

# Gold Demand Trends

## Q1 2023

### Highlights

**The LBMA Gold Price (PM) averaged US\$1,890/oz during the quarter, marginally higher y/y.**

The price was over 10% higher than the previous quarter's average, almost matching the Q3'20 record high.

**China saw a strong relief rally in the first post-COVID quarter of unfettered consumer spending.**

The recovering domestic economy and healthy income growth reignited domestic consumption, while the eye-catching gold price performance spurred investment interest.

**Indian demand fell sharply as local gold prices applied the brakes.** Record high – and volatile

– domestic gold prices discouraged both investment and jewellery consumption during the quarter.

**Investment dominates the outlook for 2023.** We continue to see healthy upside for investment this year, while the picture for fabrication (jewellery and technology) is more muted.

Further robust central bank buying is expected, albeit below 2022's record. Modest growth is likely in both mine production and recycling.

For more information please contact: [research@gold.org](mailto:research@gold.org)

### Mixed picture for gold demand in Q1

Continued momentum in central bank buying and resurgent Chinese consumer demand contrasted with a negative contribution from ETFs and weakness in India.

Q1 gold demand (excluding OTC) was 13% lower y/y at 1,081 tonnes (t). Inclusive of OTC, total gold demand strengthened 1% y/y to 1,174t as a recovery in OTC investment – consistent with investor positioning in the futures market – offset weakness in some areas.<sup>1</sup>

Demand from central banks experienced significant growth during the quarter. Official sector institutions remained keen and committed buyers of gold, adding 228t to global reserves.

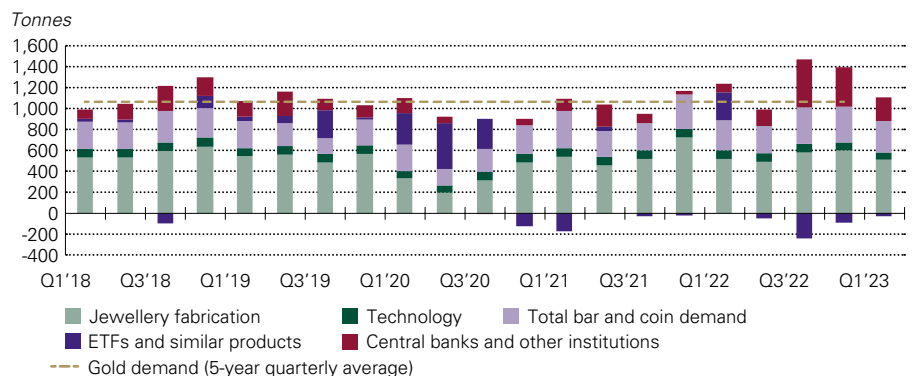
Bar and coin investment gained 5% y/y to 302t, concealing some large regional variations. In contrast, net negative demand for ETFs, although modest at -29t, generated a hefty y/y decline compared with the sizable inflows seen in Q1'22.

Global jewellery consumption was virtually flat at 478t. Jewellery fabrication exceeded consumption as stock building added just over 30t to global inventories.

Gold use in the technology sector continued to suffer from the challenging economic climate. Demand slumped to 70t – the second lowest quarter in our data series back to 2000.

Modest growth in both mine production (+2%) and recycling (+5%) led to a marginal increase in Q1 total gold supply to 1,174t. The uptick in recycling was largely a function of higher gold prices.

#### Mixed picture for gold demand in Q1 2023



Data to 31 March 2023.

Source: Metals Focus, World Gold Council

<sup>1</sup> In our data model, 'OTC & other' captures demand in the OTC market, for which data is not readily available. It also captures changes to inventories on commodity exchanges, unobserved changes to fabrication inventories and any statistical residual.

## Gold supply and demand

Tonnes	Q1'22	Q2'22	Q3'22	Q4'22	Q1'23		Y-o-y change
<b>Supply</b>							
<b>Mine production</b>	843.1	894.4	956.3	955.7	856.0	↑	2%
Net producer hedging	25.9	2.3	-25.9	-13.0	8.1	↓	-69%
Total mine supply	869.0	896.6	930.4	942.7	864.0	↓	-1%
Recycled gold	296.2	285.3	268.6	290.5	310.4	↑	5%
<b>Total Supply</b>	1,165.1	1,182.0	1,198.9	1,233.2	1,174.4	↑	1%
<b>Demand</b>							
Jewellery fabrication	516.4	492.3	582.3	601.3	508.6	↓	-2%
Jewellery consumption	475.3	458.4	526.1	629.7	477.9	↑	1%
Jewellery inventory	41.1	33.9	56.2	-28.4	30.7	↓	-25%
Technology	81.0	78.5	77.0	72.3	70.0	↓	-13%
Electronics	66.2	64.6	63.2	58.0	56.0	↓	-15%
Other Industrial	12.0	11.3	11.3	11.9	11.6	↓	-3%
Dentistry	2.7	2.6	2.5	2.4	2.4	↓	-12%
Investment	558.4	213.8	103.9	250.6	273.7	↓	-51%
Total bar & coin demand	287.7	261.2	348.0	340.3	302.4	↑	5%
Physical Bar demand	183.6	172.8	225.6	222.4	181.9	↓	-1%
Official Coin	84.6	70.8	89.4	89.0	96.5	↑	14%
Medals/Imitation Coin	19.5	17.6	33.0	28.9	24.1	↑	23%
ETFs & similar products	270.7	-47.4	-244.1	-89.6	-28.7	-	-
Central banks & other inst.	82.7	158.6	458.6	378.6	228.4	↑	176%
<b>Gold demand</b>	1,238.5	943.2	1,221.8	1,302.8	1,080.8	↓	-13%
OTC and other	-73.3	238.8	-22.8	-69.7	93.6	↑	-
<b>Total Demand</b>	1,165.1	1,182.0	1,198.9	1,233.2	1,174.4	↑	1%
<b>LBMA Gold Price, US\$/oz</b>	1,877.2	1,870.6	1,728.9	1,725.9	1,890.2	↑	1%

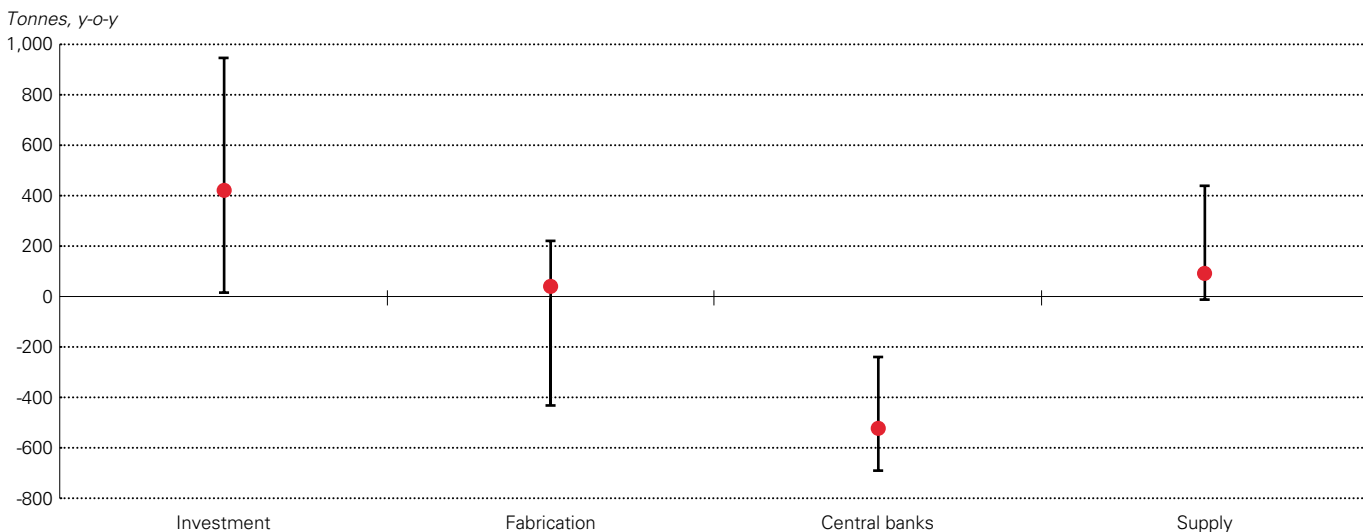
Source: ICE Benchmark Administration, Metals Focus, World Gold Council

# Outlook

## Investment to dominate y/y changes as fabrication demand faces growing risks.

- Global gold ETF demand is in need of a catalyst to see meaningful gains and we have revised down our midpoint slightly due to early European weakness. But globally, we expect positive demand and ETFs to retain significant upside potential from recession risk and waning interest rate headwinds
- Bar and coin demand is likely to continue at a good pace as US, South East Asian and Middle Eastern demand outweighs the notable slowdown in European demand in Q1. Indian weakness also weighs on our FY expectation
- Fabrication demand has been resilient, spurred on by China’s reopening. But we caution that a global growth slowdown is likely to impact demand as the year progresses. Technology demand is set to remain languid in the face of inventory drawdowns and weakening end-consumer demand. As a result we have revised down our FY estimate slightly
- Central banks have started the year on the front foot and we have revised both our midpoint and downside risk forecasts upwards, albeit still significantly below the record 2022 level
- Supply is likely to rise, both from mine production and recycling. Near-record prices have not resulted in a high absolute level of recycling, despite a strong q/q uptick in Q1, suggesting that a geopolitical risk premium has encouraged households and individuals to hold on to their gold. Q1 strength is expected to fade but still yield a y/y gain for recycling and supply in aggregate.

### Expected change in annual demand, 2023 vs 2022\*



\*Data to 31 March 2023. Fabrication combines global jewellery and technology demand. Investment includes ETFs, bar and coin and OTC demand. Supply includes mine production and recycling. We have omitted hedging and assume it to be unchanged.

Source: World Gold Council

## Investment: European weakness more than offset by strength elsewhere

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The investment baton is being passed from bar and coin demand to ETFs and OTC demand more slowly than we had envisioned at the start of the year. North American gold ETFs have seen tentative inflows in recent months, with the March surge that followed US banking failures driving them into positive territory for the quarter. We expect quarterly net flows to be positive going forward as a ceiling for interest rates appears more certain. Also, slowing growth has caused equity valuations to look overextended and geopolitical risks remain as elevated as they were in 2022, if not more so. But a trigger for sizeable inflows remains elusive, and European ETF weakness may continue to weigh on the global number for a little longer. Although early warning signs of the highly anticipated developed market recession continue to provide upside support, the recession itself may not materialise until later in the year, kicking the can for ETF inflows down the road a little.

