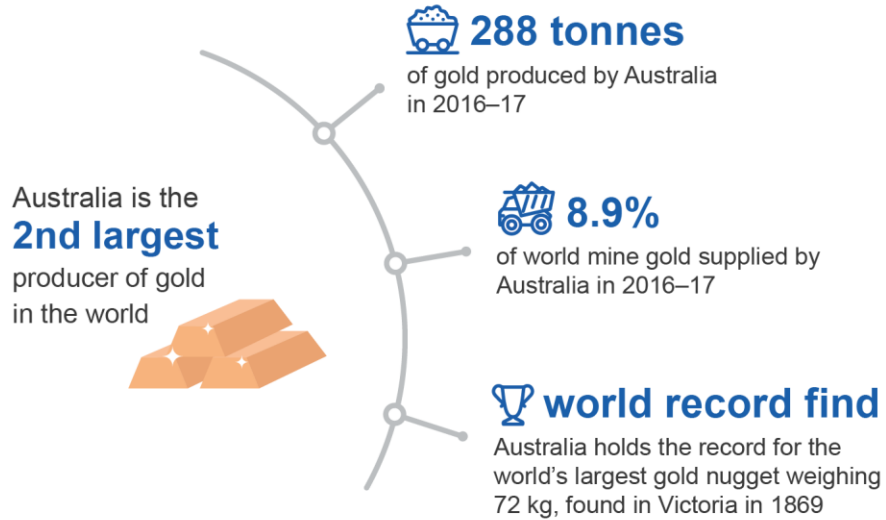


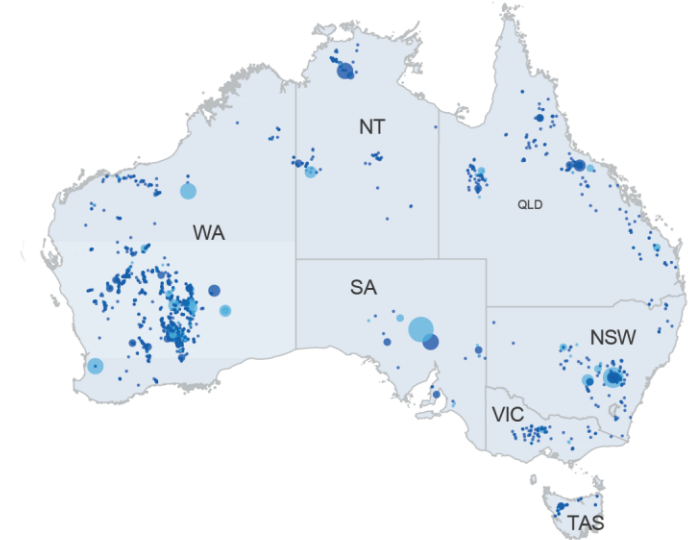
# Gold

Resources and Energy Quarterly December 2017

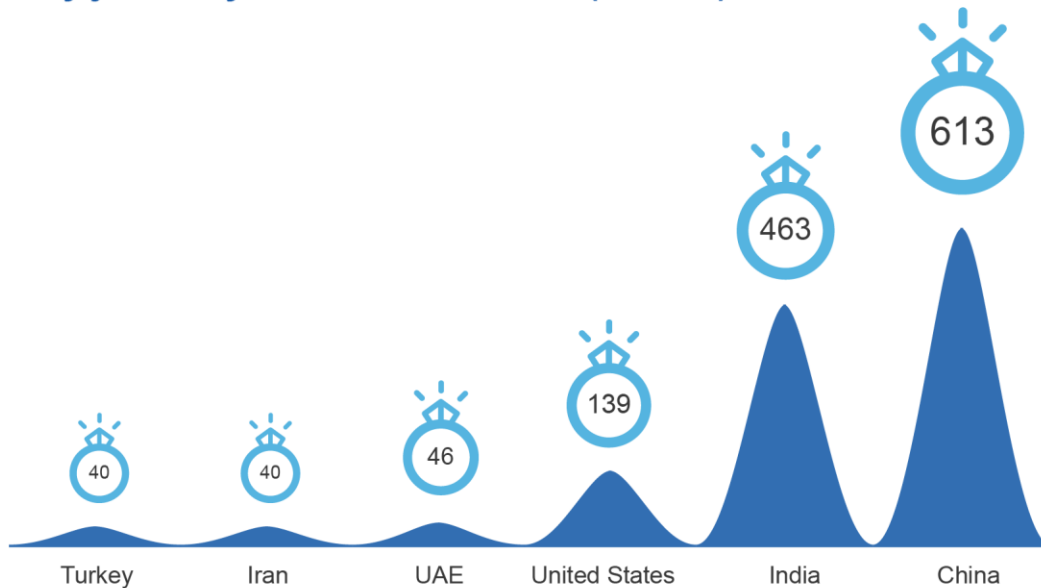


## Major Australian gold deposits (t)

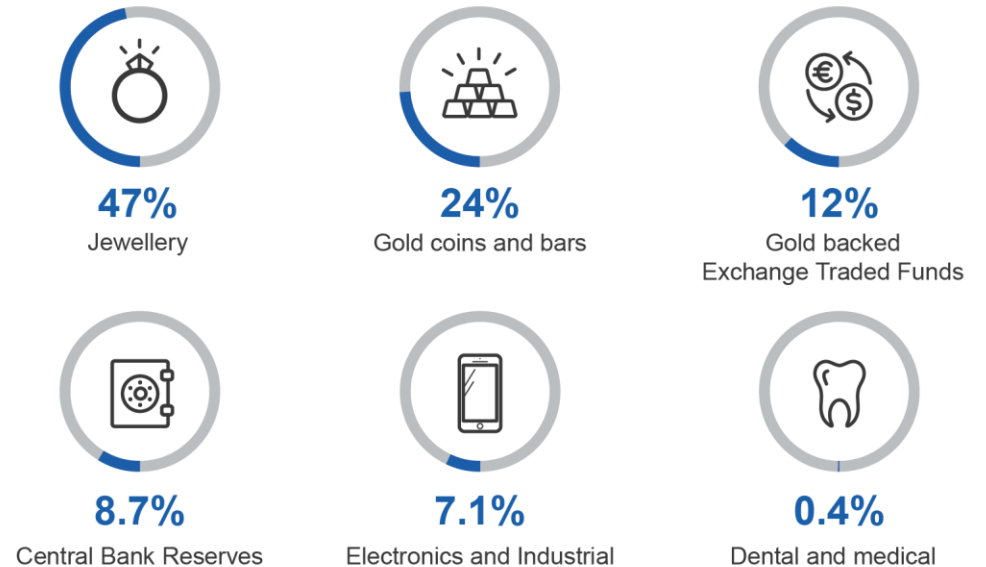
- <20
- 21–70
- 71–185
- 186–473
- 474–1,027
- >1,028
- Deposit
- Operating mine



## Key jewellery consumer markets (tonnes)



## Global uses of gold



## 10.1 Summary

- Having averaged about US\$1259 a troy ounce in 2017, the gold price is expected to average US\$1,250 a troy ounce in 2018 and decline to US\$1,205 a troy ounce in 2019.
- The fall in gold prices will be driven by rising real US Treasury bond yields, as the US Federal Reserve tightens monetary policy.
- The value of Australia's gold exports is forecast to decrease from \$18 billion in 2016–17 to \$17 billion in 2017–18 and \$16 billion in 2018–19.

## 10.2 Prices

### Gold prices were steady in December quarter of 2017

The London Bullion Market Association (LBMA) gold price averaged US\$1,280 an ounce in the December quarter, virtually unchanged from US\$1,278 an ounce in the September quarter. The gold price was steady as the downward pressure from a slight rise in the US dollar and real US Treasury bond yields was countered by persistent safe haven demand. In October, the US Federal Reserve commenced normalising its balance sheet by selling US Treasuries and mortgage-backed securities — purchased in the aftermath of the Global Financial Crisis (in an effort to lower interest rates). The Federal Funds rate was increased by a further 25 basis points in December. Both actions support higher US Treasury yields and a stronger US dollar, and contributed to weaker gold prices.

