Gold industry characteristics

Gold's scarcity, durability and decorative beauty have made it a unique and highly-prized metal since ancient times. Market characteristics – including size, depth and liquidity – have added to the attraction of gold as a monetary asset, especially in times of economic uncertainty.

Gold market fundamentals have undergone significant change over the years and this has continued in the last decade. The demand side has seen renewed importance of investment demand, even though jewellery is still the largest single source of physical demand. Mine production accounts for more than two thirds of global supply, although the role played by recycled gold has risen in recent times as the gold price has increased.

Australia's gold industry remains our third largest export earner more than 150 years after gold's discovery in 1851. The industry is an important source of economic activity and jobs in many regions, with gold mining occurring in all States and the Northern Territory. While production is expected to grow in coming years, the Australian gold industry also confronts challenges in a highly-competitive global marketplace.

Gold's multiple roles

For centuries, gold has fulfilled multiple roles including as an item of ornamentation (often with religious and cultural significance), a medium of exchange and a store of wealth, particularly in times of economic duress. These roles have been exemplified most tangibly in the forms of jewellery and money. At the same time, gold has continued to develop new and diverse technological application based on its unique physical properties.

The use of gold as money has been traced back to the 4^{th} millennium B.C. With the widespread introduction of national currencies in the 19^{th} and 20^{th} centuries, gold or silver (or a combination of the two) formed the basis of monetary reference around the world – with the national unit of currency defined in terms of a stated quantity of the metal. National monetary gold stocks became very large with the adoption of the "gold standard" by most countries in the late 19^{th} century.

The role of gold as an anchor for currencies extended in various forms through to the early 1970s. Central banks and governments continue to hold large gold reserves with the World Gold Council reporting in 2011 that gold remains the third largest reserve asset, accounting for 13 per cent of all reserves globally, after US dollar- and euro-denominated assets.

Through the 20^{th} century, jewellery emerged as the largest single use of gold as mass production techniques made gold jewellery more affordable for large segments of society. It is estimated that about half of all gold in above-ground stocks exists in the form of jewellery. The gold content of jewellery is expressed in carats, with pure gold denoted as 24 carat.

In addition, gold has long been used in a range of industrial uses (including electronics, medical and dental applications) reflecting its high electrical conductivity, malleability and ductility. The prevailing price of gold affects industrial use demand (for example, the extent to which the metal is used in the manufacture of crowns and dental repairs).