Although gold ETF demand has been disappointing, OTC demand turned positive in Q1, mirroring a c.150t increase in futures net long positions; and global bar and coin demand has shown surprising resilience, too. China's Q1 bar and coin demand was strong and this strength is likely to continue. Historically, China's credit impulse – a measure of new credit creation in an economy – was closely associated with bar and coin demand before decoupling during the lockdown. The impulse has recently turned positive after spending most of the last 18 months in negative territory. In addition, official purchases have added to positive sentiment for gold domestically. This is likely to bode well for demand in this segment.

Indian bar and coin demand was weak in Q1 as local prices hit record levels. Absent a price retracement, it is likely to stay weak this year, particularly as both growth and inflation are expected to moderate.

Western demand proved a mixed bag with strength in the US more than offset by significant weakness in Europe. Recession fears are likely a dominant driver of bar and coin demand in the US, while in Europe a return to positive real interest rates for German Bunds in December, along with the high euro gold price, has dampened further gold accumulation.

We believe this weakness in Europe to be temporary, considering the risks ahead. Given strength in the global number, and the return of OTC investment, we have modestly raised our midpoint for both full-year bar and coin demand and total investment.

## Fabrication demand: A decent start to the year but risks lie to the downside

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China has responded as expected. Jewellery demand in Q1 was strong and should continue to benefit as the year progresses. But we caution that discretionary spending might be directed elsewhere as the reopening takes hold, as occurred in Europe post-COVID lockdowns. Foreign travel has started to return, albeit slowly, and this, among other factors, could eat into jewellery demand over the course of the next few quarters.

Western jewellery demand in Q1 has been consistent with previous quarters but the spectre of a growth slowdown puts the emphasis on downside risk for the full year.

Jewellery demand in India is expected to face the same headwinds as bar and coin demand for the rest of the year. A slowdown in growth and inflation coupled with high domestic prices are likely to keep demand muted, although there are early signs that consumers have started to adjust to the higher price.

The technology sector has been unsurprisingly weak. The issues we highlighted in the last Gold Demand Trends continue to dampen demand and are likely to persist until the second half of the year when inventory drawdowns run their course and more normal levels of manufacturing resume. Although China's reopening is a welcome development for chip manufacturing, it is likely that end-user demand will slow and sanctions will remain in place while China and the US continue their economic skirmish.

## Central banks: Another strong year ahead

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Central banks have continued to surprise to the upside. The net buying rate in Q1 sets the tone for a higher midpoint for our full-year estimate. We have also raised the downside range limit, although we maintain that this year is very unlikely to match 2022. Limited information and delayed reporting mean that a broad range of outcomes are possible, both to the upside and the down. But intentions have consistently been a leading indicator for buying over the last few years and our central bank surveys suggest little change to the positive trend.

## Supply: Slight upside to mine production and recycling

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We have revised our outlook for supply up slightly, primarily on higher production. Project expansion in North America, a reduction in seasonal variation in China and an end to strikes in South Africa are likely to provide a little more upside to primary production growth for the full year. Our midpoint for supply has also been raised slightly, due to a modest rise in hedging, via finance-related forward selling.

Recycling has been evident in India and Europe, both of which show a quarterly increase; the former a likely result of a higher domestic price and the latter a combination of higher prices and moderate economic distress. But the absolute levels of recycling are not high, despite record prices. As was the case in Q4, investors appear willing to hold on to their gold in the face of elevated geopolitical risks; this is particularly evident in the Middle East. We have revised up our midpoint forecast for recycling only modestly as we expect Q1 strength to fade. We have also slightly reduced the upside risk now that a possible developed-market recession has been pushed back to the latter part of the year.

# Jewellery

## Global jewellery demand totalled 478t – unchanged y/y as growth in China met with price-driven weakness in India.

- Total jewellery consumption held steady against Q1'22, but was 24% lower q/q due to seasonal effects
- China saw vigorous buying: demand was 11% higher y/y at 198t as the removal of zero-COVID restrictions sparked consumers into life
- High and volatile gold prices proved challenging for jewellery consumers in several markets, most notably India, which saw the weakest Q1 since 2020.

Tonnes	Q1'22	Q1'23	Y-o-y change	
<b>World total</b>	475.3	477.9	↑	1%
India	94.2	78.0	↓	-17%
China, P.R.: Mainland	177.4	197.7	↑	11%

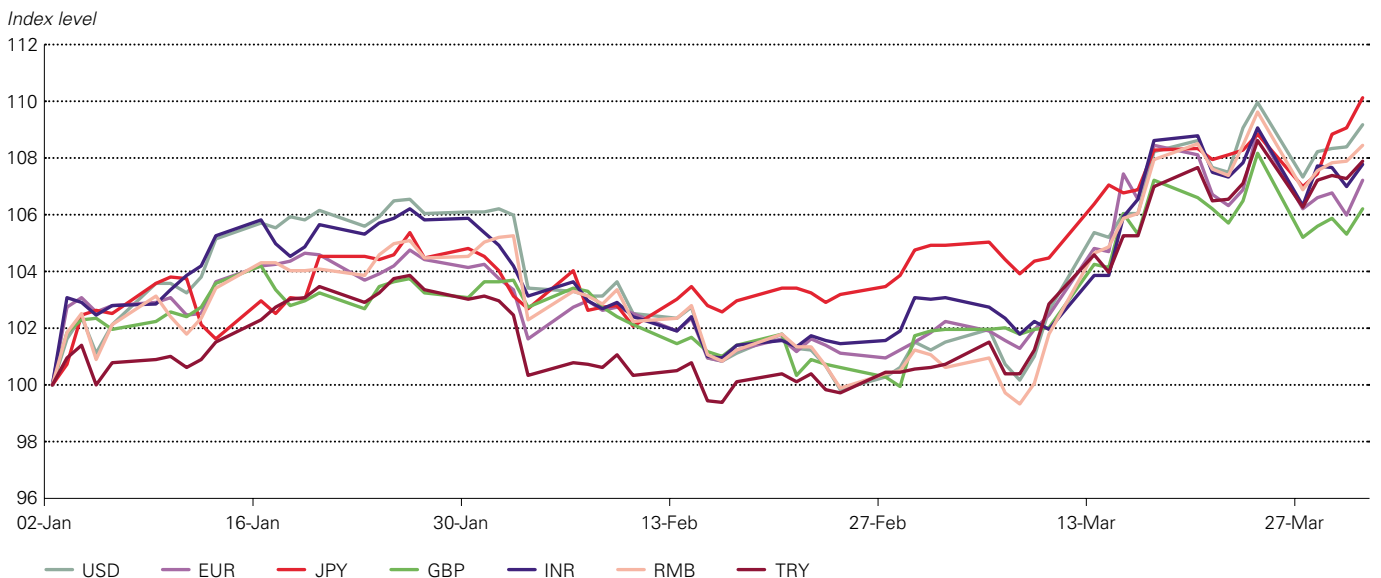
Source: Metals Focus, World Gold Council

Global gold jewellery demand for Q1 came in at 478t, almost exactly in line with that of Q1'22. This was 5% lower than the five-year quarterly average of 501t. China was the clear outperformer during the quarter, where consumers embarked on a relief-driven shopping spree. India saw a very different quarter, with demand quashed by record local gold prices. Elsewhere the higher gold price generally kept a lid on jewellery buying, although some markets saw a jump in investment-motivated demand.

## China

**Chinese consumers bought 198t of gold jewellery in Q1, 41% of the global total.** This was the highest first quarter for Chinese jewellery demand since 2015 as Chinese consumers used their wallets to celebrate finally being unleashed from restrictive zero-COVID measures. The recovering domestic economy further ignited demand: Q1 GDP increased 4.5% y/y and household income grew 4% in real terms.<sup>2</sup>

## Strength in Q1 gold prices – across all key currencies – accelerated in March\*



\*Data to 31 March 2023.

Source: ICE Benchmark administration, Refinitiv Datastream, World Gold Council

<sup>2</sup> National Bureau of Statistics of China, 18 April 2023.

Pent-up demand from previous quarters also helped. Wedding gold jewellery demand improved amid the relaxation of COVID-related restrictions; the wedding industry has reportedly been operating at full capacity so far in 2023.

And gold jewellery buying was likely spurred by investment motives. The tendency to save among Chinese consumers remains at historically high levels, and gold's financial value attracted consumer attention. Jewellery (mainly gold) was the second strongest category for y/y sales growth in Q1, as reported by the National Bureau of Statistics.<sup>3</sup>

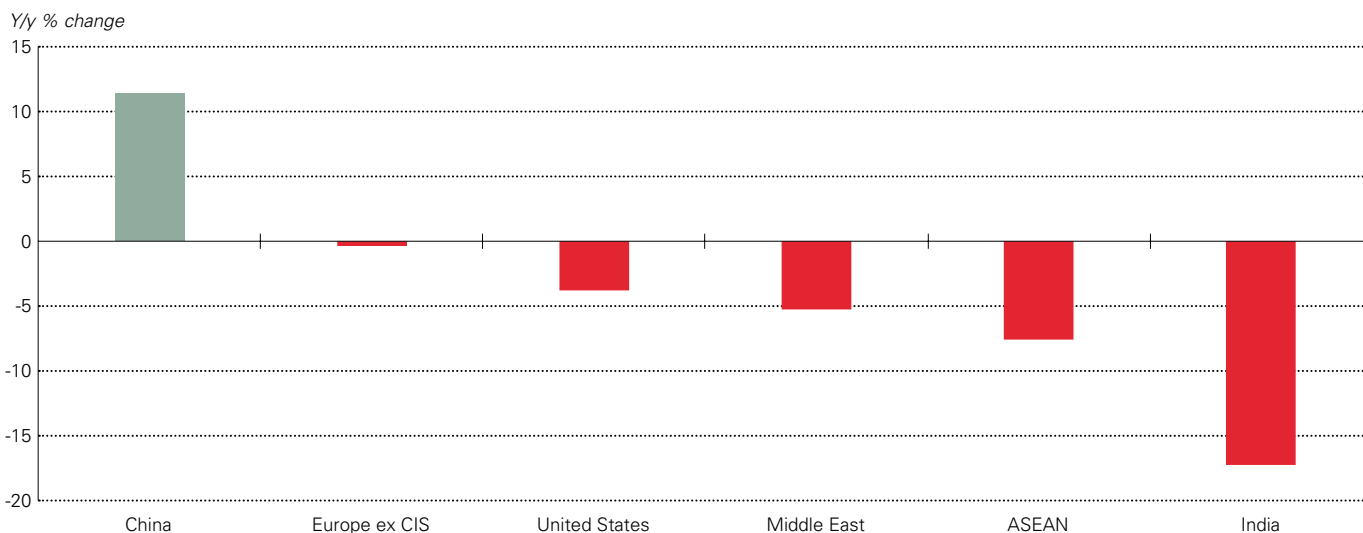
Hard pure gold jewellery products soared in popularity in Q1. The hardness of these lightweight products enables stylish designs, which are key to their rising popularity, along with their affordability. Enhanced pricing transparency also helped reassure consumers who remain cautious about spending; retailers are increasingly adopting the per-gram pricing method for these products instead of the per-piece model which may have masked the true mark-ups charged to consumers.