### Gold prices expected to taper over the outlook

The LBMA gold price is forecast to steadily decrease to average US\$1,205 a troy ounce in 2019. Real yields on 10 year US Treasury bonds are expected to average near one per cent over the next two years, propelled by rising official interest rates in the US. Investors widely anticipate the Federal Reserve increasing interest rates at least three times in 2018 — which will undermine gold prices as the opportunity cost of holding US Treasury bonds rises.

Investors remain cautious about the outlook for the global economy, equity prices and the political environment, which is expected to provide some

support to gold prices over the near term. A correction in US equities and tighter credit conditions — driven by rising US interest rates — could spark increased demand for gold as a safe haven asset over the outlook period.

Gold has benefited from safe haven demand over the past year, as tensions rise between Western nations and North Korea: the gold price steadily outperformed the inflation-adjusted US bond yield during 2017, as North Korea conducted a series of missile tests, sparking retaliatory trade and financial sanctions by Western nations.

Figure 10.1: Gold prices and US Treasury bond yields



Source: LBMA (2017) Gold Price PM; Thompson Reuters (2017) US 10 year Treasury Income Protected Securities constant maturity middle rate.

### 10.3 World consumption

Global gold consumption is forecast to rise by 2.0 per cent annually over the forecast period, reaching 4,265 tonnes in 2019. Higher gold consumption will be supported by increased jewellery purchases and higher use in industrial fabrication, while the outlook for investment demand is likely to be somewhat more subdued.

#### Jewellery consumption expected to rise

Gold jewellery consumption decreased by 3.4 per cent year-on-year in the September quarter — weighed down by the introduction of tighter regulations around jewellery sales in India. The introduction of a Goods and Services Tax (GST) in July encouraged Indian consumers to bring forward gold jewellery purchases, hurting gold sales during the September quarter.

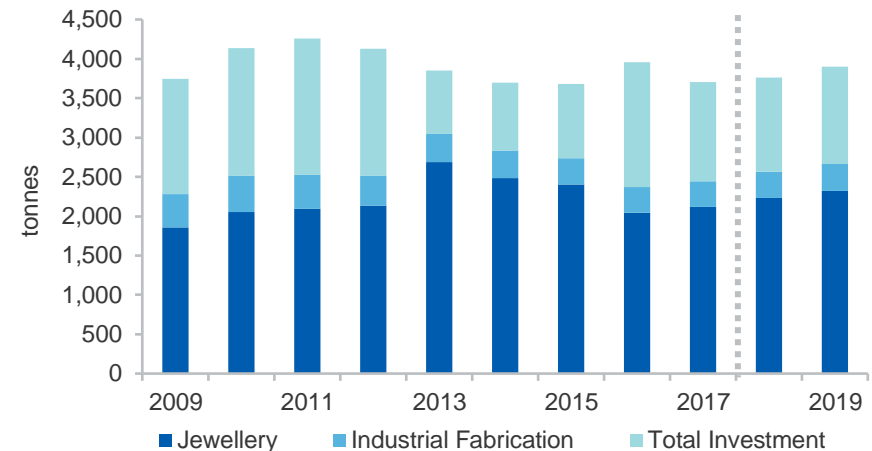
Gold jewellery consumption is forecast to increase by 4.8 per cent a year over the outlook period, lifting from around 2,117 tonnes in 2017 to 2,323 in 2019. Rising incomes in India and China — the world's two major jewellery markets — will support higher discretionary spending on gold throughout 2018 and 2019.

#### Industrial consumption continues to rise

Gold used in electronics rose by 2.0 per cent in the year to the September quarter — the fourth consecutive quarter of growth. Gold consumption in industrial applications is forecast to increase by 1.8 per cent annually over the outlook period, from 329 tonnes in 2017 to 342 tonnes in 2019.