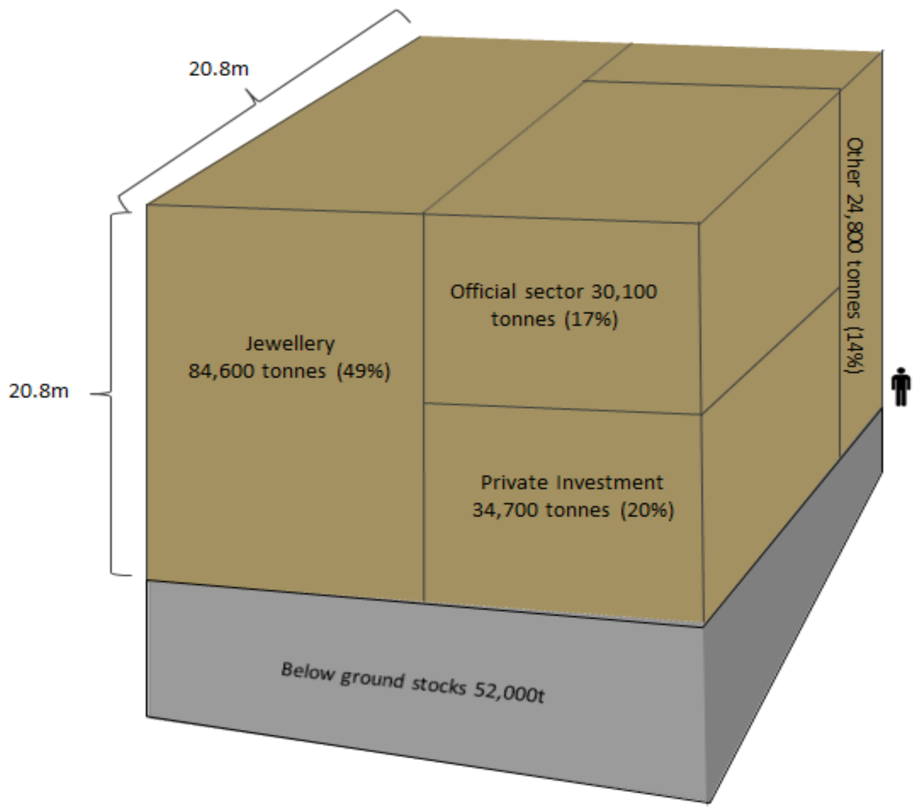
Market characteristics

A distinguishing characteristic of the gold market is the range of factors that drive market behaviour. The geographical diversity of mine production is considered a key factor contributing to lower price volatility relative to other commodities, while the sheer size, depth and liquidity of the gold market rank highly not just against other commodities, but compared with other asset classes, including sovereign debt.

The high level of liquidity in the gold market is one factor underpinning the attraction of gold as an investment and source of wealth preservation, including for small investors. Over time, new products and ways to access gold – such as the rise of Exchange Traded Funds (ETFs) – have presented increased opportunities for individuals as well as institutions keen to hold gold as part of a portfolio of investments. While mine production averages about 2,800 tonnes of gold annually, more than half that quantity is traded daily on the global market in various forms.

The World Gold Council estimates that more than 174,000 tonnes of gold has been produced since gold mining began and that 96 per cent of this total still exists in some form above the surface of the earth. On this basis, if the global stock of gold was amalgamated it would form a 20.8 metre cube (Figure 1) with another 52,000 tonnes of gold in underground stock.

Figure 1: The world's gold inventory



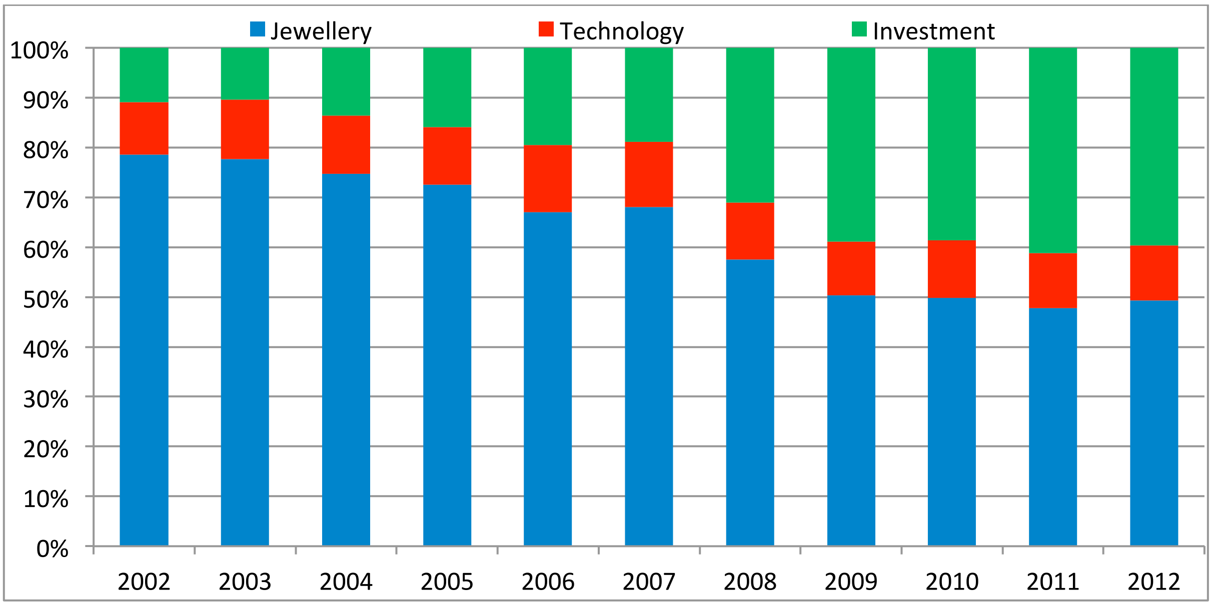
Source: United States Geological Survey, World Gold Council

Gold market fundamentals have undergone significant change over the last three to four decades. Gold jewellery still constitutes the largest single source of global demand, though investment has once again become a more prominent component of demand. Typically, the demand for gold as an investment increases during periods of economic uncertainty.