Heritage gold jewellery continued to enjoy a vital share of the market. Culture-rich designs, along with the investment motives of jewellery consumers, sustained demand for these chunky products. On the other hand, 18K and 22K products continued to lose market share to hard pure gold products. Within both the Heritage gold and the hard pure gold jewellery ranges, products with enamel and gem inlays increased in popularity.

**Looking ahead, we expect to see the usual seasonal dip in Q2 jewellery demand in China.** And should very elevated local gold prices persist, they could hinder gold jewellery demand. An additional threat comes from the potential for consumers to allocate more of their budgets to travel and entertainment, similar to the post-COVID trend that has been experienced in Western markets.

On the other hand, the combination of continued domestic economic recovery and pent-up wedding jewellery demand is likely to provide further support. We believe that hard pure gold products will benefit more than other product lines in Q2, thanks to their affordability, seasonal suitability and innovative designs.

## Jewellery demand growth in China stole the show in Q1\*



\*Data to 31 March 2023.

Source: Metals Focus, World Gold Council

<sup>3</sup> [Total Retail Sales of Consumer Goods in March 2023 \(stats.gov.cn\)](https://www.stats.gov.cn).

## India

**Gold jewellery demand of 78t was the weakest for a first quarter in India since 2020.** Demand was 17% lower compared with Q1'22. And, coming on the heels of an exceptionally strong Q4, the Q1 figure generated a stark 65% q/q decline.

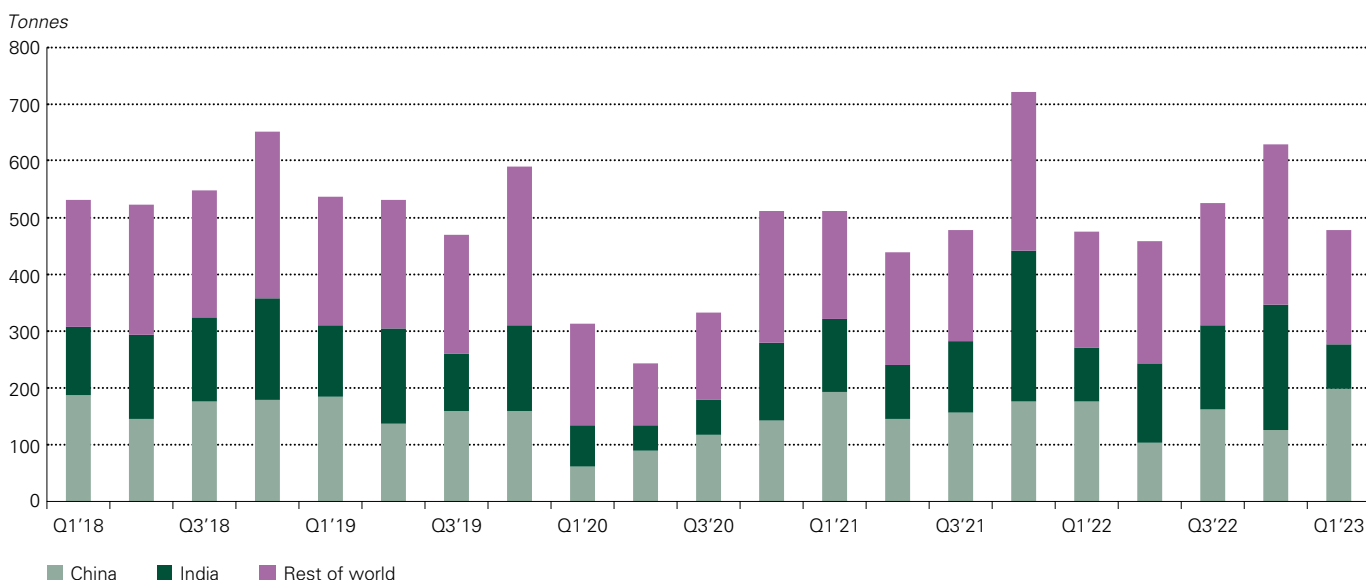
In context of the record high local gold price, it was unsurprising to see such lacklustre jewellery demand. Indian consumers are keenly aware of – and sensitive to – moves in the local gold price. We had already reported that demand in Q4 slowed sharply as the price rocketed in December, and this trend continued into January as local prices reached fresh highs. The price pullback in February generated a short-lived recovery, thanks to some bargain-hunting.

The price has also encouraged a rise in smuggling activity, incentivised by an avoidance of import duties. This has reportedly encouraged demand in smaller cities, and among independent retailers, where cash purchases are more commonplace.

18k jewellery continued to gain popularity during the quarter, particularly among younger, more budget-conscious consumers. Studded jewellery continues to slowly gain market share; the higher margins on these products allow retailers to incentivise purchases through promotions. At the trade level, large retailers performed relatively well during the quarter, thanks to their ability to implement aggressive marketing campaigns.

The outlook is for demand to remain muted over the coming quarter. Risks remain to the downside until we see evidence of healthy monsoon rainfall. Rural demand – a key source of gold jewellery demand – remains fragile and persistent inflation will likely continue to impact consumer sentiment. The historically high gold price creates a further obstacle to demand, although there are early signs that consumers have started to adjust: early estimates suggest that buying during the highly auspicious Akshaya Tritaya festival was only modestly weaker compared with last year's exceptionally strong levels.<sup>4</sup>

## Excluding India and China, jewellery demand in the rest of the world was stable y/y\*



\*Data to 31 March 2023.

Source: Metals Focus, World Gold Council

<sup>4</sup> Akshaya Tritaya is one of the most auspicious occasions in Hindu religion. Buying gold on Akshaya Tritiya is believed to bring good fortune and prosperity.



## Middle East and Turkey

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Q1 jewellery demand in Turkey was 20% higher y/y at 9t. But the q/q comparison showed a 10% drop as demand was affected by the devastating earthquakes that hit the country in February. Investment motives continued to fuel jewellery demand during Q1, with high-purity 22k sales performing much better than 14k.

Jewellery demand was mixed across the Middle Eastern region in Q1; higher prices dampened demand in some markets but encouraged quasi-investment buying in others. Iran (-15%) and the UAE (-22%) both saw weaker y/y demand, with gold price rises in the former magnified by local currency depreciation against the dollar. Currency weakness was less of a deterrent in Egypt: demand here increased 6% y/y as gold jewellery benefited from safe-haven demand.

## US and Europe

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Q1 gold jewellery demand in the US slipped 4% y/y to 26t. Demand was healthy in comparison with longer-term levels: first quarter demand for the previous five years averaged 25t.

Rising concerns around likely recession dampened consumer sentiment, supported by the fact that the lower-end was the weakest part of the market. Nevertheless, despite an increasingly challenging economic climate, demand is supported by continued strength in the jobs market and by the number of weddings remaining elevated due to the post-COVID backlog.

Jewellery demand in Europe was 11t, unchanged from Q1'22. Although this was below pre-COVID levels, the performance was robust in light of the higher euro gold price. Improved tourism reportedly supported modest growth in France and Italy.

## ASEAN markets

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On the face of it an 18% y/y decline in Vietnamese gold jewellery demand suggests a weak quarter. But this was partly due to strong base effects – Q1'22 was the strongest first quarter since 2007. And Q1 demand of 5t was comfortably higher than average quarterly levels for the five years preceding the pandemic.

That said, demand would have been stronger had there not been a sharp slowdown in economic growth during Q1. Buying was healthy during the Lunar New Year celebrations, before tailing off in February and March as the gold price rose.

Rising gold prices and cost of living pressures were behind a 6% y/y decline in Thailand's Q1 jewellery demand. In fact, the surging gold price encouraged consumers to sell back existing holdings of old gold jewellery. Demand in rural communities was reportedly more sluggish than in urban areas, due to a lagged economic recovery in those regions.

Indonesia bucked the regional trend with a 12% y/y rise in Q1 demand to 6t. A relatively robust domestic economy boosted consumer sentiment, which underpinned demand. Nevertheless, the market remains far smaller than it was before the pandemic and the rising price will likely limit demand going forward.

## Rest of Asia

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Gold jewellery demand in South Korea was a relatively paltry 3t in Q1, the second-weakest quarter for more than 10 years and 23% lower y/y. High gold prices, at a time when rising living costs and interest rates are squeezing disposable incomes, weighed on demand.

In contrast, demand in Japan was fractionally higher y/y at 3t. Demand was more robust than expected, particularly given the rising gold price. Decent demand for 'kihei' chains (plain, heavy gold chains) suggests that demand was supported by quasi-investment.

## Australia

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Jewellery demand was bang in line with year-earlier levels at a little over 2t. In value terms, jewellery consumers spent AU\$210mn (US\$143mn) on gold jewellery, a 7% increase on the AU\$196mn (US\$142mn) of Q1'22.<sup>5</sup>

<sup>5</sup> Calculated using the average quarterly LBMA Gold Price (PM).

# Investment

## Q1 saw diverging trends in gold investment demand: a small decline in gold ETF holdings versus hearty bar and coin buying.

- Investment demand of 274t was up 9% on the previous quarter, but 51% lower y/y
- Holdings of global gold ETFs fell slightly during Q1 (-29t); outflows in January and February were partially reversed by inflows in March
- Global bar and coin investment exceeded 300t for a third consecutive quarter – the first time this has happened since 2013.

