Gold Demand Trends
Full year and Q4 2019

Total fourth quarter demand fell 19% y-o-y to 1,045.2t. Two main contributors to the y-o-y drop were jewellery and physical bar demand, both of which reacted to the elevated gold price. In US dollar value terms, the decline in Q4 demand was much shallower – down just 3% to US$49.7 billion (bn).

Inflows into global gold-backed ETFs and similar products pushed total holdings to a record year-end total of 2885.5t. Holdings grew by 401.1t over the year, with 26.8t added in Q4. Inflows were heavily concentrated in Q3 as the US dollar gold price rallied to a six-year high.

Central banks were net buyers for a 10th consecutive year: global reserves grew by 650.3t (-1% y-o-y), the second highest annual total for 50 years. Purchasing in Q4 of 109.6t was 34% lower y-o-y, although this was partly a reflection of the sheer scale of buying in 2018.

China and India held sway over global consumer demand. Together, the two gold consuming giants accounted for 80% of the y-o-y decline in Q4 jewellery and retail investment demand. High gold prices and a softer economic environment were the main culprits.

Total annual gold supply edged up 2% to 4,776.1t. An 11% jump in recycling was the main reason for the increase, as consumers capitalised on the sharp rise in the gold price in the second half of the year. Annual mine production was marginally lower at 3,463.7t – the first annual decline for more than 10 years.

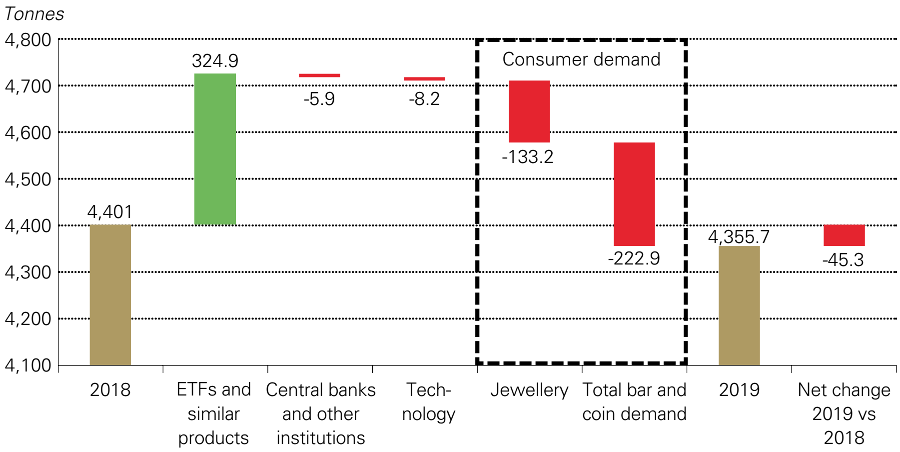
The gold price averaged US$1,481/oz in Q4. This was the highest average price since Q1 2013. Although the price remained below the Q3 high, it was well supported. And gold priced in various currencies – including euros, Indian rupees and Turkish lira – hit their highest levels in history.

Annual gold demand dips to 4,355.7(t) tonnes

Gold demand fell 1% in 2019 as a huge rise in investment flows into ETFs and similar products was matched by the price-driven slump in consumer demand

2019 was broadly a year of two distinct halves: resilience/growth across most sectors in the first half of the year contrasted with widespread y-o-y declines in the second. Global demand in H2 was down 10% on the same period of 2018 as y-o-y losses in Q4 compounded those from Q3, notably in jewellery demand and retail bar and coin investment. Central bank demand also slowed in the second half – down 38% in contrast with H1's 65% increase. But this was partly due to the sheer scale of buying in the preceding few quarters and annual purchases nevertheless reached a remarkable 650.3t – the second highest level for 50 years. ETF investment inflows bucked the general trend. Investment in these products held up strongly throughout the first nine months of the year, reaching a crescendo of 256.3t in Q3. Momentum then subsided in Q4, with inflows slowing to 26.8t (-76% y-o-y). Technology saw modest declines throughout the year, although electronics demand staged a minor recovery in Q4. The annual supply of gold increased 2% to 4,776.1t. This growth came purely from recycling and hedging, as mine production slipped 1% to 3,436.7t.

Huge rise in ETF inflows almost equalled the sharp drop in consumer demand in 2019



Source: Metals Focus, World Gold Council

Jewellery

The steep rise in the gold price in the second half of the year cut global jewellery demand: annual volumes fell 6% to 2,107t

- Fourth quarter jewellery demand sank to its lowest since 2011 – down 10% y-o-y to 584.5t
- Weakness in India and China explained much of the drop in global volumes
- By contrast, the value of gold jewellery demand increased: the annual US dollar value was its highest for five years at US$94.3bn (+3%), with Q4 growing 9% to US$27.8bn.

Tonnes	2018	2019	Y-o-y change
World total	2,240.2	2,107.0	↓ -6%
India	598.0	544.6	↓ -9%
China, P.R.: Mainland	686.3	637.3	↓ -7%

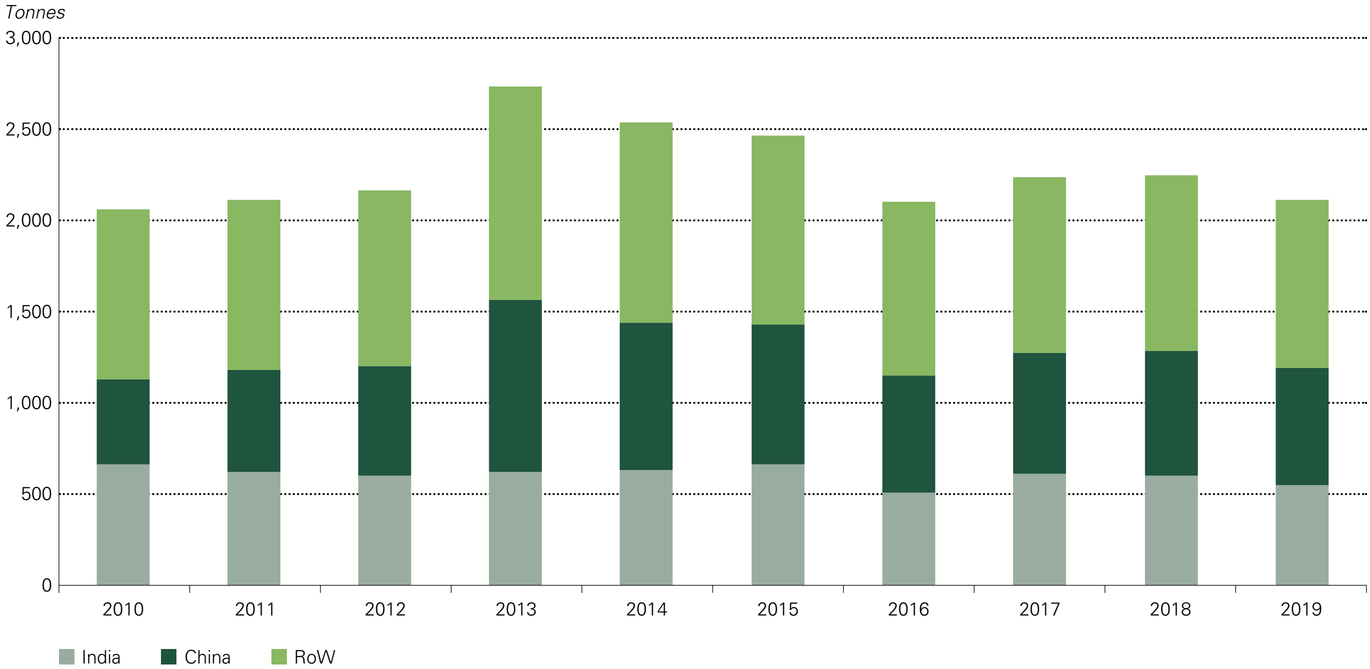
In 2019, global gold jewellery demand volumes fell 6% to 2,107t. Purely an H2 phenomenon, the weakness was primarily due to the big Q3 jump in the gold price, which impacted affordability. The price was well supported at elevated levels throughout the closing months of 2019, leading to a 10% y-o-y drop in Q4 demand to 584.5t.