The profound structural shift that has seen emerging economies account for a large and growing share of global economic activity has had major implications for the gold market. The rising economic power of the countries such as China and India has diminished the traditionally dominant role played by North America and Europe in shaping gold market dynamics – whether from jewellery demand, central bank activity or investment demand. For example, the share of jewellery-related demand from the Indian subcontinent and East Asia is estimated to have risen from 22 per cent in 1980 to about 66 per cent in 2010.

Figure 2 shows various components of global demand. Jewellery-related demand has fallen from almost 80 per cent of total demand a decade ago to around 50 per cent, displaced by a commensurate increase in investment-related demand. The shift toward investment demand gained added momentum with the onset of the Global Financial Crisis in 2008, as gold came to be seen as an increasingly attractive "safe haven". The share of demand accounted for by technological, industrial and mechanical uses of gold has remained stable throughout the decade at about 10 per cent, with electronics being the largest source of gold demand in this category.

Figure 2: Components of world gold demand



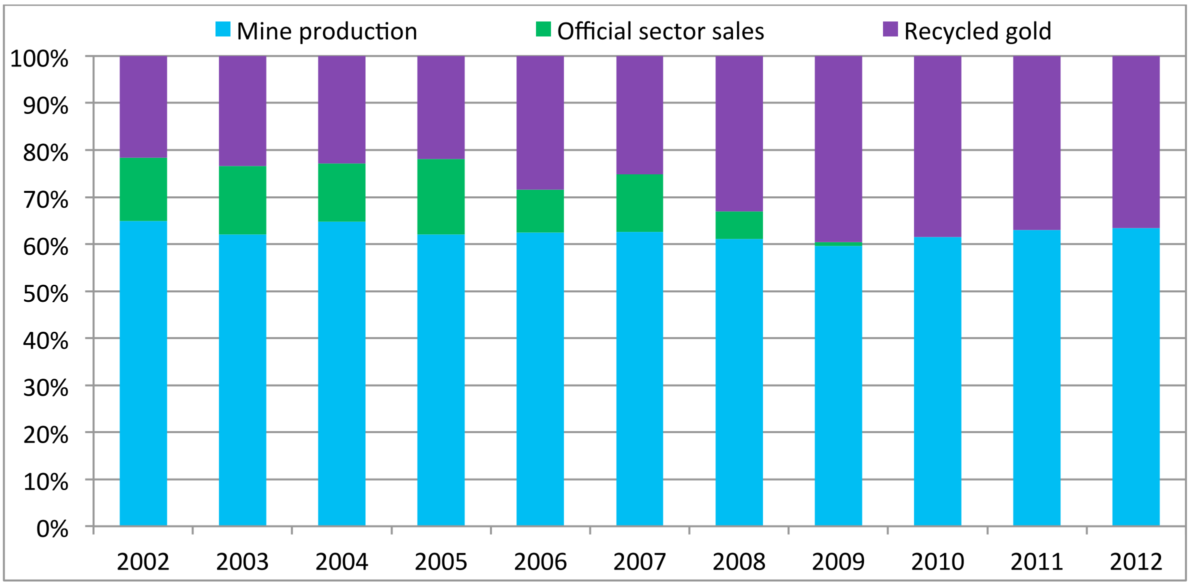
Source: World Gold Council

On the supply side (Figure 3), mine production has tended to constitute 60 to 70 per cent of total supply, with recycling, net central bank sales and net producer hedging forming other supply components to varying degrees. In recent years, the official sector has been a net source of demand, as European central banks have slowed their net sales of gold reserves and emerging market central banks have become a net source of demand.

The most notable shift in the last decade has been the comparative rise in recycled gold as a source of supply, mostly from the developed economies of Europe and the United States. Because gold is nearly indestructible, almost all the gold that has ever been mined still exists in one form or another. Hence recycled gold comprises a larger share of supply than for any other metal.

Global mine production, after falling from 2,625 tonnes in 2002 to 2,429 tonnes in 2008, has risen strongly in recent years and is estimated at 2,861 tonnes in 2012. Projections by the Bureau of Resources and Energy Economics (BREE) suggest global production will continue to rise and reach 3,345 tonnes in 2018.