Tonnes	Q1'22	Q1'23	Y-o-y change
<b>Investment</b>	558.4	273.7	↓ -51%
Bar and Coin	287.7	302.4	↑ 5%
India	41.3	34.4	↓ -17%
China, P.R.: Mainland	49.3	65.9	↑ 34%
Gold-backed ETFs	270.7	-28.7	- -

Source: Metals Focus, World Gold Council

Q1 witnessed a similar pattern of investment demand as in the previous quarter: bar and coin investment remained in rude health compared with outflows in ETFs and modest growth in OTC and futures.

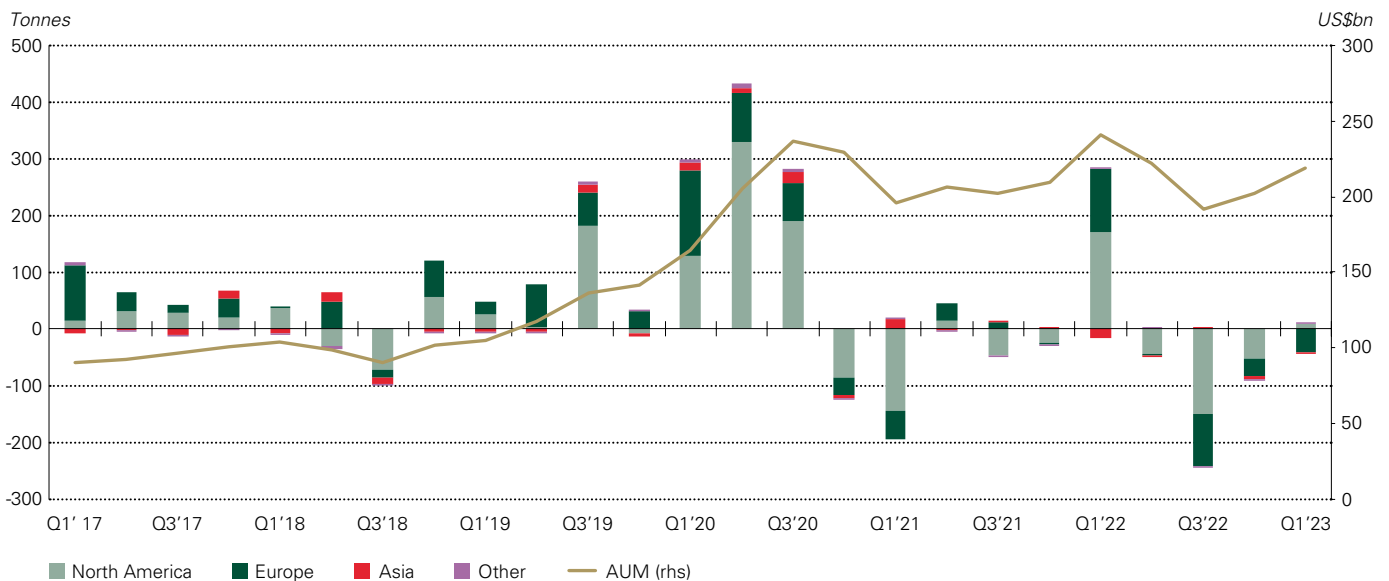
Sentiment in the more institutional segment turned markedly more positive in March as serious cracks emerged in the banking industry propelling the gold price higher. As well as monthly inflows into ETFs, March also saw a notable rebound in COMEX net longs, which ended the quarter at 622t – the highest for 10 months, although positioning remains below the average levels in 2021 (654t) and 2020 (872t).

## ETFs

Q1 saw net disinvestment of 29t from global physically-backed gold ETFs, equivalent to a US\$1.5bn outflow. Although modest, this was the fourth consecutive quarter of net global outflows from gold ETFs and generated a material y/y decline compared with the very notable inflows of Q1'22.

But the quarter ended on a positive note: January and February outflows were followed by a March reversal – the first time in 11 months that ETF holdings increased. And, so far, that positive trend has continued in April.

## Global gold ETF outflows tapered off to trivial levels in Q1\*



\*Data to 31 March 2023.

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

# Investment

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As usual, ETF demand varied across regions. The majority of Q1 outflows came from European-listed products, while Asian funds saw only mild outflows. In contrast, North American-listed ETFs, as well as those listed in Other regions, witnessed inflows during the first quarter of 2023.

**Funds listed in North America added 10t in Q1, a net inflow of US\$829mn in AUM.** Activity in this region was sensitive to moves in the US dollar and rate expectations, with inflows in January and March punctuated by outflows in February. The March banking mini-crisis was a defining factor in encouraging investment, as was with the rising gold price, which promoted momentum buying.

**Despite positive demand in March, gold ETFs listed in Europe saw net Q1 disinvestment of 40t.** UK- and German-listed funds led the outflows, partly explained by the fact that these are two of the largest markets in the region. Sentiment appeared to be driven by continued substantial rate hikes across the region. The March recovery was a response to poor stock market performance, systemic risk fears from the banking crisis, and the 6% rise in the euro gold price during the month.

**Asian-listed gold ETFs saw modest declines.** Chinese and Indian funds both generated minor losses (<1t), which contrasted with small gains in Japan. Among the funds listed in Other regions, Turkey was the standout, with strong bar and coin demand.<sup>6</sup>

## Bar and coin

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Investors bought 302t of gold bars and coins in Q1, 14% above the five-year average and equal to US\$18.4bn in value. Strong gold prices – which reached record levels in some markets – encouraged some momentum buying. Demand was further fuelled by persistent high inflation, geopolitical risks and concern over contagion in the banking crisis. But demand failed to match the previous quarter's levels, as high gold prices encouraged profit-taking and sharp declines were seen in a few key markets.

## China

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Q1 bar and coin investment soared in China. Demand totalled 66t, a 34% jump y/y and a 7% rise q/q, mainly driven by China's emergence from the COVID pandemic and the eye-catching gold price performance.

Chinese New Year generated robust demand for gold investment, particularly given the local gold price strength, which outperformed relative to other domestic assets including stocks, bonds and commodities. Additions to official gold holdings reported by the PBoC seemed to further encourage local interest in gold investment, as did elevated global geopolitical tensions. Furthermore, consumers' high tendency to save may also have elevated their interest, as gold has historically been regarded as an effective store of value.

Looking ahead, Q2 – a traditional low season for domestic gold demand – could see stronger than usual buying as investors may pay increasing attention to gold's role as a safe haven in the environment of heightened geopolitical risk. Consumers' tendency to save also remains at a record level, supporting demand for gold over recent quarters. Headwinds may come from seasonality factors and high gold prices, which may deter some new investment.

## India

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Record high – and volatile – local gold prices in Q1 were the key driver of gold investment demand, which was relatively muted at 34t. This resulted in a 17% y/y decline and a steep 40% drop q/q. In comparison with longer-term trends, demand was 14% below the five-year quarterly average.

The speed and scale of the rise in the local gold price deterred fresh buying and instead encouraged profit-taking for many. Furthermore, the low margins on gold investment products, relative to jewellery, meant that retailers concentrated their promotional efforts on the latter.

Economic momentum in India remains healthy and the RBI paused its rate hike cycle. Against this backdrop, the outlook for retail investment is highly dependent on the local gold price. Further volatility, at such extremely high price levels, would continue to act as a deterrent to bar and coin investors and further price gains would likely encourage profit-taking.

<sup>6</sup> 'Other' regions include Australia, South Africa, Turkey, Saudi Arabia and the United Arab Emirates.

# Investment

## Middle East and Turkey

Bar and coin investment in Turkey reached phenomenal levels in Q1, breaching 50t for the first time on record. Demand increased fivefold y/y and was 32% higher q/q. In value terms, an unprecedented TL58bn (US\$3bn) was invested in gold.

Turkish investors continued to seek the safety of gold as runaway inflation persisted: official statistics put CPI at around 50% (with unofficial estimates more than double that). Real rates consequently remain deeply negative, a fact that has helped gold's case – as have the impending mid-May elections, the prospect of which further highlights gold's safe-haven appeal.

All markets across the Middle East recorded growth in Q1 bar and coin demand. Regional investment hit 29t – a quarterly total that has been exceeded on only three previous occasions. Rampant inflation and currency depreciation in some markets were key drivers, along with momentum buying into the rising gold price.

In Egypt, a further currency depreciation (the third in less than a year), together with eye-watering inflation, underpinned the safe-haven and inflation-hedging motives for buying gold. Bar and coin demand doubled y/y to 7t.

Iran saw bar and coin investment of 13t – 26% higher than the 10t five-year quarterly average. Investment was spurred by a weak domestic currency, which fed through to soaring local gold prices, and extreme inflation. Disruption to the supply of gold coins has also pushed premiums up on these products.

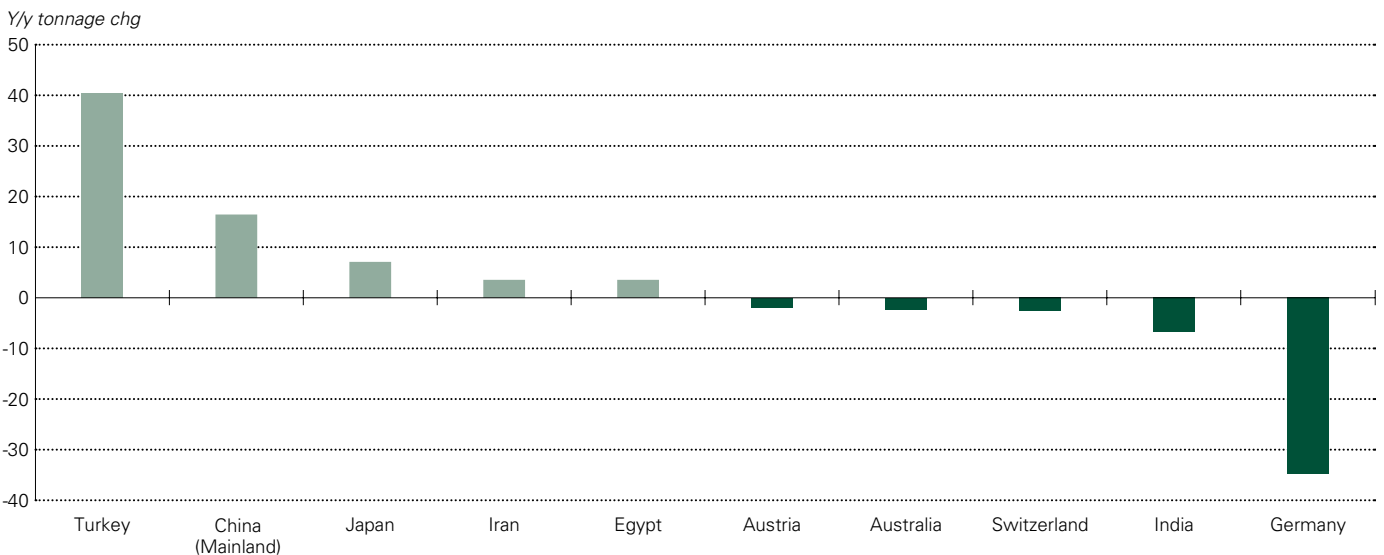
In Saudi Arabia, retail investment demand reached a seven-year high of 4t. Demand was 39% higher y/y, with investors apparently encouraged by the higher gold price, particularly as gold investment products are not burdened with the higher 15% VAT rate introduced in 2020.