The value of gold demand tells a different story. The amount that consumers spent on gold increased in 2019. In US dollar terms, gold jewellery demand grew by 3% to a five-year high of US$94.3bn. And much of this came from a 9% y-o-y increase in Q4 demand, which reached US$27.8bn – a seven-year high.

India

A 17% y-o-y drop in Q4 generated a 24% decline for H2 in India. Key factors behind the second half weakness were: higher gold prices (having reached record levels in Q3), domestic economic slowdown and muted rural demand. Weddings and retailer promotions checked the downfall to some extent.

Higher gold prices and slowing economies caused weakness in India and China



Source: Metals Focus, Refinitiv GFMS, World Gold Council

Jewellery

Dhanteras – the first day of Diwali (the Festival of Light) which fell on 25 October – failed to bring cheer to gold demand in Q4 as the higher domestic gold price and weak economic sentiment curtailed gold sales. Festival demand received some support from advance wedding purchases and a dip in the gold price ahead of the November wedding season released some pent-up wedding-related demand, but volumes were nevertheless soft compared with 2018.

The slowdown was less pronounced among the more organised national and regional chain stores. Branded chain stores continue to outperform other areas of the gold jewellery market, reporting far more modest declines in sales than medium-sized and standalone stores. Chain stores were better positioned to offer attractive promotions during Dhanteras and some launched new collections for Diwali and the wedding season, supporting their sales volume despite the higher gold price.

Similarly, demand for higher-value items was more resilient. As the economy has slowed, middle-class urban and rural consumers have become more cautious in opening their wallets. And with gold prices holding near record-high levels, this impacted demand for lightweight gold jewellery in Q4. But the volume of high-ticket purchases (heavyweight weddings items such as necklaces and waist chains/bands) held up relatively well. This reflected the broader resilience in higher-end sectors, which succumbed less easily to the challenging environment. Anecdotal reports suggest that diamond jewellery performed better in the quarter, and luxury car maker Mercedes Benz India y-o-y sales growth in Q4.

India's gold market continues to strive towards regulation and standardisation. The opening weeks of 2020 saw two important developments in the gold market: notification on mandatory hallmarking for gold jewellery and the introduction of Indian gold delivery standards for gold bullion. Effective from 15 January 2021, hallmarking will become mandatory for all gold jewellery sold as 14K, 18K or 22K.

Retailers have a one-year period in which to become compliant, selling or melting any stocks of non-hallmarked jewellery and registering with Bureau of Indian Standards (BIS).

China

China's Q4 jewellery demand was 10% lower y-o-y at 159.7t. And, after shrinking for a fifth consecutive quarter, full-year 2019 demand slid 7% to 637.3t. The slowing economy, rising inflation, global trade disputes, higher gold prices and the younger generation's shifting tastes – towards lighter jewellery pieces with fashionable designs – contributed to subdued demand in 2019.

Consumers' disposable budgets were limited. Growth in key economic indicators continued to decelerate throughout 2019. GDP growth slowed to 6.1% y-o-y – the lowest since 1992. Meanwhile, surging pork prices pushed y-o-y CPI growth up to a seven-year high of 4.5% in December. These twin factors hampered jewellery demand.

Traditional mass-appeal 24k jewellery continued to lose market share to more innovative product ranges. Relatively weak performance in the traditional segment – which represents the lion's share of China's jewellery market – dragged total jewellery demand down. But innovative products have been gaining market share as young consumers favour lighter pieces with fashionable designs. The higher margins associated with these products (which tend to be price on a per-piece basis, rather than by weight) make it easy for them to gain traction among retailers, further accelerating the structural change in the market.

Heritage gold had a good year in 2019. Embedded with Chinese cultural elements and ancient craftsmanship, these chunky 24K products turned out to be a success among the middle-aged generation. Moreover, by incorporating "China Fashion" and using technology to reduce product weight, jewellers are able to target younger consumers too. Chinese youngsters don't believe gold jewellery can help them stand out and have a weak emotional connection to gold, according to our 2019 global consumer research results. However, the appearance of heritage gold with its intricate cultural designs has proven effective in attracting younger consumers.

The traditional peak season for gold jewellery sales before Chinese New Year was as expected. The traditional belief that gold can bring good luck – combined with the fact that many companies grant year-end bonuses ahead of the lunar new year – lifted jewellery consumption ahead of the biggest festival of the year. To celebrate the Year of Rat, mouse-themed products are quite popular, particularly lightweight and affordable 3D hard gold products, which end to attract young consumers.

Jewellery

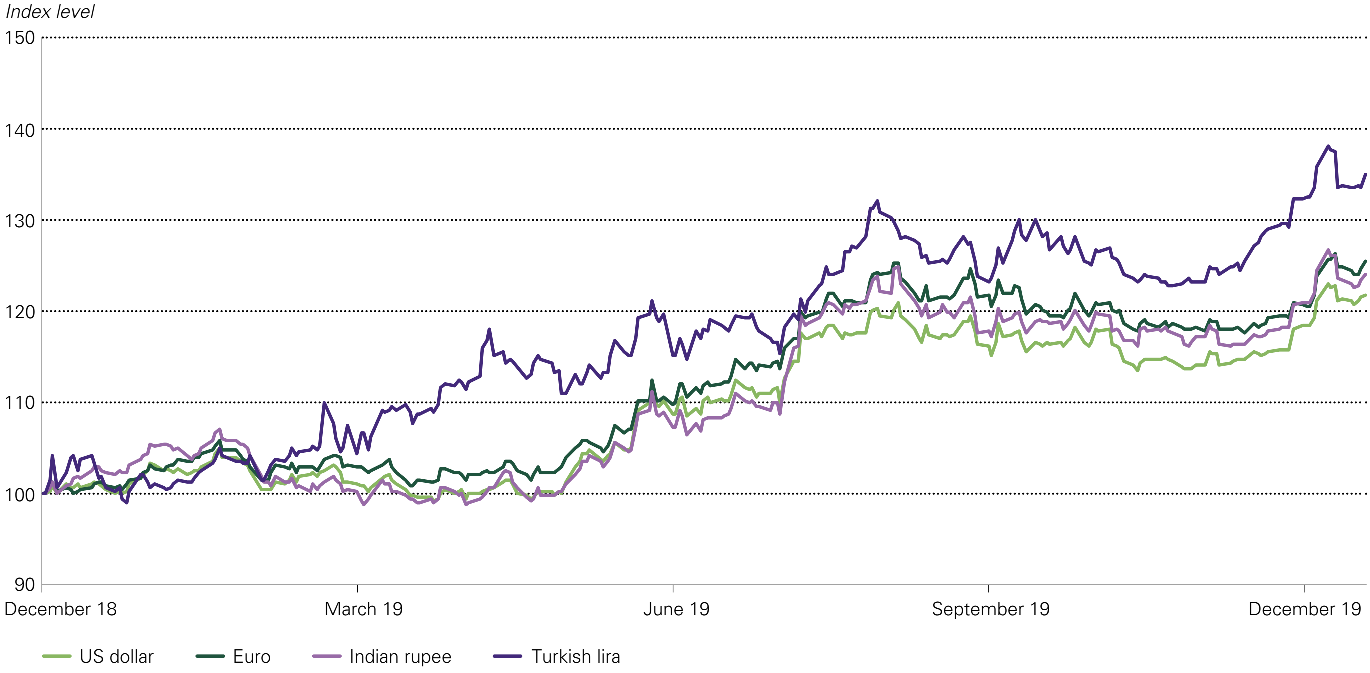
Middle East and Turkey

Annual Middle Eastern jewellery demand fell 2% after a 3% y-o-y decline in Q4. Fourth quarter demand in Iran dropped by 10% y-o-y, as protests against rising fuel prices erupted throughout the country. Despite this, annual demand grew by 4% to 30.5t, although current troubles in Iran suggest demand could remain muted into 2020.