Higher industrial demand will be underpinned by growth in demand for gold bonding wire used in memory chips, particularly for producing smartphones. Increased industrial consumption will also be driven by the use of gold in the production of sensor technology and LED lighting in the automotive industry.

Figure 10.2: Gold consumption by sector



Source: World Gold Council (2017) Gold Demand Trends Q3 2017; Department of Industry, Innovation and Science (2017)

#### Central bank purchases grew strongly in the September quarter 2017

Central bank buying increased by 25 per cent year-on-year in the September quarter, driven by increased purchases by Russia, Turkey and Kazakhstan — who together purchased over 100 tonnes of gold. Central bank purchases are forecast to taper over the outlook period, declining to 360 tonnes in 2019.

#### ETF holdings remained steady in the September quarter

Investors increased Exchange Traded Funds (ETF) holdings by 19 tonnes in the September quarter, representing an 87 per cent year-on-year decline due to an exceptional September quarter in 2016.

Total investment in gold — including gold bars, coins and bullion-backed Exchange Traded Funds (ETF) — is forecast to decrease by 7.9 per cent annually, from 1,587 tonnes in 2016 to 1,240 tonnes in 2019. Lower world gold prices will tend to discourage, rather than stimulate, investor demand over the outlook period.

## 10.4 World production

Total world gold supply is forecast to increase by 0.3 per cent annually in the outlook period, from 4,590 tonnes in 2016 to 4,630 tonnes in 2019. Higher total gold supply will be propelled by increased mine production, with scrap production forecast to be steady over the outlook.

### Mine production expected to rise

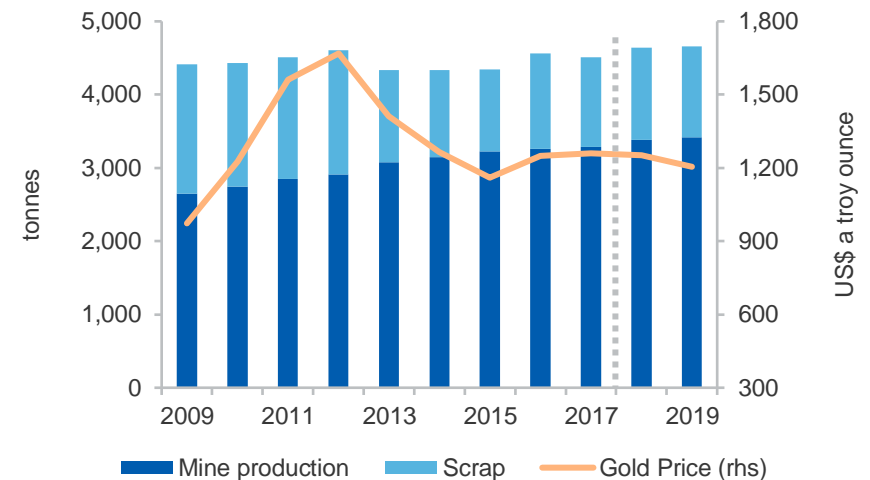
World mine production declined by 1.3 per cent year-on-year in the September quarter to 840 tonnes. Production was impacted by government restrictions on several gold mines in China, due to environmental breaches. China's efforts to reduce the discharge of cyanide tailings will likely disrupt gold production over the short term. Production was also lower in Tanzania, weighed down by a government-imposed ban on exports from Acacia Mining, which last year supplied 45 per cent of Tanzania's gold production. Mine production in Suriname increased by 90 per cent year-on-year in the September quarter, as Newmont's Merian mine ramps up to near full capacity.

World mine production is forecast to increase by 1.5 per cent annually in the forecast period, from 3,264 tonnes in 2016 to 3,413 tonnes in 2019. Several new projects are expected to add up to 100 tonnes to world mine supply in 2018, and a further 30 tonnes in 2019. Much of the expected additional supply comes from new projects, with only a small number of expansion projects in the pipeline.