## The West

There was a sharp disparity between US and European bar and coin demand in Q1. The banking failure in March lit a fuse under US bar and coin investors, who piled into gold. Investment in Germany, on the other hand, came to a virtual standstill as higher interest rates increased the opportunity cost of holding gold and high local gold prices encouraged profit-taking.

US bar and coin demand jumped 40% q/q – a 4% y/y increase – to 32t, the fourth strongest quarter in our data series and the highest since 2010. This was almost double the five-year average of 17t.

## Biggest y/y changes in bar and coin investment\*



\*Data to 31 March 2023.

Source: Metals Focus, World Gold Council

# Investment

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The higher gold price continued to stoke interest in gold, although initially at a more measured pace than in recent quarters. The market burst into life in March as the collapse of SVB and Signature Bank put gold squarely in the spotlight. The US Mint reported rocketing coin sales, which reached 288,000 ounces in March – the biggest monthly total since October 1998, when the Y2K safe-haven rush for gold was in full swing.

Demand remains healthy amid continued fears about the health of the banking sector, as well as concern around the forthcoming domestic debt ceiling negotiations and more general elevated global geopolitical tensions. Higher premiums on silver products are also reportedly supporting some substitution into gold.

The Q1 picture for Europe was very different. Demand slumped to 38t, less than half that of Q1'22 and the lowest quarterly total since the pandemic began.

Germany was the clear driver of the regional decline. Demand in this market fell to 13t, the lowest since Q2'08 and 63% below the five-year average of 34t. The main trigger for the collapse in investment appears to have been the shift back to positive real rates for the first time in nine years,<sup>7</sup> due to easing inflation and higher nominal rates. The rising euro gold price in January also reportedly encouraged profit-taking, with the net result that demand was more or less zero during the month.

The banking crisis briefly revitalised demand in March but liquidations remained strong throughout the quarter and this prevented net demand from matching recent levels.

Switzerland recorded a significant, but smaller, 20% y/y decline. Demand slowed in January and February before returning with a vengeance in March as banking crisis contagion hit home.

The smaller markets of France, the UK and Italy bucked this trend and registered modest growth, likely as investors were attracted by the rising gold price.

## ASEAN markets

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Bar and coin demand was mixed across the ASEAN markets covered in GDT. Vietnamese retail investment was down 10% y/y at 13t – the lowest first quarter since the pandemic-stricken 2020. The y/y decline partly reflected lower levels of liquidity among investors, whose equity and real estate investments in the last two years have not performed well. Demand was directed towards

chi rings, given the high premiums charged on Saigon Jewellery Company tael bars.<sup>8</sup> High gold prices may deter investment in the coming months.

Thailand and Indonesia both witnessed y/y growth of 15% in retail investment. In Thailand, however, this was largely due to the comparison with a very weak base period. Q1 investment was negligible at less than 2t. The q/q comparison reveals an 83% drop as investors stood aside while the price spiked in March. Indonesian bar and coin buying increased to 6t as rising gold prices, along with high inflation, encouraged investors. Strong q/q growth (+20%) also reflected the complete removal of the COVID-19 curbs at the end of last year.

## Rest of Asia

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Japan saw a second consecutive quarter of net disinvestment in Q1, as the local gold price reached new record highs. Japanese investors sold a net 3t of gold bars and coins as they cashed in on their existing holdings. That being said, the modest degree of net selling was somewhat surprising and reflects a healthy underlying level of buying interest.

Traditional Japanese investors tend to be older and have legacy holdings of gold bars and coins that they use as a source of liquidity. But growing interest has been reported among a younger cohort of investors who are increasingly interested in gold as an investment. And as the price has reached all-time highs, media interest has likely been generated, further raising gold's profile.

South Korean bar and coin demand softened to 4t, a decline of 15% y/y. While some investors were cautious of buying at relatively high prices, others added to their holdings during price pullbacks, anticipating further price strength.

## Australia

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Our data series for Australia (back to Q1'21) has been revised higher on the basis of new information. Bar and coin demand was healthy at 6t but notably weaker than the very strong 8t of investment seen in Q1'22. The banking crisis helped to spur demand during March, despite the exceptional price rally during the month.

<sup>7</sup> German 10-year inflation-linked bond yields turned positive in December 2022 for the first time since Q1 2014.

<sup>8</sup> Chi rings are plain 24k gold rings and classified as jewellery. They require only crude workmanship and therefore command limited premiums, making them a popular investment proxy. 'Tael bars' are gold bars of 37.5 grams.

# Central banks

## Central bank demand makes a record-breaking start to 2023.

- Central bank demand hit 228t in Q1, 34% higher than the previous Q1 record set in 2013
- This follows the record annual demand of 1,078t in 2022
- Buying during the quarter was reported by both emerging and developed market banks.

Tonnes	Q1'22	Q1'23	Y-o-y change
<b>Central banks and other institutions</b>	82.7	228.4	↑ 176%

Source: Metals Focus, World Gold Council

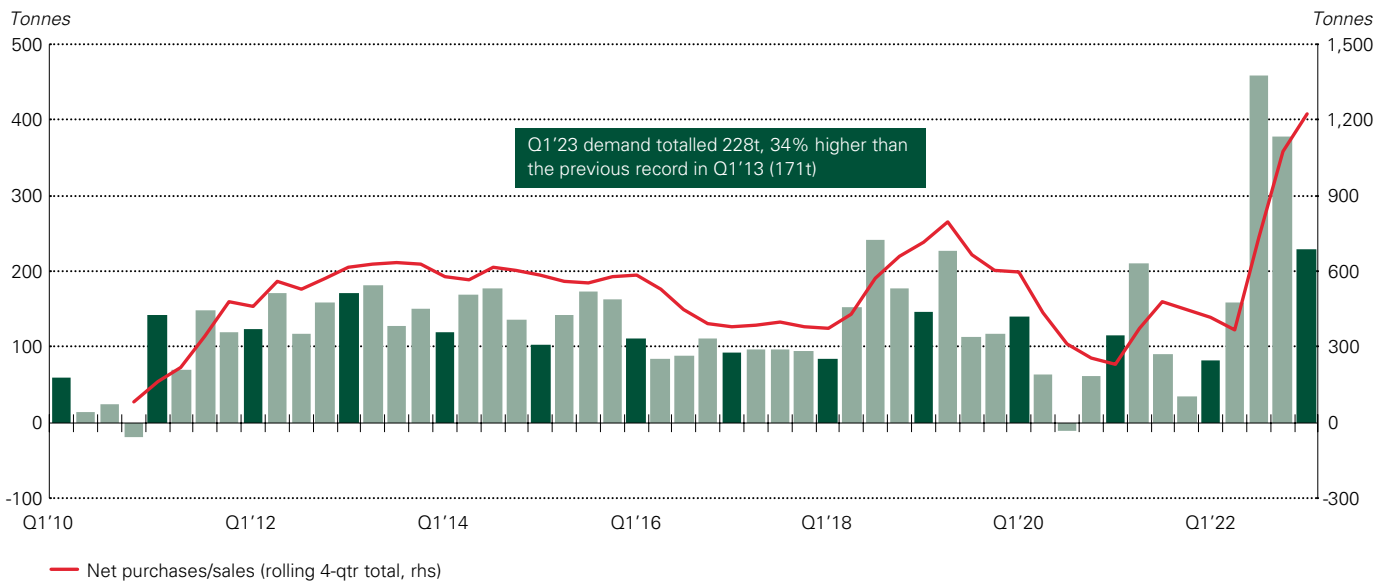
Central bank gold buying made a blistering start to 2023. Q1 demand reached 228t. While lower than the figures seen in the previous two quarters this is nonetheless the strongest first quarter on record.<sup>9</sup>

This is all the more impressive considering it follows the record-breaking pace of demand last year. The rolling four-quarter total jumped significantly to 1,224t in Q1 following massive buying in recent quarters. As with the figures for both Q3 and Q4 2022, data for the current quarter contains a significant estimate for unreported activity.

**Four central banks accounted for the majority of reported purchasing during Q1.**<sup>10</sup> The Monetary Authority of Singapore (MAS) was the largest single buyer during the quarter. The addition of 69t, the first increase in its gold reserves since June 2021, confirms that buying in Q1 was not only the domain of emerging market central banks. Gold reserves at MAS now total 222t, 45% higher than at the end of 2022.

The People's Bank of China (PBoC) disclosed that its gold reserves had risen by 58t. Since recommencing reports of purchases in November 2022, the PBoC has added 120t to its gold reserves, lifting them to 2,068t (4% of total reported gold reserves).

## Central bank demand hits Q1 record, maintaining its upward trend\*



\*Data to 31 March 2023.

Source: Metals Focus, Refinitiv GFMS, World Gold Council

<sup>9</sup> Our quarterly central bank demand series goes back to 2000.

<sup>10</sup> Country-level gross sales and purchases are taken from the most recent IMF IFS, or data reported directly by individual central banks where relevant. These may not match the net central bank demand figures published in Gold Demand Trends, as Metals Focus uses additional sources of information to obtain its estimates.