Widespread weakness in demand across the rest of the region was primarily a response to the higher gold price, particularly as consumers in these markets continued to face economic and geopolitical challenges. Egypt was the outlier: Q4 jewellery demand of 6.8t posted a healthy 13% y-o-y rise. Consumers, buoyed by improving economic indicators and continued stability in the domestic currency, generated annual demand of 26.4t (+7%). The outlook is fragile however, particularly while gold prices remain elevated and regional conflicts persist.

Turkish jewellery demand was remarkably resilient in Q4, fractionally lower at 9.1t (-1% y-o-y). This apparent relative strength was largely a reflection of the weakness in Q4 2018, when jewellery demand sank to a six-year low. Lira prices climbed towards fresh record highs in the closing weeks of the quarter, suggesting that demand could tail off during Q1 2020.

The gold price jumped in 2019, hitting record highs in some currencies



Source: ICE Benchmark Administration, Datastream, World Gold Council

Jewellery

The West

US jewellery demand grew for a third successive year in 2019, up 2% to a 10-year high of 131.1t. Consumer confidence improved amid a relatively robust economic environment and Q4 saw a twelfth consecutive quarter of y-o-y growth – up 2% y-o-y to 49.2t.

European jewellery demand was contrastingly weak: modest declines were widespread across the region. Annual 2019 demand lost 2% y-o-y to reach a low for our series of 72.1t. Political uncertainty across the region – not least the ongoing Brexit saga – a lacklustre economic backdrop and global geopolitical uncertainty took their toll on jewellery demand.

Other Asia

Higher gold prices dented demand across the East Asian region in Q4, leading to widespread losses in full-year demand. Consumers in Indonesia and Thailand also had to contend with slowing domestic economies. In Vietnam, meanwhile, consumers have been hit by liquidity issues due to poorly performing investments in real estate and equities.

Japanese jewellery demand ran counter to the regional trend, rising by 4% y-o-y in Q4 (to 5.2t). This equated to annual growth of 3%, with full-year demand reaching a six-year high of 17t. Feedback suggests that growth was concentrated in demand for kihei chains – a quasi-investment jewellery product range of plain, heavy gold chains.

Investment

Growth in annual investment demand was fuelled by ETF inflows, while bar and coin demand was contrastingly weak

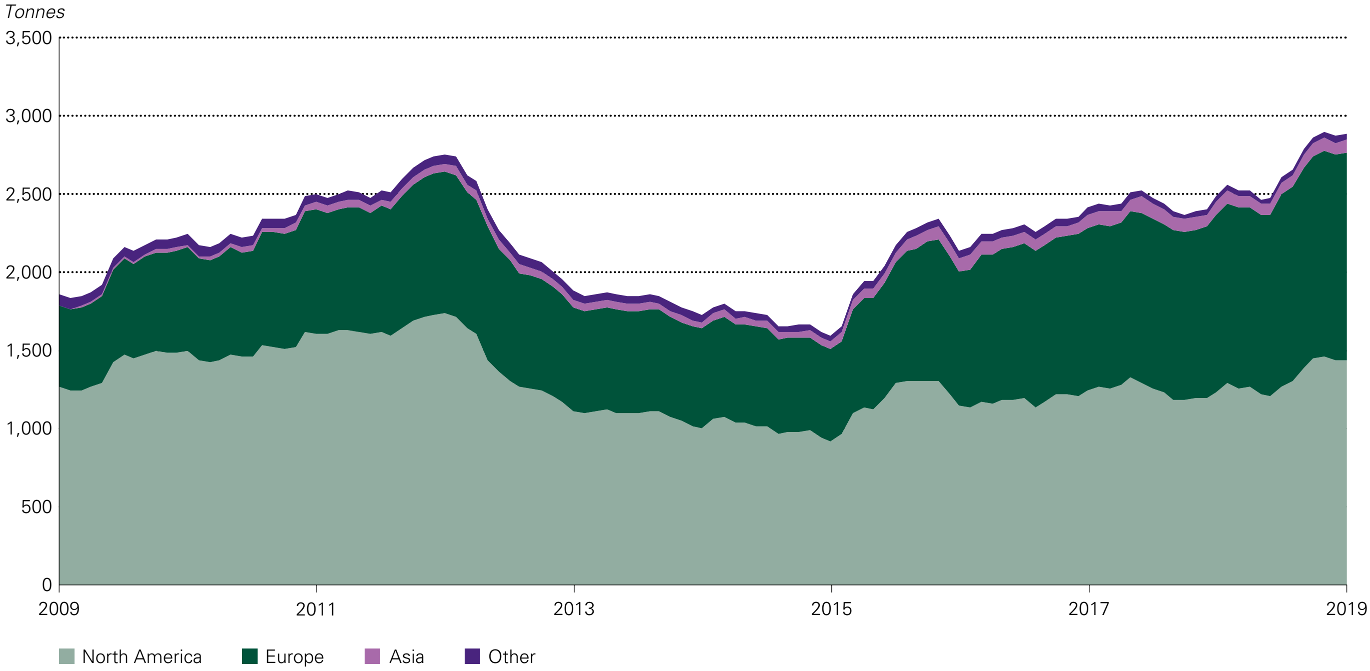
- Gold's price rise had a mixed impact on investment: bar and coin investors took profits, while momentum buying contributed to inflows into gold-backed ETFs
- Low interest rates and geopolitical uncertainty pushed holdings of gold-backed ETFs to record highs of 2,905.9t during Q4
- A 10-year low in bar and coin demand owed much to steep declines in China and India.

Tonnes	2018	2019	Y-o-y change
Investment	1,169.8	1,271.7	↑ 9%
Bar and Coin	1,093.6	870.6	↓ -20%
India	162.4	145.8	↓ -10%
China, P.R.: Mainland	308.0	211.1	↓ -31%
Gold-backed ETFs	76.2	401.1	↑ 426%

Price was a key feature of the gold market in 2019. The gold price rallied to a six-year high in US dollar terms and hit record levels in a range of other currencies – euro, Indian rupee, Turkish lira and South African rand among them. This price strength had clear implications for gold demand across all sectors. But investment demand was more intricately linked to the dynamics of the gold price, being a a major contributor to its rise.