Figure 3: Components of world gold supply



Source: Thomson Reuters GFMS

More so than many other metals, gold production is widely distributed throughout the world with no country accounting for more than 15 per cent of global production. According to US Geological Survey estimates, China was the world's largest gold producer in 2012 (13.7 per cent), followed by Australia (8.7 per cent), the United States (8.5 per cent), Russia (7.6 per cent) and South Africa (6.3 per cent).

Australia's gold industry: A snapshot

The discovery of gold in 1851 was a defining event in both the economic and social development of Australia. Today, gold remains Australia's third largest export earner (after iron ore and coal) with exports worth $15.5 billion in 2011-12.

The gold industry is a significant source of economic activity and employment in many regional centres. Census data from the Australian Bureau of Statistics put total direct employment in the gold mining industry at more than 16,081 in 2011, with flow-on indirect employment estimated at more than 34,300 jobs. Rising output and more complex operations have led to increased direct employment in recent years.

Australian gold companies have a strong commitment to training employees, spending 4 per cent of payroll on both accredited and unaccredited training in 2011-12. More than two thirds of gold companies offer support for structured training. According to research by the National Centre for Vocational Education Research, 59 per cent of gold companies employ apprentices and trainees.

The industry is a key contributor to government revenues through taxes and royalties. In 2011-12, the Australian gold industry paid roughly $300 million in royalties to State and Territory Governments. Over the last decade, total royalty payments have amounted to almost $2 billion.

Gold is mined in all Australian States and the Northern Territory (Figure 4). Western Australia accounts for almost 70 per cent of Australia's gold production, followed by New South Wales (12 per cent), Queensland (6 per cent) and South Australia (5 per cent). Gold is the primary output of about 75 operations in Australia with many drawing resources from two or more deposits and/or from both open-cut and underground mining operations (Geoscience Australia, 2013). Several mines also produce gold as a by-product from the production of other commodities.

Approximately, 80 per cent of gold production in Australia comes from open-cut mines. Open-cut mining of large, relatively low-grade deposits accounts for most of the strong growth in production through the 1980s and 1990s.

Figure 4: Major Australian gold mines

In 2012, Australian gold mine production was 250 tonnes (about 8.7 per cent of the world's total) ranking second behind China. BREE anticipates further growth in gold production in Australia in coming years as new projects come on stream. Forecast mine production is expected to reach almost 300 tonnes in the middle of the decade, before declining slightly to 291 tonnes in 2017-18.

Most gold mined in Australia is refined locally before being exported. As a result, Australia is not only a major producer and exporter of gold, is also a key player in the gold refining industry. Perth Mint refinery in Western Australia is one of the largest in the world, with turnover of $6.8 billion in 2011-12. The Perth facility currently refines almost all of Australia's gold production, as well as gold mined in New Zealand, Papua New Guinea, Fiji, Solomon Islands, Thailand, Malaysia and the United States. It also refines a significant amount of scrap gold, mainly from Asia (Perth Mint, 2012).

High levels of industry globalisation and capital intensity are among the structural features of the gold industry in Australia. Gold is priced globally in US dollars and the US$-A$ exchange rate has a direct effect on Australian dollar revenues received by local producers. The industry is mature in the sense that demand broadly follows trends in overall economic activity. Industry concentration has risen in the wake of global rationalisation and the search by companies for economies of scale.

Technological advancements in exploration and mining have helped to sustain production in the face of challenges such as declining ore grades. As with the Australian mining industry in general, gold mining is heavily regulated based on health, safety, environmental and other requirements. At the same time, the industry receives negligible assistance from government (Figure 5).

Figure 5: Key structural characteristics

Industry globalisation	High
Capital intensity	High
Life cycle stage	Mature
Technology change	Medium
Regulation and policy	Heavy
Industry assistance	Low

Source: IBISWorld

Conclusion

Based on its unique properties and attributes, gold is one of the most highly valued, closely monitored and actively traded metals in the world. The market’s size, depth and liquidity continue to underpin the attraction of gold as a source of wealth preservation, especially in times of economic uncertainty.

More than 150 years after the discovery of gold in Australia, the industry remains a driver of Australian prosperity, including through exports, jobs and government revenues. With gold production in all Australian States and the Northern Territory, all Australians have a stake in a competitive and successful gold industry.

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