### Recycled supply falls in the first half 2017

World recycled supply declined by 5.8 per cent year-on-year in the September quarter of 2017, to 315 tonnes. The decline is largely due to exceptionally high production last year, when rising gold prices encouraged greater recycled supply. Recycled gold supply is forecast to rise marginally over the outlook, increasing by 0.8 per cent annually to 1,250 tonnes in 2019, hurt by the deteriorating gold price.

Figure 10.3: World gold supply and price



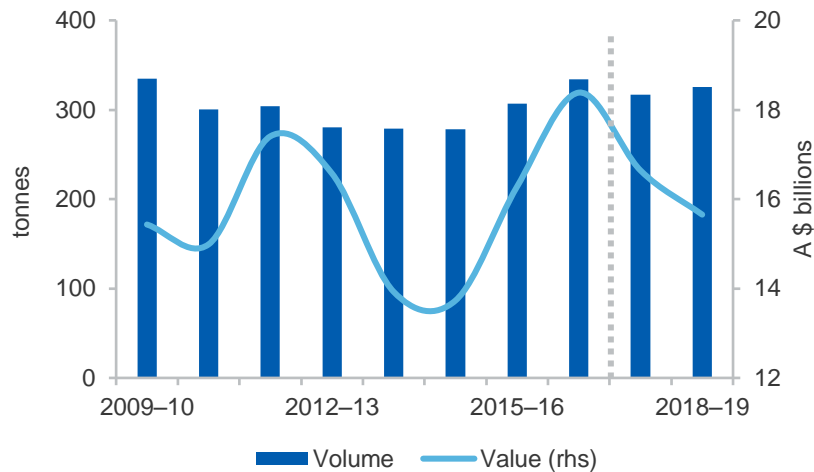
Source: World Gold Council (2017) Gold Demand Trends Q3 2017; Department of Industry, Innovation and Science (2017)

## 10.5 Australia's production and exports

### Export values expected to taper in 2018–19

The value of Australia's gold exports is forecast to decrease from \$18 billion in 2016–17 to \$17 billion in 2017–18 and \$16 billion in 2018–19. The modest fall in export values will be driven by lower gold prices offsetting higher local mine production. Export volumes are forecast to rise marginally over the outlook period, increasing from 334 tonnes in 2016–17 to 335 tonnes in 2018–19. Export volumes will be underpinned by higher local mine production in Western Australia and the Northern Territory. Export volumes will also be supported by imports of gold doré for refining, as production ramps up at the Ok Tedi mine in Papua New Guinea. The Australian gold price is forecast to decrease from an average of A\$1,720 a troy ounce in 2016–17 to A\$1,567 a troy ounce in 2018–19. The lower domestic price will be weighed down by lower world gold prices, with the AUD/USD exchange rate assumed to remain around A\$0.77 over the outlook.

**Figure 10.4: Australia's gold exports**



Source: ABS (2017) International Trade, 5464.0; Department of Industry, Innovation and Science (2017)

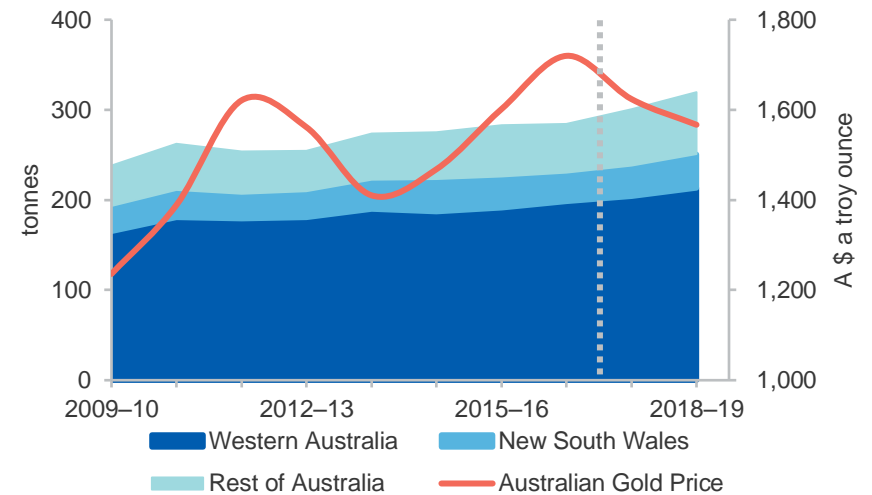
**Improved outlook for Australian gold mine production**

