021 remaining weak.

Figure 2.5: China GDP growth (quarter-on-quarter)



Notes: Consumption is made up of both household and government sectors.
Source: Bloomberg (2022); National Bureau of Statistics of China (2022)

More expansionary fiscal and monetary policy has been signalled for 2022, with the Chinese Government announcing a growth target of around 5.5% for 2022. Cuts to lending rates (the first in a number of years) and the bank reserve requirement ratio (RRR) in recent months has seen an improvement in China's credit conditions — though year-on-year growth remained negative as of January 2022. Local government spending — particularly on infrastructure — is also expected to surpass 2021 levels, with 102 mega projects already earmarked for fast tracking in 2022, with activity likely to concentrate in the March quarter (see *Steel* chapter).

Weakness in China's residential property market remains a major risk to economic growth in 2022, as developers seek to deleverage and manage ongoing liquidity concerns. New property starts continued to trend lower in February 2022 (12% lower year-on-year), and new home prices have also been subdued, with zero month-on-month growth in February following 0.2% growth in January. A broader slowdown in China would have significant implications for global growth, and resource and energy markets over the outlook period.

The IMF is forecasting China to grow by 4.8% in 2022. The 0.8 percentage point downgrade (from the October 2021 IMF Outlook) reflects recent waves of the pandemic, as well as the ongoing liquidity pressures amongst residential property developers. The forecast does not account for the Russian invasion of Ukraine. The IMF projects growth will rise to 5.2% in 2023, as disruptions ease, but lifting this growth rate to the Government's 5.5% target will require management of significant economic headwinds. Over the outlook period to 2027, China's economic growth is projected to stabilise at around 5.0% annually. This reflects slowing population growth in China, as well as the continued shift toward quality-oriented (rather than quantity) consumption-led growth.

Japan's strong growth in December quarter 2021 to moderate in 2022

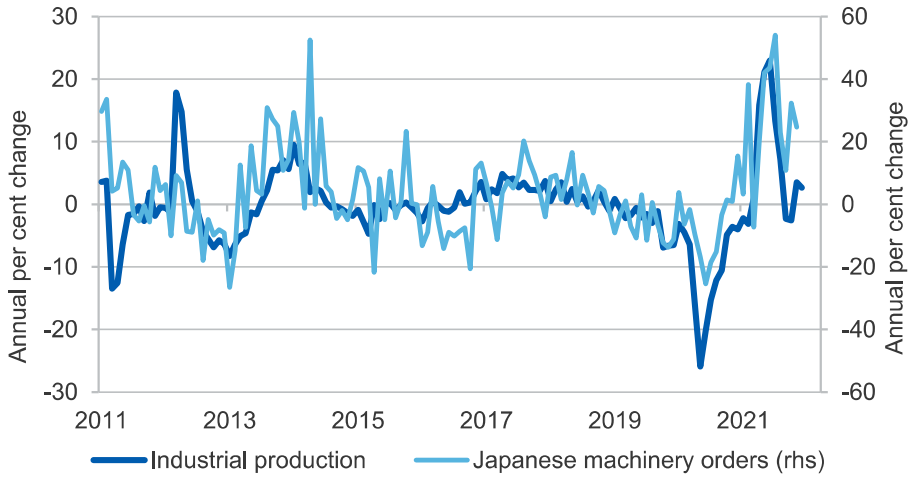
Strong growth of 1.3% (quarter-on-quarter) in the December quarter 2021 helped lift the Japanese economy into positive growth following two years of contraction. Japan's GDP increased 1.7% in 2021.

The December quarter result reflected a recovery in household consumption and business investment, as the fall in COVID-19 cases saw the government lift the state of emergency in October.

Japan's industrial output has begun to stabilise, growing 2.7% year-on-year in December following two years of substantial volatility. Machinery orders have followed a similar pattern over the period, with orders up 24.7% year-on-year in November following a lull in September (Figure 2.6).

Lead indicators for the March quarter 2022 are mixed. While remaining positive, the Jibun Bank Manufacturing PMI for Japan slipped from 55.4 in January to 52.7 in February, bringing to an end a thirteen month run of improvements in operating conditions. Manufacturers continue to report supply chain pressures, due to material shortages and growing delivery delays. These will likely push up input costs. Firms are increasingly finding it difficult to absorb these input price increases, with manufacturing output prices growing at the highest rate since July 2008.