As is often the case during periods of high and rising prices, retail and professional investment behaviour diverged: bar and coin investors were more inclined to capitalise on the price rise by selling existing holdings or waiting for the price to find a steadier footing. In contrast, positioning in US futures – widely accepted as representing the sentiment of more tactical investors – turned sharply bullish in June as the Federal Reserve began to ease rates. Comex Net longs reached all-time highs equivalent to 1,134t in September. This bullish sentiment among professional investors contributed to the price rise, which in turn attracted further momentum-driven investment inflows, notably into ETFs.

Global gold-backed ETF holdings hit an all-time high in Q4 2019



Source: Bloomberg, Company Filings, ICE Benchmark Administration, World Gold Council

Investment

ETFs

Gold holdings in physically-backed ETFs and similar products closed 2019 at 2885.5t thanks to annual inflows of 401.1t. In US dollar value terms, the combination of annual net inflows of US$19.2bn and an 18% rise in the gold price lifted AUM to US$141.1bn by the end of December.

Monetary policy and geopolitics fuelled the bulk of annual inflows, while the price rise also drew in momentum-driven inflows. North American funds saw the largest net increase in 2019, adding 206t (US$10.1bn) as growing geopolitical tensions and the first Fed rate cuts in a decade fuelled market uncertainty and reduced the opportunity cost of investing in gold. European funds added 188t (US$8.8bn). Half of this growth was directed into UK-based funds, which added 91t (US$4.1bn) on the back of ongoing Brexit concerns. Asian funds finished the year relatively flat, losing 0.1t, while funds in other regions added 7.6t, with most of the growth coming from Australian-listed funds as the gold priced soared in local currency terms.

After exceptional Q3 inflows of 256t, momentum slowed in Q4. Inflows in October and December were punctuated by outflows in November: the net result was a 26.8t increase in global holdings during the quarter. Global holdings reached record highs of 2,905.9t in mid-October and although these levels were not sustained, they held up near historical highs for the remainder of the year.

Ultra-low interest rates and persistent global geopolitical uncertainty have been the twin engines of long-term growth in European-listed funds. Q4 growth was concentrated in European-listed funds, which added 34.1t during the quarter (+2%). Q4 saw a broad continuation of the supportive themes that had encouraged positive investor sentiment in previous quarters, namely: high gold prices, the low/negative interest rate environment, and ongoing geo-political issues. And increasingly during the fourth quarter, investors became anxious over whether the long-term bull trend in the US stock market may run out of steam.

Since dipping below 1,600t at the end of 2015, global gold-backed ETF holdings have nearly doubled – growing 81% to just shy of 2,900t at year-end. And the geographical allocation of these holdings has shifted over this time. Four years ago, US-listed funds accounted for almost two-thirds of global holdings (922.8t) and European-listed funds for just over one-third (583.6t). This regional split is now closer to 50:50 after holdings of European-listed funds more than doubled: by the end of 2019, they held 1,322.1t.

Holdings of Chinese-listed gold ETFs saw a 4.6t outflow in Q4 as the bullish Q3 momentum in the gold price cooled. But total holdings of 44.9t were largely unchanged at the end of 2019 when compared with end-2018: the 10t outflow from H1 was cancelled out by an equal inflow in H2, driven by risk-hedging, price momentum and innovations.

AUM in Chinese gold-backed ETFs reached an all-time high in September 2019. Impacted by uncertainties from the US-China trade dispute, USD/CNY breached CNY7 in August for the first time in 11 years. Coupled with the bullish gold price momentum during the third quarter, this pushed holdings in domestic gold ETFs to 17bn yuan (equal to US$2.2bn) – the highest in history.

China's gold-backed ETF market is expanding. The China Securities Regulatory Commission (CSRC) approved three new gold-backed exchange-traded funds late October 2019, raising the number of Chinese gold-backed ETFs to seven. These new ETFs, also fully backed by physical gold, will be managed by ICBC Credit Suisse Asset Management, China Asset Management and the First Seafront Fund Management, and listed within the next six months.[1]

1 According to the CSRC, these fund companies will list products no more than nine months after their approval.

Investment

Bar and coin

Full-year retail investment tumbled to a 10-year low. Annual demand for gold bars and coins dropped 20% y-o-y to 870.6t – the lowest level since 2009. Much of the decline came from a sharp decline in the two largest markets: China and India. The drop off in investment was mostly a reaction to the price rally and higher price volatility with added pressure coming from a slowdown in the domestic economies of both countries. But weakness was by no means confined to China and India: investment was notably weaker across much of Asia, the Middle East and the west.

Another steep fall in Chinese bar and coin demand in Q4 compounded the annual decline. Q4 demand declined 35% y-o-y at 47.6t, bringing the annual total to 211.1t (-31% y-o-y). The rising gold price was the major factor denting bar and coin demand throughout the year; some investors took profits, while others deferred their investment decisions for a better entrance point as the gold price stayed high.

China's economic slowdown was another contributor to softness in bar and coin demand. And while China's GDP growth slowed to the lowest level in 27 years, inflation was simultaneously surging, resulting in tighter budgets.

Indian Q4 retail investment fell for a second consecutive quarter, pulling annual demand down 10% to 146t. Gold bar and coin demand during 2019 as a whole was overshadowed by the runaway performance of the stock market. The BSE Sensex reached successive record highs throughout the year, capturing the attention of urban investors, who piled into the market.

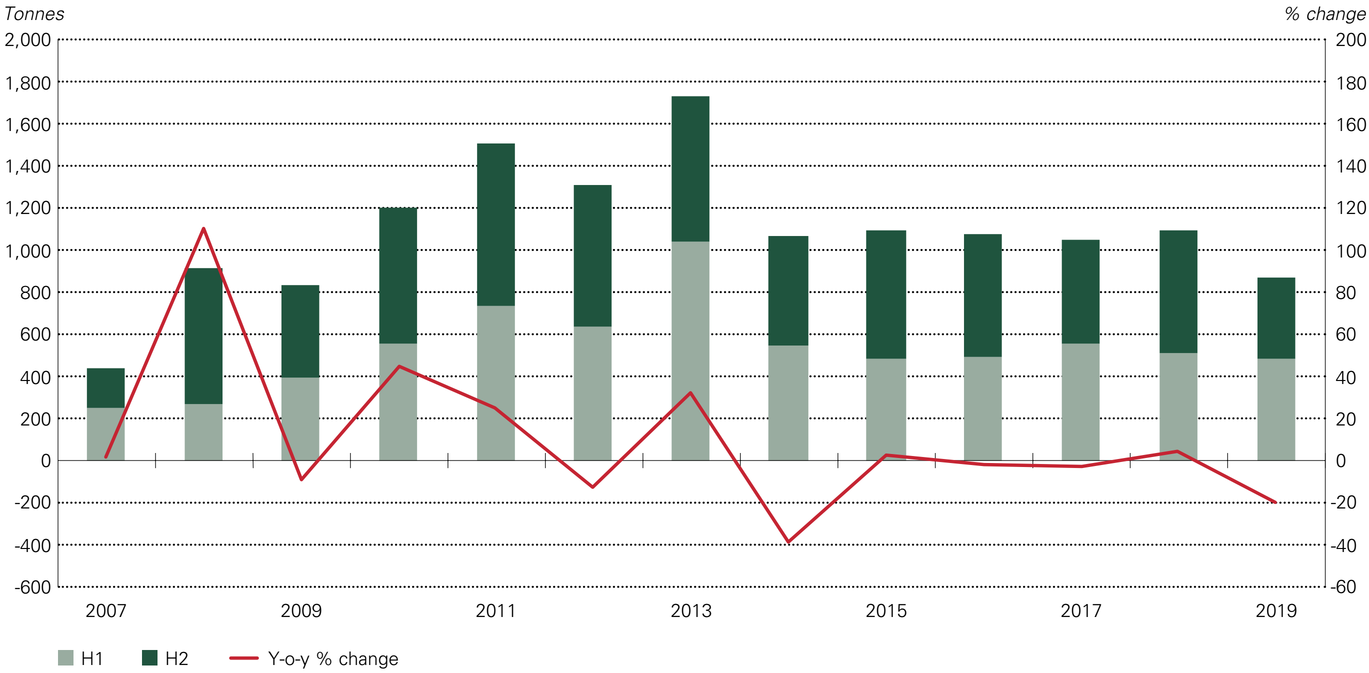
Equity market investment was supported by three key factors:

- the reduction in corporate tax rate from 30% to 22%
- disinvestment of government shareholding in five public sector enterprises
- and the possibility of a trade agreement between US and China.