Australian gold mine production increased by 2.6 per cent year-on-year in the September quarter to 72 tonnes. Higher production was driven by increase output at several mines, including AngloGold Ashanti's Sunrise Dam and the Tropicana joint venture. Both mines increased production by 24 and 15 per cent, respectively, driven by higher mill throughput and higher ore grades at the Sunrise Dam operation. Higher ore grades at Fosterville, operated by Kirkland Lake Gold in Victoria, resulted in a 66 per cent year-on-year gain in the September quarter to 1.9 tonnes.

Australia's gold mine production is forecast to increase by 3.7 per cent annually, from 285 tonnes in 2016-17 to 306 tonnes in 2018-19. Higher mine production will be driven by the addition of new gold projects and mine expansions. Fosterville is expected to ramp up production further over 2017-18 and produce 8 tonnes. Dacian Gold's Mount Morgans project in Western Australia is expected to commence production in 2018 and produce 5 tonnes annually. The Gruyere joint venture currently under

construction in Western Australia is expected to produce over 9 tonnes annually, commencing in the first quarter of 2019.

**Figure 10.5: Australian gold production and price**



Source: Department of Industry, Innovation and Science (2017)

**Exploration expenditure continues to increase**

Australia's gold exploration expenditure increased by 21 per cent year-on-year in the September quarter to \$193 million. Australia's gold exploration expenditure increased by 26 per cent to \$689 million in 2016-17, accounting for 44 per cent of Australia's total minerals exploration expenditure during the financial year. Gold exploration expenditure was supported by higher world gold prices. Western Australia remains the largest centre of gold exploration activity in Australia, accounting for \$510 million of exploration expenditure. Expenditure increased in most States, reaching \$51 million in Queensland and \$46 million in New South Wales.

**Table 10.1: Gold outlook**

World	Unit	2016	2017 s	2018 f	2019 f	Annual percentage change		
						2017 s	2018 f	2019 f
Total demand	t	4,347	4,104	4,129	4,265	-5.6	0.6	3.3
Fabrication consumption b	t	2,370	2,447	2,569	2,665	3.3	5.0	3.7
Mine production	t	3,264	3,287	3,380	3,413	0.7	2.8	1.0
Price c								
Nominal	US\$/oz	1,248	1,259	1,251	1,205	0.8	-0.7	-3.6
Real d	US\$/oz	1,275	1,259	1,225	1,155	-1.2	-2.7	-5.7
Australia	Unit	2015–16	2016–17 s	2017–18 f	2018–19 f	2016–17 s	2017–18 f	2018–19 f
Mine production	t	283	285	293	306	0.5	3.0	4.4
Export volume	t	306	334	317	325	8.9	-5.0	2.6
Nominal value	A\$m	15,687	18,013	16,641	16,010	14.8	-7.6	-3.8
Real value e	A\$m	16,283	18,384	16,641	15,637	12.9	-9.5	-6.0
Price								
Nominal	A\$/oz	1,602	1,720	1,624	1,567	7.4	-5.6	-3.5
Real e	A\$/oz	1,663	1,755	1,624	1,530	5.6	-7.5	-5.8

Notes: **b** includes jewellery consumption and industrial applications; **c** London Bullion Market Association PM price; **d** In 2017 calendar year US dollars; **e** In 2017–18 financial year Australian dollars; **f** Forecast; **s** Estimate

Source: ABS (2017) International Trade, 5465.0; London Bullion Market Association (2017) gold price PM; World Gold Council (2017); Department of Industry, Innovation and Science (2017)