Figure 2.6: Japan industrial production and machinery orders



Notes: IP data is to December 2021; machinery orders data only available to November 2021
Source: Bloomberg (2022)

Jibun Bank's Japan Services PMI indicates that after positive growth in the last three months of 2021, rising COVID-19 cases have seen Japan's services PMI fall sharply from 52.1 in December to 47.6 in January 2022. The IMF is now projecting Japanese economic growth of 3.3% in 2022. This is a slight increase of 0.1 percentage points from the October 2021 Outlook. While growth is expected to moderate, the IMF has revised up its forecast for 2023 by 0.4 percentage points to 1.8% in 2022.

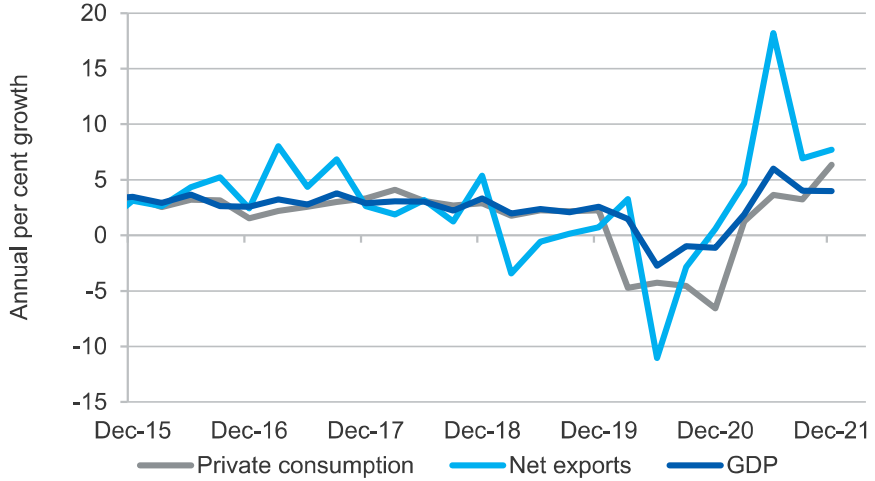
In the latter half of the outlook period, growth is expected to settle at about 0.5%, as Japan's demographic trends of an ageing and declining population and shrinking workforce continue to slow GDP growth.

South Korea's 2021 GDP growth the highest in 11 years

South Korea's economy grew by 4.0% year-on-year in the December quarter 2021. This follows strengthening household consumption, as the nation emerged from a severe wave of the COVID-19 pandemic in mid-2021, as well as rising exports from the 2021 global trade recovery.

For the full year 2021, South Korea's economy grew 4.0% year-on-year, the fastest yearly rate of expansion since 2010. This included robust growth in household consumption and government spending (6.4% and 8.1% year-on-year), as well as a record boom in exports (up 6.1% year-on-year) (Figure 2.7).

Figure 2.7: South Korea quarterly GDP, consumption and trade



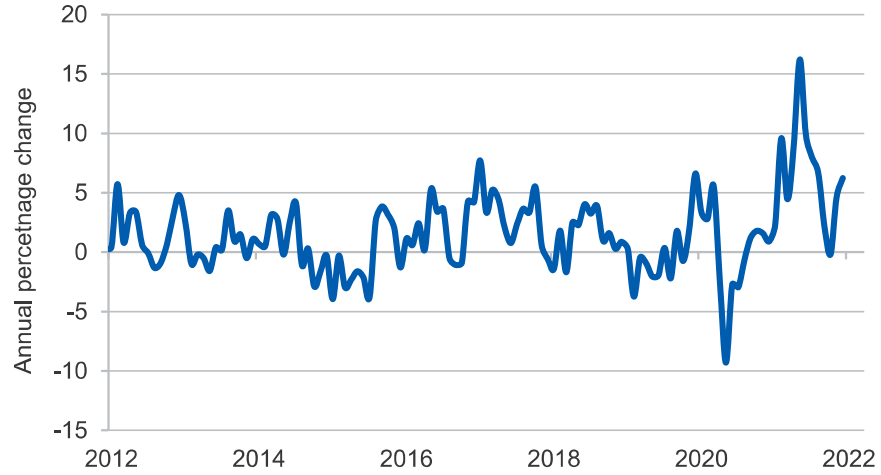
Source: Bloomberg (2022)

Despite renewed outbreaks of the pandemic in the second half of 2021, South Korea's industrial production has remained resilient, growing 4.8%

year-on-year in 2021 (Figure 2.8). South Korea's manufacturing PMI reading in January 2022 of 52.8 marked 16 consecutive months of expansion. However, firms continue to highlight intense supply side challenges (such as lengthy supplier delivery times, port congestion and container shortages) as well as acute cost pressures.