After reaching lofty highs of 41,681 towards the end of December, the Sensex fetched a total return of 6.8% in Q4 compared to 4.3% on gold and a meagre 1.9% on 10-year government bonds.

High prices were a headwind for investment demand during Dhanteras. Although the festival boosted gold coin purchases, they ended around 10-15% lower y-o-y. Digital gold platforms however, witnessed a notable uptick in sales during the festival; low entry points for digital gold investments (as low as Rs1) helped combat the affordability barrier created by higher gold prices.

Global bar and coin demand fell to a ten-year low in 2019



Source: Metals Focus, Refinitiv GFMS, World Gold Council

Investment

India continues its efforts to regulate and standardise the gold industry. The BIS recently announced standards for delivery of a range of items, including gold. Under the good delivery standards, gold processed by domestic refineries that meet the requirements will now be eligible for delivery on the domestic Multi Commodity Exchange (MCX). The introduction of good delivery standards will help pave the way for bullion banking and gold spot exchange in India.

Almost without exception, investment demand fell across the Asian region: Japan and Thailand were significant contributors to the region's weakness. Japan saw negative net investment in each quarter of 2019, generating annual net disinvestment of 19.7t – easily the worst year for gold investment since 2011. The increase in consumption tax imposed in October, coinciding with local gold prices near their record highs, discouraged fresh investment.

Investment in Thailand recovered from Q3's negative levels, but – at 11t – was nevertheless fairly anaemic in Q4. The relative strength of the Thai baht throughout much of 2019 meant investors were less focused on the need for gold as a safe haven.

Turkey was an outlier: Q4 investment more than doubled y-o-y. Bar and coin demand grew 138% y-o-y to 20t, lifting the annual total to 53t (+40% y-o-y) The reasons for the Q4 jump in demand were twofold: many of the investors who had sold into the Q3 price rise bought back again as the gold price dipped back, expecting a resumption of the rally. And some investors chose to redeem their sovereign gold bond, taking delivery of gold coins as the bonds matured.

Iran was the laggard in a Middle East region beset by weakness. Q4 bar and coin demand in Iran halved to 8t, although the drop was partly due to the comparison being made with a high Q4 2018. A sharp currency-led jump in the local gold price during the quarter staved off fresh investment, but safe-haven buying is likely to have resumed in recent weeks as a response to the recent troubles.

Losses were seen across the rest of the region as punishingly high gold prices added to the burden on investors already disheartened by challenging economic conditions.

US annual bar and coin demand sank to a fresh post-financial crisis low of 20t. Gold battled the twin elements of continued growth in equity markets and a well-supported gold price, which together encouraged more investors to sell their bar and coin holdings than build their investments.

Europe saw a second year of double-digit declines: annual retail investment for the region totalled 153.3t (-11%). After reaching record historical highs in September, the euro gold price stabilised at elevated levels for the remainder of the year. Demand remains robust, particularly among German-speaking markets: Australia's Perth Mint attributed a sharp uptick in December gold coin sales to strong demand from Germany.

Central banks

Central bank demand totalled 650t in 2019 – the 10th consecutive year of annual net purchases

- Central banks added 650.3t to global official gold reserves in 2019, 1% lower y-o-y
- 15 central banks made net purchases of a tonne or more, highlighting continued breadth of demand
- This marks ten consecutive years of net purchases, with global official reserves now 5,000t higher than end-2009 at ~34,700t.

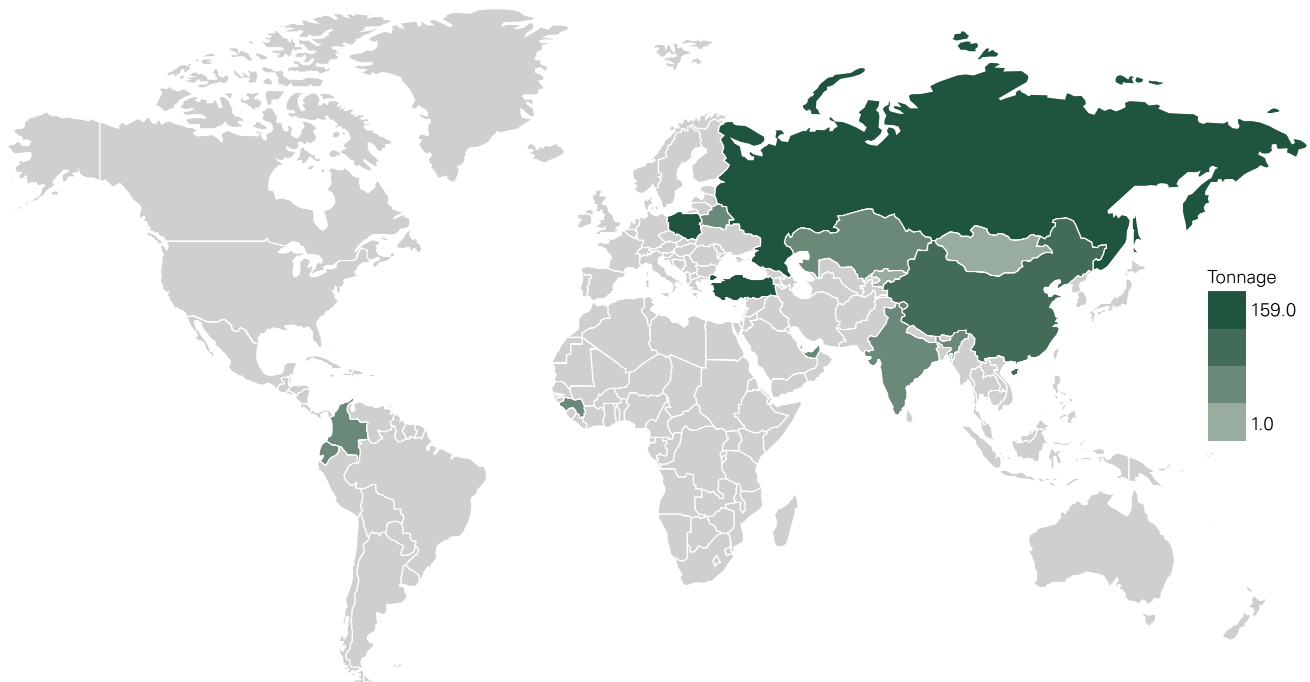
Tonnes	2018	2019	Y-o-y change
Central banks and other institutions	656.2	650.3	↓ -1%

In the fourth quarter of 2019 central banks added a net 109.6t to global official gold reserves, 34% lower y-o-y. Added to net purchases in the first three quarters, this brought full-year net purchases to 650.3t, just 1% shy of the 2018 total (656.2t).