# Central banks

Turkey was again a big buyer of gold during the quarter: official reserves rose by 30t. Combined purchases of 45t in January and February were offset by a sale in March – the first since November 2021.<sup>11</sup> 15t of gold was sold into the local market following a temporary partial ban on gold bullion imports.<sup>12</sup> Overall, this lifted total gold reserves to 572t (34% of total reserves).

The Reserve Bank of India also added a modest 7t in Q1, lifting its gold reserves to 795t, while the Czech Republic (2t) and the Philippines (1t) were also notable buyers.

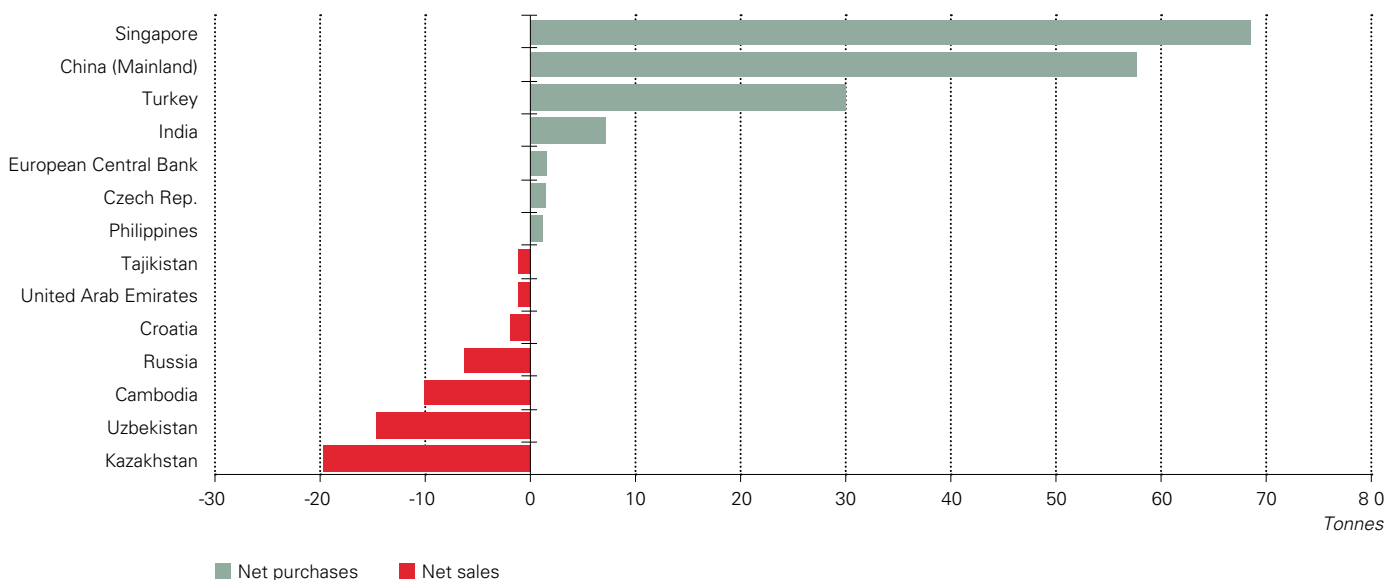
A significant update during Q1 came from the Central Bank of Russia in a resumption of its reporting of gold reserves, back filling data from the end of January 2022 to date. We can now see that in Q1 Russia's official gold reserves fell by 6t, to 2,327t (25% of total reserves). However, even with this decline – possibly related to coin-minting – the country's gold reserves are 28t higher than when it stopped reporting last year. Our historical series has been updated to reflect this, along with new information from other central banks.

## Selling was again much more modest by comparison.

The Central Bank of Uzbekistan (-15t) and the National Bank of Kazakhstan (-20t) were the largest sellers of gold during the quarter. As we have noted previously, it is not uncommon for central banks that purchase gold from domestic sources – as both Uzbekistan and Kazakhstan do – to be frequent sellers of gold. Cambodia (-10t), UAE (-1t) and Tajikistan (-1t) were the other notable sellers. Croatia reported a 2t reduction in its gold holdings in January but this was a transfer to the European Central Bank – which is required of all countries joining the euro area – and, as such, it does not represent a decline in the global universe of official sector gold.

Our broad expectation for central bank demand in 2023 has, so far, been borne out. Central bank buying remains robust, with little to indicate that this will change in the short term. As such, we maintain our belief that purchases will continue to outweigh sales as we move into Q2. But the exact pace of this net buying is difficult to determine. There are no guarantees that the rapid start to the year will be sustained, nor should we discount the potential for surprise activity – in both purchases and sales.

## Net purchases have heavily outweighed sales year-to-date\*



\*Data to 31 March 2023 where available.

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

11 Turkey official sector gold reserves are the sum of central bank owned gold and Treasury gold holdings. This is equivalent to gross gold reserves less all gold held at the central bank in relation to commercial sector gold policies, such as the Reserve Option Mechanism (ROM), collateral, deposits and swaps. Please follow this link for information on this methodology: [www.gold.org/download/file/16208/Central-bank-stats-methodology-technical-adjustments.pdf](http://www.gold.org/download/file/16208/Central-bank-stats-methodology-technical-adjustments.pdf)

12 [www.reuters.com/markets/commodities/turkey-suspend-some-gold-imports-after-earthquake-bloomberg-news-2023-02-14/](http://www.reuters.com/markets/commodities/turkey-suspend-some-gold-imports-after-earthquake-bloomberg-news-2023-02-14/)

# Technology

## Continued weakness in global electronics sales weighed heavily on demand for gold in the technology sector during Q1.

- Gold demand in the sector fell by 14% y/y to 70t during Q1
- This was primarily driven by a 15% decline in the electronics sector on weaker consumer spending
- Gold used in other industrial applications and dentistry also weakened, in part due to the higher gold price.

Tonnes	Q1'22	Q1'23	Y-o-y change
<b>Technology</b>	81.0	70.0	↓ -13%
Electronics	66.2	56.0	↓ -15%
Other industrial	12.0	11.6	↓ -3%
Dentistry	2.7	2.4	↓ -12%

Source: Metals Focus, World Gold Council

Gold usage in industrial applications suffered one of the weakest quarters on record as the global cost of living crisis slammed the brakes on consumer spending, translating to sharp inventory reductions across much of the electronics sector. The worst of this should come in the first half of the year before the outlook turns more positive and inventory levels stabilise – particularly if inflationary pressures ease, as some forecasts suggest.<sup>13</sup> The second half may be stronger than H1 – even if the US and other economies enter recession – as new products are launched and manufacturing ramps back up to more normal levels.

## Electronics

**Gold used in electronics experienced another significant fall during Q1, with major declines registered across all sectors of use.** Taking PC and smartphone shipments as examples, analysts at Gartner have forecast<sup>14</sup> declines to continue well into 2023 after a weak 2022. In the absence of meaningful new technology consumers are retaining devices for longer, and manufacturers are passing on inflationary component costs to users, further dampening demand.

<sup>13</sup> Inflation Peaking amid Low Growth (imf.org).

<sup>14</sup> Gartner Forecasts Worldwide Device Shipments to Decline 4% in 2023, January 2023.

<sup>15</sup> Samsung to cut chip production as profits plunge by 96%.

<sup>16</sup> Power amplifier chips are used to amplify the signal transmitted from the phone's antenna to the cell tower, and are critical components of modern mobile phones.

**Demand for Printed Circuit Boards (PCBs) fell rapidly during Q1.** A significant proportion of PCB demand comes from PCs – a segment which has experienced rapid inventory reduction. Healthy demand from the automotive sector has provided some support, but not enough to offset the impact of weakened consumer electronics demand.

**Memory chips, traditionally a steady source of demand, also fell in Q1.** Samsung, one of the world's largest memory chip manufacturers, reported a 96% fall in Q1 profits and, tellingly, reported that they were "...lowering the production of memory chips by a meaningful level, especially [the manufacture] of products with supply secured".<sup>15</sup>

**Gold used in Light Emitting Diodes (LEDs) fell dramatically, almost halving from year-earlier levels.**

Even the relatively buoyant automotive sector was unable to steady the ship, with backlight applications also seeing falls. UV-LED demand has been hit by weakness in consumer electronic sales, and this is likely to continue during H1 as many new product launches have been postponed. In addition, increased uptake of mini-LEDs (which use less gold than traditional LED technology) remains a threat, although this may be slowed by current market weakness.

**The wireless sector was similarly weak during Q1.** This was a direct consequence of the weakening smartphone market – the largest source of demand for power amplifiers,<sup>16</sup> which are currently at high inventory levels like many other chips. Some relatively niche applications (such as 3D imaging, aerospace/satellite and LIDAR) remained steady, but these are as yet a minor component of demand and unable to cushion falls seen in the power amplifier sector.

At the aggregate level the four major global electronics fabrication hubs recorded a y/y fall in gold demand during Q1: Japan (16%), South Korea (29%), US (6%) and Mainland China and Hong Kong SAR (19%).

## Other industrial and dentistry

Other industrial applications (which include gold used in plating as well as decorative items such as gold thread) recorded a smaller but visible y/y decrease of 3% to 12t during Q1, with most countries seeing modest losses. Demand in Italy was down by a notable 5%. In contrast, India saw slight growth as the ongoing post-COVID recovery brought some relief. Dental demand fell 12% y/y to 2t on price-driven substitution from gold to other precious metals.



# Supply

## Total supply rose 1% in Q1 due to record mine production and higher recycling.

- Q1 mine production increased 2% y/y to a record level for the first quarter
- Gold recycling volumes rose by 5% y/y as the gold price increased
- Q1 saw a modest 8t added to the global hedge book owing to higher gold prices.