Inflationary price pressures are expected to see the Bank of Korea raise policy rates further in 2022 (following a 25 basis points increase in both August and November 2021). Managing tighter monetary conditions while maintaining robust economic growth presents a key challenge to South Korea over the outlook period (given current debt levels). The country also remains vulnerable to further global supply chain disruption, given its high dependency on exports.

Figure 2.8: South Korea monthly industrial production



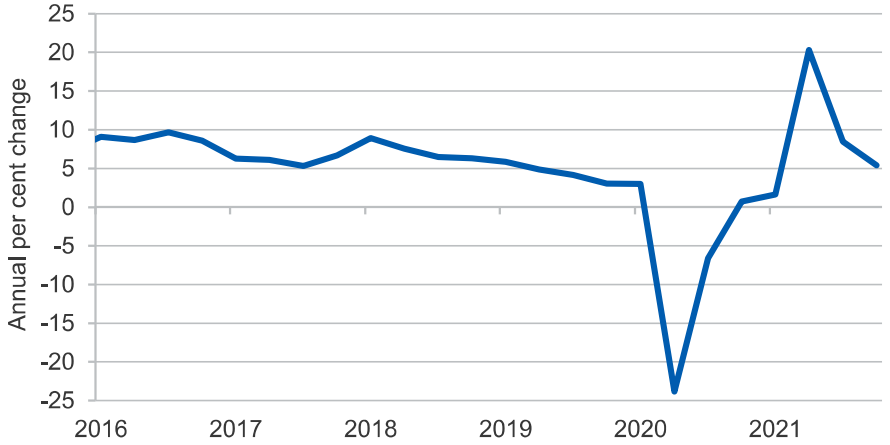
Source: Bloomberg (2022)

The IMF is projecting South Korea's economic growth to remain robust in 2022 (3.0% year-on-year) and 2023 (2.9% year-on-year) as household consumption and global trade continue to improve. South Korea's advanced manufacturing industry — including products such as semi-conductor chips — is expected to continue as a vital component of its economy. This will be supported by the recently announced New Deal, which aims to support new growth industries and products as part of a transition to an increasingly digital and green global economy. The latter part of the outlook period is likely to see growth moderate to around 2.5%.

India's recovery slows but outlook remains healthy

India's growth slowed in the December quarter 2021 to 5.4% year-on-year as the base effect from the 2020 recession faded. The result was below market expectations of 6.0% and down from 8.5% in the September quarter and 20.3% in the June quarter (Figure 2.9).

Figure 2.9: India quarterly GDP



Source: Bloomberg (2021)

Output growth in all major goods and service sectors fell in the December quarter as a third wave of COVID-19 infections saw further restrictions on mobility. Weak construction activity, down 2.8% in the December quarter (year-on-year), contributed to the slowdown. Supply chain disruptions, including semi-conductor shortages, saw manufacturing activity flatten in the quarter, growing just 0.2% year-on-year. Activity in the Trade, Hotels, Transport & Communication sector fell from 9.5% year-on-year in the September quarter 2021 to 6.1% in the December quarter.

Growth in industrial production in December 2021 slowed to 0.4% year-on-year, reflecting weaker output growth across mining and quarrying, manufacturing and utilities.

Private consumption was the main driver of growth in the December quarter, up 7% year-on-year. However, the emergence of a number of supply side issues in recent months is dampening business confidence. In particular, concerns about the intensification in the pandemic and further containment measures may further dampen economic activity and consumption and add to inflationary pressures during 2022.

India's composite PMI (combining manufacturing and services) fell from 56.4 in December 2021 to 53.0 in January 2022, with slowing evident in both manufacturing and services activity. Although new orders continued to rise, the rate of expansion was the slowest in six months. After receding in December, input cost inflation gathered pace in January with service providers reporting a stronger upturn in cost burdens. In January, manufacturing business confidence slipped to its lowest level in 18 months. However, India's manufacturing PMI showed some improvement in February, rising to 54.9, up from 54.0 in January.