Central bank net purchases in 2019 were remarkable. The annual total of 650.3t is the second highest level of annual purchases for 50 years, highlighting the importance central banks place on having an allocation to gold in their reserve portfolio. The highest level was recorded in 2018 and buying in 2019 was not widely expected to repeat these levels for a second consecutive year.

Buyers in force. In total, 15 central banks increased their gold reserves by at least one tonne in 2019, highlighting the breadth of buying. Demand was exclusive to emerging market central banks looking to bolster and/or diversify their overall reserves.

Emerging markets continue to dominate central bank gold buying



Source: IMF IFS, Respective central banks, World Gold Council

Central banks

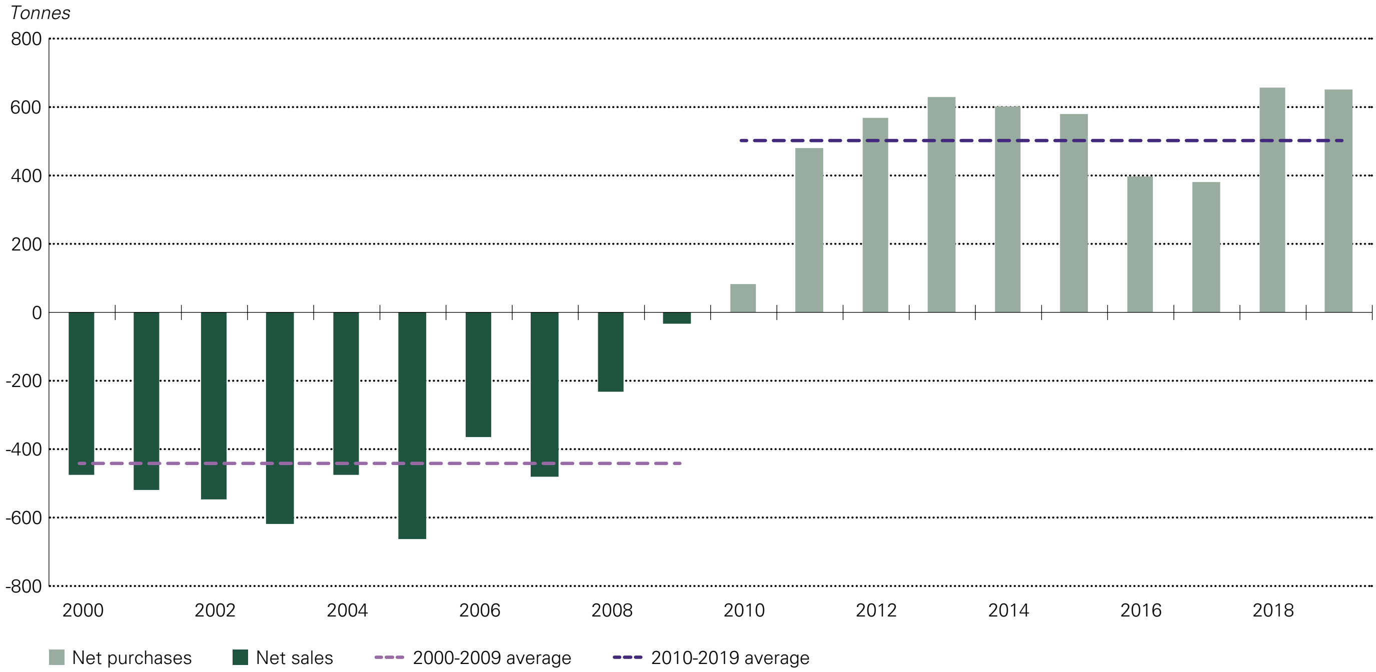
The largest purchasers during the year were mostly familiar faces. Turkey, which began buying gold in 2017, emerged as the largest buyer in 2019, growing gold reserves by 159t.[2] This brought total holdings to 413t, 63% higher y-o-y and equal to 20% of total reserves. Poland, which purchased 25.7t in 2018, made the biggest single purchase in 2019, buying 94.9t in June. In total, annual Polish net purchases amounted to 100t, taking reserves to 228.6t. Russian gold reserves rose by a healthy 158.1t, albeit 42% lower than a year earlier, partly because in May the central bank began offering a discounted purchase price aimed at encouraging domestic producers to export more gold. Chinese gold reserves grew by 95.8t over the first nine months, taking total gold reserves to 1,948t (3% of total reserves). No further purchases were reported after September. Central banks in Kazakhstan (35t), India (32.7t), UAE (13.5t) Qatar (11t), Ecuador (10.6t) and Serbia (10t) also increased official gold reserves by at least 10 tonnes.

Dazzling decade of demand. 2019 marked one decade since central banks became annual net purchasers, following the Global Financial Crisis in 2008. The fundamental change in mindset towards gold has resulted in significant and, importantly, sustained levels of demand. During this time, central banks have added 5,019t back to global official gold reserves, with an annual average of around 500t, compared with average annual net sales of 443t in the preceding decade. And any sales in the last 10 years have been dwarfed by the scale of buying.

Over this time, heightened economic and geopolitical uncertainty have been the twin driving forces that have propelled central bank buying, particularly from emerging markets. The decade was beset by unconventional monetary policies (such as consistent low or negative interest rates) in order to restore economic stability and growth, as well as a rise in nationalism/populism, trade wars, and risks of armed conflicts. In response, central banks increased their allocation to gold.

The 5,019t surge in demand over the last decade, more than offsetting the 4,426t of net sales between 2000-2009, means that reported global official gold reserves are now only 10% below the all-time high of 38,491t seen in 1966.

Central banks net purchasers for tenth consecutive year



Source: Metals Focus, Refinitiv GFMS, World Gold Council

2 Data points used are the latest IFS statistics available at the time of publication and may not incorporate all purchases/sales to end-Dec 2019

Technology

Technology demand weakened again in 2019 but the outlook is more optimistic; 2020 should herald strong demand growth in the electronics wireless sector

- Full-year gold demand in the technology sector fell 2% y-o-y to 326.6t
- 2019 was a weak year for the whole electronics industry, and this contributed to a 2% fall in demand for gold in the sector
- However, Q4 demand showed signs of recovery, posting a 1% y-o-y increase to 68.2t. This was driven by strong growth in wireless applications as 5G installations gained traction.

Tonnes	2018	2019	Y-o-y change
Technology	334.8	326.6	↓ -2%
Electronics	268.4	262.6	↓ -2%
Other industrial	51.2	50.1	↓ -2%
Dentistry	15.3	13.9	↓ -9%

While electronics demand showed signs of recovery, gold used in the dental sector continued its steady decline with a 9% y-o-y fall to 14t in 2019. Other industrial applications experienced a minor fall of 2% y-o-y to 50t.

Electronics

Gold used in electronics fell 2% to 262.6t in 2019. This is perhaps not a huge surprise considering the overall weakness of the sector during the year. Forecasts for the semiconductor market – a traditional bellwether of the industry – are down by almost 13% compared with 2018, with falls across all major sectors.[3] However, a recovery does appear to be in progress, with the World Semiconductor Trade Statistics group predicting a return to growth of 5.9% in 2020. Our data supports this forecast, with demand for the final quarter posting a 1% y-o-y increase to 68.2t.