Tonnes	Q1'22	Q1'23	Y-o-y change	
<b>Total supply</b>	1,165.1	1,174.4	↑	1%
Mine production	843.1	856.0	↑	2%
Net producer hedging	25.9	8.1	↓	-69%
Recycled gold	296.2	310.4	↑	5%

Source: Metals Focus, World Gold Council

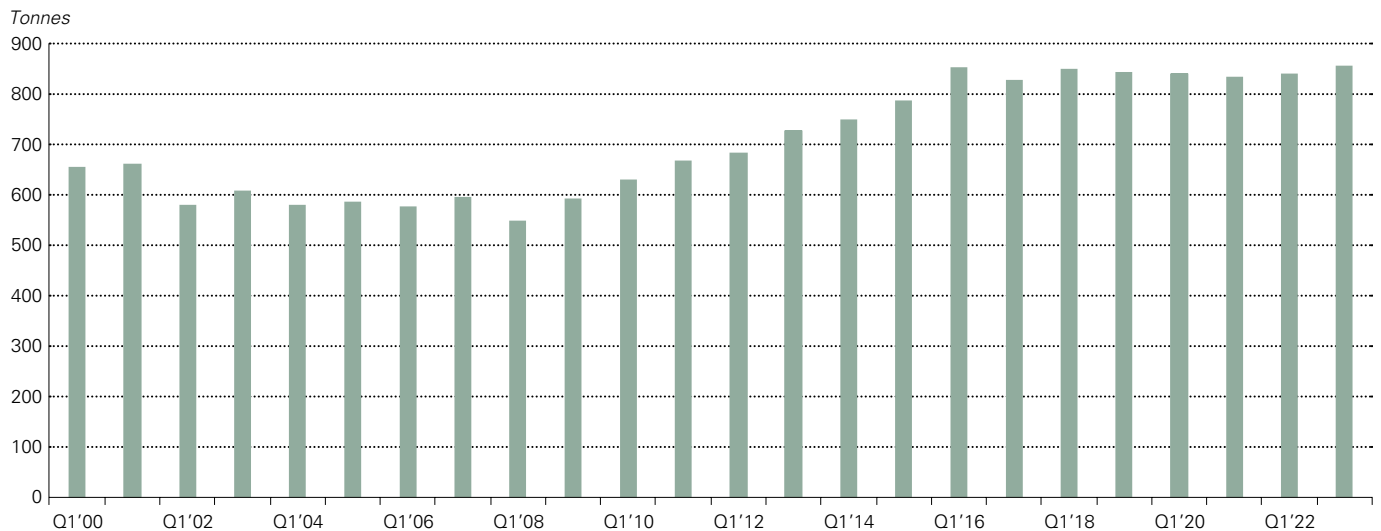
Total gold supply increased by 1% y/y in Q1'23. This was driven by strong mine production of 856t – an all-time Q1 high in our data series, which dates back to 2000 – and higher recycling of 310t. Total supply would have increased further except for smaller y/y additions to the aggregate hedge book, but as usual there is room for substantial revisions in this data-set once mining companies have released their quarterly reports.

## Mine production

Early data suggests that mine production increased 2% y/y to a little more than 856t,<sup>17</sup> narrowly beating the previous first quarter record (a shade under 856t) set in Q1 2016.<sup>18</sup>

On a q/q basis, production fell by 10%, due primarily to seasonal fluctuations: open pit and alluvial operations cut back or stop altogether in some very cold climates, especially in China, Russia and other countries in the former Soviet Union. Meanwhile, South Africa's gold mining industry is subject to reduced output during the long summer holidays over Christmas and the New Year.

## Mine production hit an all-time first-quarter high in Q1-2023\*



\*Data to 31 March 2023. Note: Our quarterly records go back to 2000.

Source: Metals Focus, Refinitiv GFMS, World Gold Council

17 This data may be revised as more data is made available through upcoming company reports.

18 Our data partner, Metals Focus, made relatively large revisions to its gold output estimates for 2022, increasing full-year mine production by 39t to 3,649t. The principle cause of this revision was larger than previously expected production from Russia. While collection of data on Russia's gold market has become much harder since the invasion of Ukraine in Q1'22, available information does indicate mines were much less affected by sanctions than first thought. Following the revision, 2022 full-year mine production was just 9t shy of the 2018 record of 3,658t.

Notable production increases were seen in Q1 in the following countries:

- Mine production more than doubled (+118% y/y) in **Mongolia** as commercial production was declared from underground operations at the vast Oyu Tolgoi copper-gold mine.
- Production increased 13% y/y in **Brazil** due to the ramp-up at the Salobo mine.
- In **South Africa**, mine production increased by 8% y/y despite ongoing electrical power supply disruptions. The major contributors were Kloof and Driefontein, which had higher output compared to strike-disrupted operations in Q1'22.

Mine production in **China** increased by 3% y/y due to a combination of factors. The COVID disruptions experienced during Q1'22 were absent and it appears that output was less disrupted by seasonal factors this year. Ongoing consolidation of the China mining industry is leading to improved operating practices that reduce the impact of harsh winter weather on mining. Despite these supportive factors, consolidation of small producers and tighter environmental standards could generate a slow decline in Chinese mine production over the medium term.

Operations in some countries were hit by a mix of mining, geological and weather factors.

- In **Indonesia**, mine production fell by 19% y/y due to flooding and planned lower grades from Grasberg, the large copper-gold mine.
- In **Senegal**, output was 8% lower y/y as lower grades reduced output from some mines, including Sabadola and Mako.
- **Suriname** saw production fall by 7% y/y on sequencing, harder ore and additional stripping at Merian, much the same reasons for the 6% y/y decline seen from **Mexico** in respect of the Peñasquito Mine.

Regionally, the Central & South American region saw the largest increase, up 4t y/y, due to increases in Brazil noted above. Oceania and the CIS both saw production up 3t y/y due to higher output from Australia and Russia respectively; Other regions were broadly unchanged.

Although it is too early to precisely forecast full-year mine production for 2023, many of the trends evident in the first quarter suggest that production will remain strong. Please see the [Review and Outlook](#) section for more details.

**In 2022, average all-in sustaining costs (AISC) for the gold mining industry reached a record high, rising by 18% y/y to US\$1,276/oz.** This was 14%, or US\$160/oz, above the previous record set in 2012. However, there was some respite for miners in the fourth quarter. In Q4'22, the last data available at the time of writing, the global average AISC fell for the first time in 2022, dropping by 1% q/q to US\$1,279/oz. For more detail and expectations on AISC in Q1'23, please see our [blog](#).

## Net producer hedging

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**The global delta-adjusted producer hedge book fell by 11t in 2022 to 169t.** Confirmed hedging data has led to an adjustment in our annual total for 2022: companies delivered more heavily into positions in the second half of the year as the gold price was generally lower. The increase in the gold price in early 2023 appears to have triggered new hedging activity: our preliminary estimate is for a minimal 8t rise in the industry hedge book, although we expect this estimate to increase once first-quarter company reports have been received.

Most new hedging positions are either opportunistic in the short-term, capitalising on a higher gold price, and small in size, or from companies with project or debt finance requirements.

## Recycled gold

Gold recycling in Q1 rose to 310t (+7% q/q, +5% y/y) – in response to higher gold prices – the strongest first quarter level of recycled supply since 2016. But this was a relatively subdued increase, given the price action and the challenging economic environment for many, and there were pockets of weakness as gold served its purpose as a safe-haven asset.

Although up 5% y/y, we believe the 7% increase q/q is a more important comparison. This is the second consecutive quarterly increase in recycling supply and mirrors the increase in the gold price over this period. In Q1'23 the LBMA PM reference gold price averaged US\$1,890/oz, almost matching the quarterly record of US\$1,909/oz seen in Q3'20.

Despite the increase in recycling, the absolute volume of recycled supply was depressed, primarily due to lower sales from Western markets and the Middle East. Developments in major markets are highlighted below:

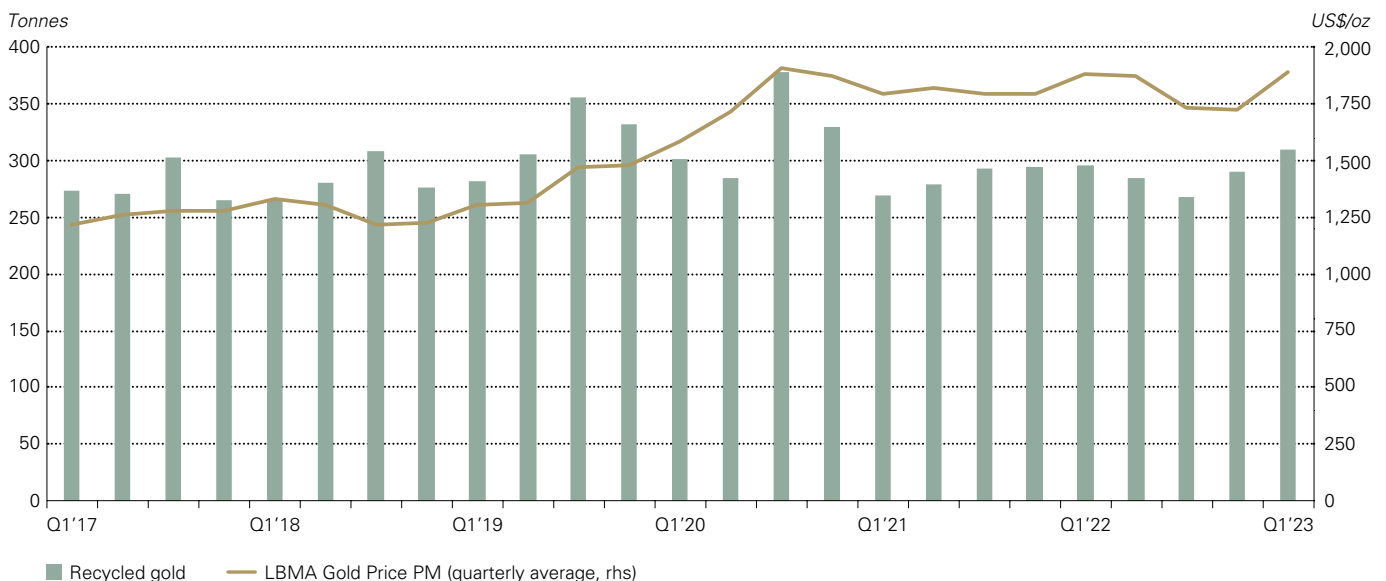
- There are clear signs in Western markets of depletion of near-market stocks, especially in the US and, to a lesser extent, in Europe where a considerable amount of 18 carat gold jewellery remains in the hands of Southern European consumers

- In the Middle East, ongoing political and economic turmoil has dampened sales compared with what might have been expected, as gold is seen as an asset to hold in the face of high inflation, weak currencies and heightened geopolitical risk.
- Chinese recycling volumes were lower q/q, mainly due to the normal surge of retailer supply towards the end of the calendar year: this is a market where q/q comparisons are less useful. Excluding China from the global total would have resulted in a 14% increase q/q, demonstrating the importance of China in global recycling totals
- India saw higher q/q and y/y recycling volumes, understandably so given the price sensitivity in this market. As well as consumer sales, finance companies liquidated gold holdings during the quarter. We believe this represents a mixture of defaulted loans, where gold was used as collateral, and opportunistic sales from the finance companies that viewed the gold price as high.