Beyond these immediate concerns, the overall outlook for India's economy over the next two years remains healthy. The IMF forecasts India's economic growth at 9.0% in 2022 and 7.1% in 2023, an upward revision of 0.5 percentage points in each year from its October 2021 Outlook. The upward revision reflects stronger-than-expected financial sector performance, with the resulting expected improvements to credit growth flowing through to stronger investment and consumption.

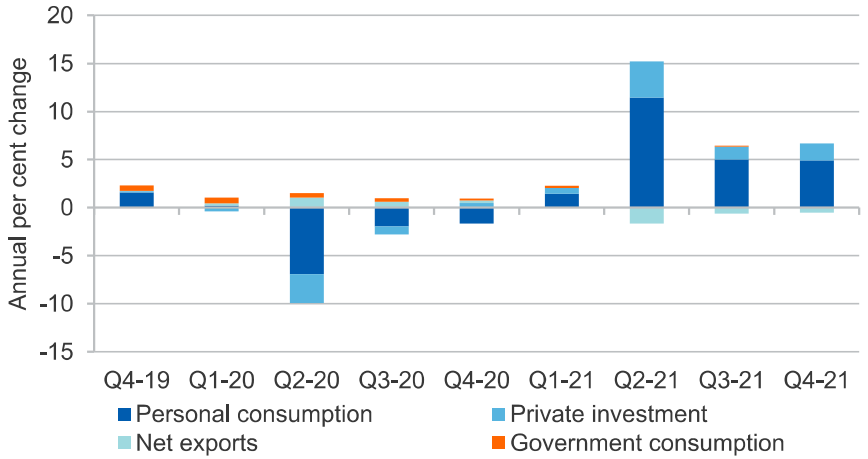
Further out, India's GDP growth is likely to average just over 6.0% a year. This reflects a resumption of the healthy growth trajectory seen in the decade prior to the COVID-19 shock where ongoing industrialisation and favourable demographics helped push India's economy to among the fastest growing in the world.

Stronger US growth in Q4 despite persistent supply chain pressures

The US economy grew at 5.5% year-on-year (an annualised rate of 6.9%) in the December 2021 quarter, a stronger-than-expected result. This was led by increased business investment (up 8.6% year on year) and consumer spending (up 7.1% year on year) (Figure 2.10).

For 2021, US GDP grew 5.7% year-on-year, its fastest rate since 1984. The release of pent up demand was a major driver of the US recovery in 2021, with household spending growing by 7.9% year-on-year. This was supported by fiscal stimulus, as well as record levels of private savings accumulated during the pandemic (Figure 2.11). However, with stimulus spending now unwinding and net private savings back to longer-run levels, this spending impulse is expected to recede in 2022.

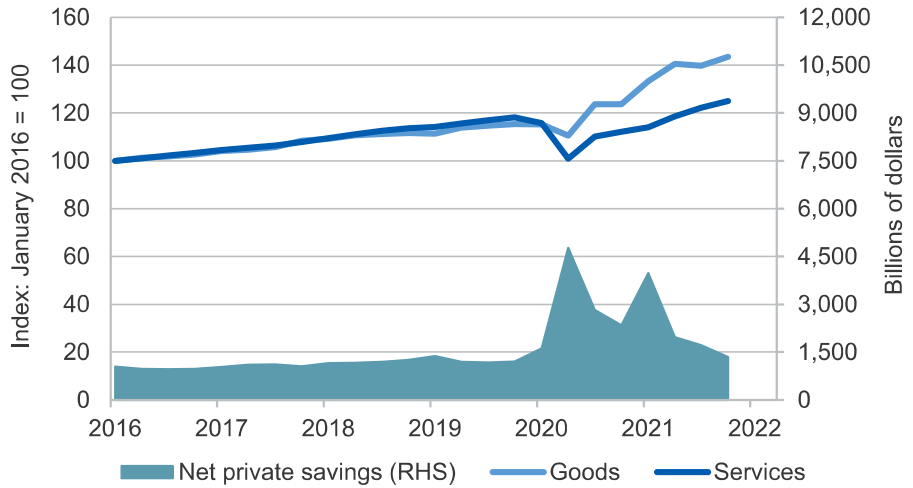
Figure 2.10: US GDP growth (year-on-year)



Source: Bloomberg (2022)

Industrial output expanded by 4.5% in the December 2021 quarter, down from a peak of 14.7% in mid-2021. The US Manufacturing PMI index remained in expansionary territory (57.3) in February, but down from the peaks seen in 2021. Input shortages and long lead times remained an ongoing concern, however the rise in input prices was the slowest in nine months, suggesting some reprieve in cost pressures.