The strong Q3 growth in the wireless sector continued in Q4, with a 30-40% increase in gold demand y-o-y. This was driven by the rapid acceleration in 5G infrastructure deployment around the world. Major chip manufacturers, such as Taiwan's WIN Semiconductor Corp, are reportedly planning expanded production capacity in 2020 due to 100% utilisation rates at their current facilities. We believe this sector will be positive for gold demand for some time to come; 5G infrastructure demand is just beginning to ramp up, and new applications such as vertical cavity surface emitting lasers (VCSELs) and power amplifiers will add further demand for the technology.

Traditionally a low season for LEDs, Q4 2019 was down 6-8% y-o-y. The market remained sluggish with new mini- and micro-LED technology threatening traditional LEDs, which have higher gold utilisation rates. Additionally, while a preliminary deal has been signed by both China and the USA, the trade war remains a concern and continues to weigh on many industries that are heavy users of LED technologies.

3 www.wsts.org/esraCMS/extension/media/f/WST/4298/WSTS_nr-2019_11.pdf

Technology

The memory sector rebounded into growth during Q4, albeit at relatively low levels of 1-3% y-o-y. As we reported last quarter, major manufacturers such as Samsung and Micron, appear to have successfully normalised their inventories after two years of rapid growth and expansion. There are a handful of technological threats to gold demand in the sector, such as the miniaturisation of memory devices in some mainstream products potentially pressuring gold bonding wire usage. However, 5G related applications and data housing construction are expected to drive growth in the memory sector during 2020.

Finally, the Printed Circuit Board (PCB) sector registered a healthy rise of 7-10% y-o-y during the quarter. This was driven by the ramping up of 5G infrastructure deployment, alongside recoveries in consumer electronics and Artificial Intelligence demand. While there is an ongoing threat from miniaturisation in some sectors, demand remains strong in key sectors such as the automotive industry where PCBs are critical components of the electronic devices present in modern vehicles. Indeed, we believe we will see continued growth throughout 2020 in the PCB sector.

Of the four key electronics fabrication hubs around the world, only Japan registered a fall of 1.9% y-o-y. Mainland China and Hong Kong, South Korea and the US all saw small increases in gold volumes during the quarter of 2.8%, 3.9% and 1.1% respectively.

Other industrial and dentistry

Dental demand continued its inexorable decline, falling 10% y-o-y in Q4 to 3.2t. Demand for gold used in other industrial applications was down 4% to 12.4t; subsequently, annual demand was down 2% to 50.1t. This was in part due to the US-China trade dispute, which hit end use in the luxury accessories sector.

Supply

Total supply up 2% y-o-y in 2019; recycling and producer hedging boosted by gold price performance

- Total supply increased by 2% y-o-y in 2019 to 4,776.1t, the second consecutive marginal increase in annual supply
- Mine production fell 1% to 3,464t in 2019, the first y-o-y decline in output since 2008
- Recycled gold supply rose by 11% y-o-y in response to the gold price rally that began in June.

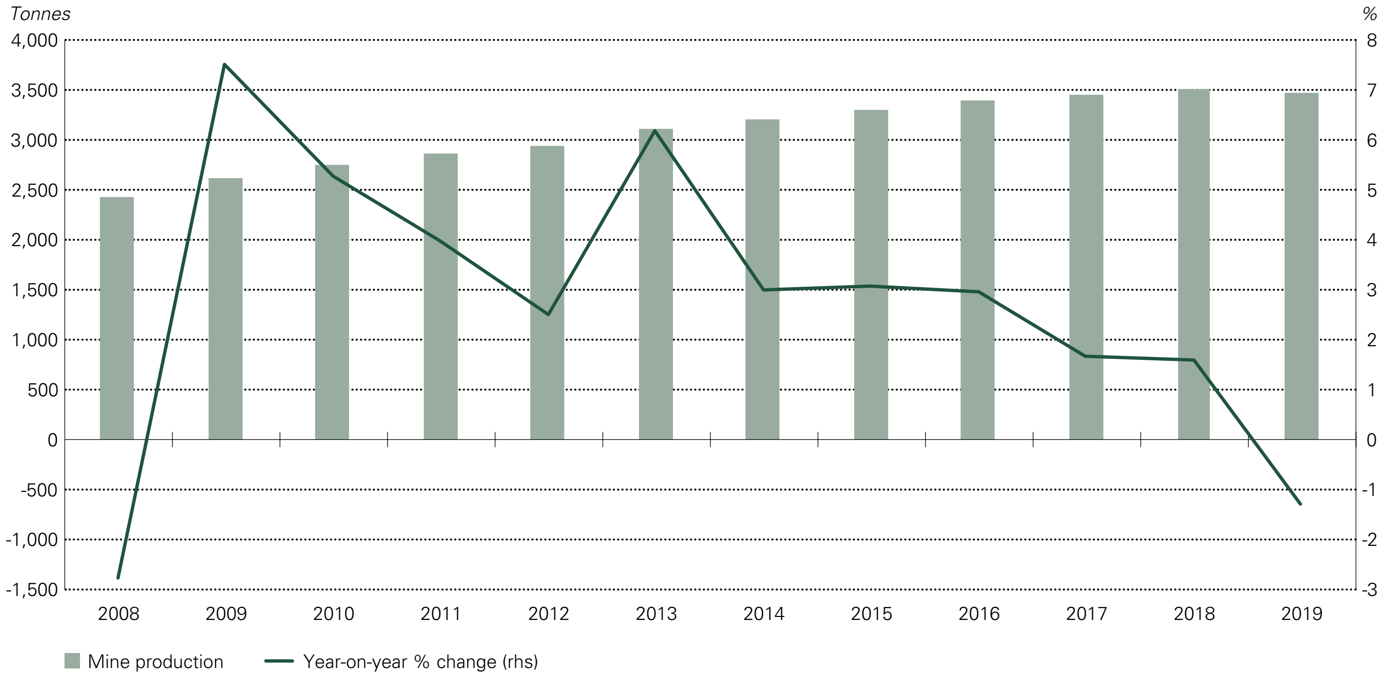
Tonnes	2018	2019	Y-o-y change
Total supply	4,673.0	4,776.1	↑ 2%
Mine production	3,509.3	3,463.7	↓ -1%
Net producer hedging	-12.5	8.3	↑ –
Recycled gold	1,176.1	1,304.1	↑ 11%

Total supply was slightly higher in 2019 – up 2% y-o-y to 4,776.1t. This growth was attributable to the price performance of gold over the year, primarily through its impact on recycling, but also on net hedging to a certain extent. While mine production fell by 1% y-o-y, a sharp increase in gold recycling to its highest level since 2012 (+11% y-o-y) helped boost higher total supply. Modest net producer hedging – the first year of net hedging since 2016 – also contributed to overall supply.

Mine production

Mine production in the final quarter of 2019 fell 2% y-o-y to 889.5t. This was the lowest level of Q4 mine output since Q4'16 and resulted in a clean sweep: y-o-y declines in all quarters in 2019. Gold mine production totalled 3,463.7t in 2019, 1% lower than in 2018. This is the first annual decline in production since 2008.

First year-on-year decline in mine production since 2008



Source: Metals Focus, Refinitiv GFMS, World Gold Council

Production growth was largely from greenfield and brownfield development. Russian gold mine production saw an 8% increase y-o-y in 2019. The ramp-up of greenfield sites – such as Natalka – and increases at several brownfield sites contributed to the growth in output. Similarly, in Australia, aggregate mine production rose by 3% y-o-y owing to higher production at several mines and the ramp up of projects such as Mount Morgans and Cadia Valley. Mine production in Turkey leapt (+66% y-o-y) due to improvements in the regulatory environment and permitting process, as well as expansion at the Copler project. In recent years the government has become more supportive towards the gold mining industry, helping to reduce the country's trade deficit in gold. West Africa again proved to be an engine of growth for mine production. Several of the region's nations, such as Ghana, Burkino Faso and Côte d'Ivoire, all saw increased gold production.