Notwithstanding relatively low quantities of recycled gold supply globally, it is worth reiterating that higher gold prices, especially in local currency terms, prompted additional flows of metal in most markets. And while there were few references to distress-selling, some markets were affected, notably certain Middle Eastern countries and India.

Barring a sharp rise in the gold price in 2023 we believe recycling supply could rise modestly over the year. For more details, please see the [Outlook section](#).

## Gold recycling activities rose as the gold price climbed\*



\*Data to 31 March 2023.

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

# Notes and definitions

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## Notes

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### Revisions to data

All data is subject to revision in the light of new information.

### Historical data series

Demand and supply data from Q1 2014 are provided by Metals Focus. Data between Q1 2010 and Q4 2013 is a synthesis of Metals Focus and GFMS, Thomson Reuters data, which was created using relatively simple statistical techniques. For more information on this process, please see [\*Creating a consistent data series\* by Dr James Abdey](#).

## Definitions

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### Bars

Net investment (i.e. gross purchases less gross sales) in small gold bars (1kg and below) sold at the retail level. Where identifiable, this also includes gold bought and stored via online vendors.

### Central banks

Net purchases (i.e. gross purchases less gross sales) by central banks and other official sector institutions, including supra national entities such as the IMF. Swaps and the effects of delta hedging are excluded.

### Comex net long positioning

The Commodity Futures Trading Commission (CFTC) publishes a weekly [Commitment of Traders \(COT\)](#) report that provides information on the positioning of speculative investors in the U.S. futures markets. The report gives the aggregate positions held by traders from the previous Tuesday, including the number of long contracts (that stand to benefit if prices rise) and short contracts (that benefit if they fall). The report is often used as an indicator of market sentiment regarding the price of gold: short positioning reflects bearish sentiment while long positioning reflects bullish sentiment in the gold futures' markets.

### Consumer demand

The sum of jewellery consumption and total bar and coin investment occurring within a country i.e. the amount (in fine weight) of gold purchased directly by individuals. Technology demand is not included at the individual country level, as it is measured at the point of fabrication rather than at the point of consumption.

### Electronics

The volume of gold bullion or grain fabricated into components used in the production of electronics, including – but not limited to – semiconductors and bonding wire.

### Dentistry

The volume of gold bullion or grain fabricated into products destined for dental applications such as dental alloys.

### Gold-backed Exchange-Traded Funds (ETFs) and similar

The volume of gold held in physical form by open-ended Exchange Traded Funds (ETFs) and other products such as close-end funds, and mutual funds. Most funds included in this list are fully backed by physical gold. While several funds allow other holdings such as cash, derivatives or other precious metals, we monitor only those funds investing at least 90% in physical gold and appropriately adjust their reported assets to estimate physical holdings only. For funds that include physical holdings of multiple precious metals, the total AUM depicted for such funds is lower than their actual total AUM. Over time, the data set will adapt to most accurately represent the universe of active funds. For a comprehensive list of the funds we track or to subscribe to our monthly update on gold-backed ETF holdings, visit [/goldhub/data/global-gold-backed-etf-holdings-and-flows](#)

### Fabrication

Fabrication is the first transformation of gold bullion into a semi-finished or finished product.

### Gold bullion

Gold, in bar form, refined to a purity of at least 99.5%.

### Gold demand

The total of jewellery fabrication, technology fabrication, investment and net purchases by central banks.

### Jewellery consumption

End-user (consumer) demand for all newly-made carat jewellery sold at the retail level, by volume of fine gold. Measured on a gross basis (i.e. includes recycled gold). Excludes: purchases funded by the trading-in of existing carat gold jewellery (gold-for-gold exchange); and purchases of second-hand jewellery, other metals plated with gold, and coins and bars used as jewellery. At the global level, it is measured as jewellery fabrication adjusted for changes in inventories held by the trade. At the country level, it is jewellery fabrication adjusted for changes in trade stocks plus imports, less exports.

# Notes and definitions

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## **Jewellery fabrication**

Jewellery fabrication is the first transformation of gold bullion into semi-finished or finished jewellery. This differs from jewellery consumption as it excludes stock building/de-stocking by manufacturers and distributors. At the individual country level, it also excludes imports or exports.

## **Jewellery inventory**

Changes to the level of jewellery stocks along the jewellery distribution chain, this is the difference between gold fabrication and gold consumption. A negative figure represents a draw-down of stocks when consumption exceeds fabrication. A positive figure represents a build-up of stocks.

## **LBMA Gold price PM**

Unless otherwise specified, gold price values from 20 March 2015 are based on the LBMA Gold price PM administered by ICE Benchmark Administration (IBA), with prior values being based on the London PM Fix. For more information, see [www.gold.org/goldhub/research/market-primer/gold-prices](http://www.gold.org/goldhub/research/market-primer/gold-prices)

## **Medals/imitation coins**

Fabrication of gold coins without a face value, produced by both private and official/national mints. India dominates this category with, on average, around 75% of the total. 'Medallion' is the name given to unofficial coins in India. Medals of at least 99% purity are also included.

## **Mine production**

The volume (in fine weight) of gold mined globally. This includes an estimate for gold produced by artisanal and small-scale gold mining (ASGM), which is largely informal. For more information, refer to: [www.gold.org/goldhub/research/market-primer/mine-production](http://www.gold.org/goldhub/research/market-primer/mine-production)

## **Net producer hedging**

The net impact in the physical market of mining companies' gold forward sales, loans and options positions. Hedging transactions – which release gold to the market from existing above-ground stocks – accelerates the sale of gold. De-hedging – the process of closing out hedged positions – has the opposite impact and will reduce the amount of gold available to the market in any given quarter. Over time, hedging activity does not generate a net change in the supply of gold. For more information, refer to: [www.gold.org/goldhub/research/market-primer/mine-production](http://www.gold.org/goldhub/research/market-primer/mine-production)

## **Official coins**

Net investment in gold bullion coins (i.e. gross purchases less gross sales) at the retail level. It is equal to the volume of fine gold in coins fabricated by official/national mints which are, or have been, legal tender in the country of issue. It is measured at the country of consumption rather than at the country of origin (for example, the Perth Mint in Australia, sells most of the coins it produces through its global distribution network). In practice it includes the initial sale of many coins destined ultimately to be considered as numismatic rather than bullion.

## **OTC and other**

This number captures demand in the OTC market (for which data is not readily available), changes to inventories on commodity exchanges, any unobserved changes in fabrication inventories and any statistical residual. It is the difference between total supply and gold demand.

## **Other industrial**

Gold used in the production of compounds, such as Gold Potassium Cyanide, for electro-plating in industrial applications as well as in the production of gold-plated jewellery and other decorative items such as gold thread. India accounts for the bulk of demand in this category.

## **Over-the-counter (OTC)**

Over-the-counter (OTC) transactions (also referred to as 'off exchange' trading) take place directly between two parties, unlike exchange trading which is conducted via an exchange.

## **Recycled gold**

Gold recovered from fabricated products, including unused trade stocks, which is refined back into bullion. This specifically refers to gold sold for cash. It does not include gold traded-in for other gold products (for example, by consumers at jewellery stores) or process scrap (scrap generated during manufacturing, which never becomes part of a fabricated product but instead returns as scrap to a refiner). For more information, refer to [www.gold.org/goldhub/research/market-primer/recycling](http://www.gold.org/goldhub/research/market-primer/recycling)

## **Technology**

This captures all gold used in the fabrication of electronics, dental, medical, decorative and other technological applications, with electronics representing the largest component of this category. It includes gold destined for plating jewellery.

# Notes and definitions

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**Tonne (Metric)**

1,000 kg or 32,151 troy oz of fine gold.

**Total bar and coin**

Total net investment in gold bars, coins and medals/imitation coins.

**Total supply**

The total of mine production, net producer hedging and recycling.

**Year-to-date (y-t-d)**

In Gold Demand Trends, year-to-date refers to the period to the end of the quarter being reviewed (i.e. for Gold Demand Trends Q2 2017, 'year-to-date' referred to the period from 31/12/2016 to 30/06/2017).

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## About the World Gold Council

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We're the global experts on gold.

Leveraging our broad knowledge and experience, we work to improve understanding of the gold market and underscore gold's value to individuals, investors, and the world at large.

Collaboration is the cornerstone of our approach. We're an association whose members are the world's most forward-thinking gold mining companies. Combining the insights of our members and other industry partners, we seek to unlock gold's evolving role as a catalyst for advancements that meet societal needs.

We develop standards, expand access to gold, and tackle barriers to adoption to stimulate demand and support a vibrant and sustainable future for the gold market. From our offices in Beijing, London, Mumbai, New York, Shanghai, and Singapore, we deliver positive impact worldwide.

### World Gold Council

7th Floor, 15 Fetter Lane  
London EC4A 1BW  
United Kingdom

**T** +44 20 7826 4700

**F** +44 20 7826 4799

**W** [www.gold.org](http://www.gold.org)

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## Research

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### Louise Street

[louise.street@gold.org](mailto:louise.street@gold.org)

### Krishan Gopaul

[krishan.gopaul@gold.org](mailto:krishan.gopaul@gold.org)

### Ray Jia

[ray.jia@gold.org](mailto:ray.jia@gold.org)

### Jeremy De Pessemier, CFA

[jeremy.depessemier@gold.org](mailto:jeremy.depessemier@gold.org)

### Juan Carlos Artigas

Global Head of Research

[juancarlos.artigas@gold.org](mailto:juancarlos.artigas@gold.org)

### Johan Palmberg

[johan.palmberg@gold.org](mailto:johan.palmberg@gold.org)

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## Further information

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For data sets and methodology visit:

**[www.gold.org/goldhub/data/gold-supply-and-demand-statistics](http://www.gold.org/goldhub/data/gold-supply-and-demand-statistics)**

Or contact:

**[research@gold.org](mailto:research@gold.org)**

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## Market Strategy

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### Joseph Cavatoni

Market Strategist,  
North America

[joseph.cavatoni@gold.org](mailto:joseph.cavatoni@gold.org)

### John Reade

Market Strategist,  
EMEA and APAC

[john.ream@gold.org](mailto:john.ream@gold.org)

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