Figure 2.11: US personal consumption and net private savings



Notes: Personal Consumption Expenditures; seasonally adjusted data; January 2016 =100
Source: U.S. Bureau of Economic Analysis (2022)

Supply chain disruptions seen through 2021 continue to be a concern, with US port congestion still at historic highs, and continued labour shortages in the transportation and logistics sectors. This has led to growing inflationary pressures, with CPI growth hitting 7.9% in February. Monetary conditions are expected to steadily tighten in 2022, with the US Fed signalling an accelerated taper for asset purchases, and that it anticipates multiple rate rises in the next 12 months. In announcing the 25 basis point increase in March 2022 the Fed increased its estimate for US inflation to 4.1% in 2022 and sharply revised down expected GDP growth to 2.8%.

The IMF's January 2021 World Economic Outlook update projects the US economy to grow by 4.0% in 2022. This is a 1.2 percentage point reduction from the October 2021 outlook, due to the earlier withdrawal of monetary accommodation, and continued supply shortages. The IMF expects growth of 2.6% in 2023. However, in March 2022 the IMF stated it expects substantially lower global growth in 2022 due to the Russian invasion of Ukraine, with updated growth and inflation forecasts scheduled for release in April.

Over the rest of the outlook to 2027, US economic growth is projected to trend toward a lower, longer-run level of around 1.7% annually. Factors affecting growth over this period will include future revenue and spending measures employed to address significant increases in public debt, rising healthcare costs and population ageing, and how the global energy transition reshapes the post-pandemic economy.

Europe recovery hampered by Omicron and supply chain disruptions

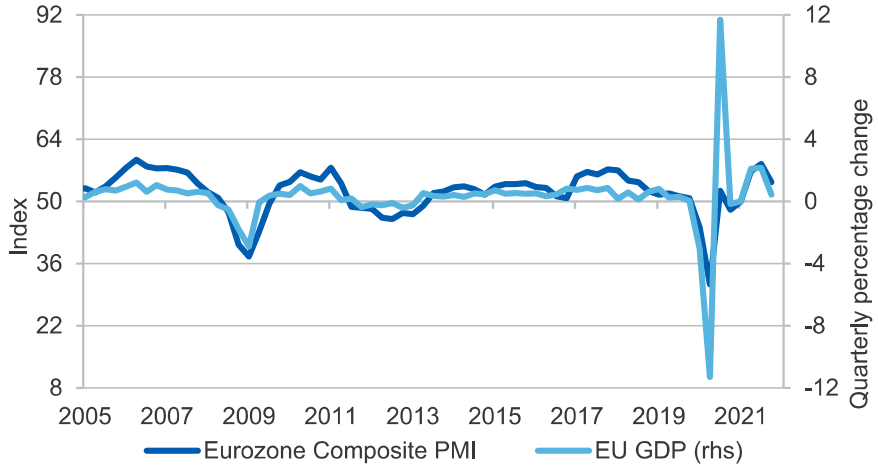
The EU economy grew by 4.8% year-on-year in the December 2021 quarter. This was 0.4% higher quarter-on-quarter, representing a considerable easing from the 2.2% growth seen for the September 2021 quarter (Figure 2.12). This slowdown reflects the impacts from the most recent omicron-wave of the pandemic, as well as subdued manufacturing activity due to ongoing supply chain disruptions. For the full year 2021, EU GDP grew by 5.2%, however in level terms EU GDP remained around 1.2% lower than the level achieved in 2019.

European manufacturing continued to be hampered by Omicron outbreaks and supply chain disruptions in the second half of 2021, with industrial production in the Eurozone only 1.5% higher year-on-year in the month of December following a fall in November. However, the Eurozone Manufacturing PMI reading of 58.2 in February 2022 suggests some stabilisation in 2022, with demand for Eurozone goods rising at the fastest rate since August 2021. Some firms also indicated in February that supply chain delays were beginning to show signs of easing.