But this was outweighed by declines in some top producing nations. In China, the world's largest producer, mine output fell 6% y-o-y in 2019, the third consecutive year of decline. Chinese gold production was hampered primarily by the strict environmental restrictions which have come into force in recent years. But the rate of decline has been slowing for some time as the industry becomes compliant with new regulations. In addition, the rising gold price accelerated many gold mining plans in 2019. In South Africa, industrial action in the first half of the year significantly curtailed operations. While the strikes at Beatrix, Kloof and Driefontein – which began in November 2018 – ended in April, mine production continued to feel the after-effects well into Q3. In South America, disputes between local communities and contractors – such as at Peñasquito in Mexico – also led to lower production compared to 2018. While there is a healthy pipeline of projects in this region, obtaining a social licence to operate has proved challenging.

But Indonesia had the biggest impact on global mine production in 2019 due to the activity at Grasberg. The exhaustion of higher-grade ore at Grasberg and its subsequent transition from open pit to underground mining was a constant issue throughout the year. But this drag on global production will not be felt to the same extent in 2020. The project has been ramping up its Grasberg Block Cave mine where output is expected to improve after 2020.[4]

Net producer hedging

In Q4, net producer de-hedging amounted to 29.9t. This was mostly due to options expirations and closing of existing hedging positions. Despite the sizeable de-hedging in the final quarter, 2019 saw a modest 8.3t of net hedging. De-hedging in the other three quarters failed to offset the 49t of hedging in Q2, when miners took advantage of a higher gold price in order to protect project financing and secure cash prepayments. Latest available estimates put the global hedge book at 265t at the end of Q3.

Modest hedging reaction to substantial gold price rises. In 2019, the annual average gold price – in US dollars – grew by 10%, the largest increase since 2011. The increase in many local gold prices was even greater – particularly in key producer currencies, which weakened against the US dollar during the year – with some reaching new record levels. At first this may seem counterintuitive; the impressive gold price rally of 2019, which began in June, should have made hedging more attractive. And while some fresh hedging (or restructuring of existing positions) was seen during the year, it appears that miners were broadly comfortable to adopt a "wait-and-see" approach, preferring to see if the gold price would rise further before committing their future production.

4 www.fcx.com/index.php/operations/indonesia#grasberg_link

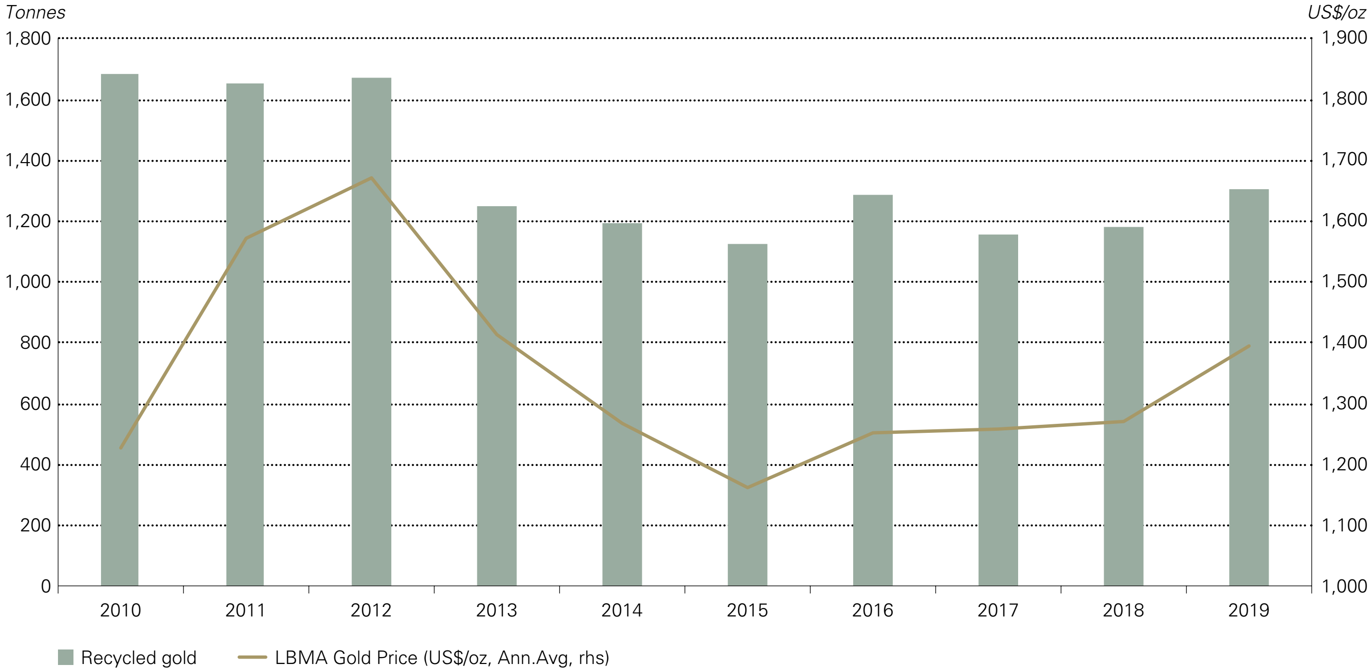
Recycled gold

Recycled gold supply rose 16% y-o-y in Q4, totalling 335t. This brought the annual supply of recycled gold to 1,304.1t in 2019, the highest since 2012 when the US dollar gold price was significantly higher.

While demand faltered, recycled gold supply jumped in response to price gain. Price was the overwhelming driver of this rise: the negative relationship between changes in the gold price and changes in recycling levels is well known. In 2019, the 10% jump in the annual average US dollar gold price understandably caught the attention of consumers.[5] This was especially the case in some key consumer markets where currency weakness against the US dollar generated even greater local gold price gains and in some markets, such as India, led to record price levels.

Recycled gold supply saw sizeable increases in South and East Asia, as well as in the Middle East. India saw the largest up-tick in recycling across Asia, as the gold price blew past the previous record high and remained at elevated levels. The local gold price finished the year just above Rs39,000/10g, almost 24% higher than at the end of 2018. In the Middle East, both Turkey and Iran saw notable y-o-y increases in recycling, particularly in the second half of the year. In Iran, as the rial collapsed against the US dollar, consumers rushed to seize on gains in the local gold price.

Gold recycling rose in response to the price rally in 2019



Source: Metals Focus, Refinitiv GFMS, ICE Benchmark Administration, World Gold Council

5 Based on end-of-period LBMA Gold Price (PM).

About the World Gold Council

The World Gold Council is the market development organisation for the gold industry. Our purpose is to stimulate and sustain demand for gold, provide industry leadership, and be the global authority on the gold market.

We develop gold-backed solutions, services and products, based on authoritative market insight, and we work with a range of partners to put our ideas into action. As a result, we create structural shifts in demand for gold across key market sectors. We provide insights into the international gold markets, helping people to understand the wealth-preservation qualities of gold and its role in meeting the social and environmental needs of society.

Based in the UK, with operations in India, the Far East and the US, the World Gold Council is an association whose members comprise the world's leading gold mining companies.

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