Headline inflation in the Eurozone reached 5.9% (year-on-year) in February 2022 — its highest level on record. Energy prices have been the major driver of these inflationary pressures (up 32% year-on-year in February 2022), with shortages of oil and gas leading to multi-year price highs in the second half of 2021 and early 2022 (see *LNG* chapter). Estimates suggest Europe will see energy costs of more than US$1 trillion

in 2022 (up from US$500 billion in 2019). High inflation has raised expectations of monetary tightening in Europe in 2022.

Figure 2.12: Eurozone GDP and Composite PMI (quarterly)



Source: Bloomberg (2022)

The Russian invasion of Ukraine is the largest risk to Europe's outlook in 2022. European economies are being hit hard due to their business, economic and energy links to Russia and Ukraine, as well as impacts from the fastest refugee flow in Europe since the Second World War. Alongside energy price volatility, the invasion could lead to further sanctions and actions by major economies that could further impact trade and economic activity throughout Europe.

The IMF's January 2022 forecasts project the European Union economy to grow by 4.0% in 2022. This is a 0.4 percentage point reduction from the October 2021 outlook, and is the result of supply disruptions (particularly on manufacturing), and a resurgence in COVID cases. For 2023, growth is forecast at 2.8%. Over the remainder of the outlook to 2027, economic growth is projected to trend toward a lower, longer-run annual level of about 1.7%.

Table 2.1: Key IMF GDP assumptions

	2021	2022[a]	2023[a]	2024[a]	2025[a]	2026[a]	2027[a]
Economic growth[b]							
Advanced economies	5.0	3.9	2.6	1.7	1.6	1.6	1.6
Australia	4.2	4.1	2.5	2.6	2.6	2.6	2.6
European Union	5.2	4.0	2.8	1.9	1.7	1.7	1.7
France	6.7	3.5	1.8	1.5	1.4	1.4	1.4
Germany	2.7	3.8	2.5	1.4	1.2	1.1	1.1
Japan	1.6	3.3	1.8	0.8	0.6	0.5	0.5
New Zealand	5.1	3.3	1.7	1.9	2.2	2.4	2.4
South Korea	4.0	3.0	2.9	2.6	2.5	2.4	2.4
United Kingdom	7.2	4.7	2.3	1.6	1.5	1.5	1.5
United States	5.6	4.0	2.6	1.7	1.7	1.7	1.7
Emerging economies	6.5	4.8	4.7	4.5	4.4	4.4	4.4
ASEAN-5d[d]	3.1	5.6	6.0	5.6	5.4	5.4	5.4
China [e]	8.1	4.8	5.2	5.2	5.1	4.9	4.9
India	9.0	9.0	7.1	6.3	6.2	6.1	6.1
Latin America	6.8	2.4	2.6	2.3	2.4	2.4	2.4
Middle East	4.1	4.4	3.4	2.9	0.0	2.8	2.8
World [c]	5.9	4.4	3.8	3.4	3.3	3.3	3.3

Notes: a Assumption; b Year-on-year change; **c** Calculated by the IMF using purchasing power parity (PPP) weights for nominal country gross domestic product; **d** Indonesia, Malaysia, the Philippines, Thailand and Vietnam. **e** Excludes Hong Kong.

Sources: Bloomberg (2022); Department of Industry, Science, Energy and Resources (2022); IMF (2022)

Table 2.2: Exchange rate and inflation assumptions

	2020	2021[a]	2022[a]	2023[a]	2024[a]	2025[a]	2026[a]	2027[a]
AUD/USD exchange rate[b]	0.69	0.75	0.74	0.76	0.77	0.76	0.75	0.75
Inflation rate[c]								
United States	1.2	3.7	3.5	2.7	2.6	2.5	2.3	2.3
	2019–20	**2020–21[a]**	**2021–22[a]**	**2022–23[a]**	**2023–24[a]**	**2024–25[a]**	**2025–26[a]**	**2026–27[a]**
Australia	1.3	1.6	3.4	3.1	2.7	2.5	2.5	2.5

Notes: a Assumption; **b** Average of daily rates; c Change from previous period. US inflation assumptions are from IMF World Economic Outlook Database (October 2021).
Sources: ABS (2021) Consumer Price Index, 6401.0; Bloomberg (2022); Department of Industry, Science, Energy and Resources; RBA (2022); IMF (2021).