GFMS Gold Survey 2019

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GFMS GOLD SURVEY 2019

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GFMS GOLD SURVEY 2019

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ACKNOWLEDGEMENTS

The estimates shown in the GFMS Gold Survey for the main components of mine production, scrap, fabrication and investment demand are calculated on the basis of a detailed supply/demand analysis for each of the markets listed in the main tables. In the vast majority of cases, the information used in these analyses has been derived from visits to the countries concerned and discussions with local traders, producers, refiners, fabricators and central bankers. Although we also make use of public domain data where this is relevant, it is the information provided by our contacts which ultimately makes this GFMS Gold Survey unique. We are grateful to all of them.

NOTES

UNITS USED

troy ounce (oz) =	31.1035 grammes
tonne =	1 metric tonne, 32,151 troy ounces
carat =	gold purity in parts per 24

- Unless otherwise stated, U.S. dollar prices and their equivalents are for the LBMA Gold Price PM.
- Unless otherwise stated, all statistics on gold supply and demand are expressed in terms of fine gold content.
- Throughout the tables, totals may not add due to independent rounding.

TERMINOLOGY

"-"	Not available or not applicable.
"0.0"	Zero or less than 0.05.
"dollar", "$"	U.S. dollar unless otherwise stated.
"Identifiable Investment"	The sum of physical bar investment and all coin fabrication, plus the net change in Exchange Traded Fund (ETF) holdings.
"Jewellery Consumption"	Fine gold content of all new jewellery (i.e. does not include exchanged or second-hand pieces) sold at the retail level. It is calculated as being equal to jewellery fabrication, plus imports less exports (i.e. the net inflow of jewellery). An adjustment is also made for retail stock movements.
"Physical Surplus/ Deficit"	The difference between the supply of new and secondary gold to the market in a calendar year and measurable demand for physical gold. This excludes opaque Over the Counter (OTC) investment in gold and commercial bank transactions.
"Net Balance"	The physical surplus or deficit of gold with the addition of highly visible ETF and exchange stock inventory changes.
"Retail Investment"	Identifiable net investment in physical gold in bar and coin form. The bars may or may not conform to 'London Good Delivery' status but will be in a form that is commonly traded in the country of origin. Coins include all official and unofficial coins and medallions, with and without a face value.

1. SUMMARY AND OUTLOOK

Going by the phrase, a lot can happen in a year, well then, 2018 certainly is best termed under that description, with volatile political and economic activity throughout the year resulting in the CBOE Volatility Index (VIX) jumping to its highest level in February 2018 since August 2015 and rebounding from its lowest level on record in 2017. Having said this however, gold on an annual average basis, while marking its third year of increases, only rose by a mere 0.9% last year (similar to the gold price move in 2017 which rose by 0.5%). This is the second year in which gold's price move has been somewhat of an anomaly, with the rest of the decade recording value moves (whether higher or lower) of 5% or typically double-digits. While an overview of supply and demand fundamentals is best addressed over-leaf, last year the gold market recorded a modest decline in physical demand led by falls in both jewellery and retail demand which was unable to offset an increase in mine production, leaving a net balance of 485 tonnes, its highest level since 2003.

While last year started off on an optimistic note, with positive economic projections from the World Bank, over the year, the majority of economies (with the exception of the United States) ended the year in a worse off position (with China being a key example, as GDP growth for the country fell to its lowest level in 28 years). Meanwhile, rising inflation in the United States, which pushed up Treasury yields to their highest levels since end-2013, resulted in the Federal Reserve (Fed) introducing a further four interest rate rises throughout the year, with the U.S. dollar jumping by 4% intra-year. While these conditions played out negatively for gold, further afield, a higher U.S. dollar punished Emerging Markets (EM) currencies, wiping out investors desire for risk-off assets. Further exaggerating this theme, an acceleration in protectionism ideology resulted in the United States implementing sanctions on several EM countries (such as Turkey, sending the country into recession); while global concerns regarding escalating (and still unresolved) trade tariff wars with China damaged exports globally. By end-year, a downbeat global economic outlook, in conjunction with fraught internal politics across Europe and South America boosted the desire to hold gold as a means of diversification, with central banks (particularly EM central banks), increasing their gold holdings in order to decrease their dependence on the U.S. dollar.

WORLD GOLD SUPPLY AND DEMAND

(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Supply										
Mine Production	2,651	2,771	2,868	2,882	3,076	3,180	3,222	3,252	3,259	3,332
Scrap	1,765	1,743	1,698	1,700	1,303	1,159	1,180	1,306	1,210	1,178
Net Hedging Supply	-234	-106	18	-40	-39	108	21	32	-41	8
Total Supply	**4,182**	**4,407**	**4,584**	**4,543**	**4,340**	**4,446**	**4,422**	**4,590**	**4,428**	**4,518**
Demand										
Jewellery	1,879	2,096	2,109	2,075	2,737	2,569	2,474	1,962	2,222	2,129
Industrial Fabrication	426	480	470	432	428	411	376	366	380	391
...of which Electronics	295	346	342	310	306	297	267	264	277	288
...of which Dental & Medical	53	48	43	39	36	34	32	30	29	29
...of which Other Industrial	79	86	85	84	85	80	76	71	73	74
Net Official Sector	-34	77	457	544	409	466	443	253	366	536
Retail Investment	866	1,263	1,617	1,407	1,871	1,165	1,172	1,051	1,031	1,097
...of which Bars	562	946	1,248	1,057	1,444	886	875	785	771	800
...of which Coins	304	317	369	350	426	279	296	266	261	297
Physical Demand	**3,138**	**3,915**	**4,652**	**4,458**	**5,445**	**4,611**	**4,464**	**3,631**	**3,999**	**4,154**
Physical Surplus/Deficit	**1,044**	**492**	**-69**	**85**	**-1,105**	**-164**	**-42**	**959**	**429**	**365**
ETP Inventory Build	623	384	189	279	-879	-155	-117	539	177	59
Exchange Inventory Build	39	54	-6	-10	-98	1	-48	86	0	-21
Net Balance*	**382**	**54**	**-251**	**-185**	**-129**	**-10**	**124**	**334**	**252**	**327**
Gold Price, $ per oz.	**972.35**	**1,224.52**	**1,571.69**	**1,668.98**	**1,411.23**	**1,266.40**	**1,160.06**	**1,250.80**	**1,257.15**	**1,268.49**

Source: GFMS, Refinitiv
Totals may not add due to independent rounding. Net producer hedging is the change in the physical market impact of mining companies' gold loans, forwards and options positions.

SUPPLY IN 2018

— **Mine production grew 2% in 2018 to a total of 3,332 tonnes, fuelled by a considerable production increase in Indonesia and the United States.**
— **Total cash costs rose by 5% to $696/oz, while all-in sustaining costs increased by 4% to $897/oz.**
— **Global scrap supply fell 3% in 2018 to 1,178 tonnes, a three-year low, as weak price action limited recycling.**

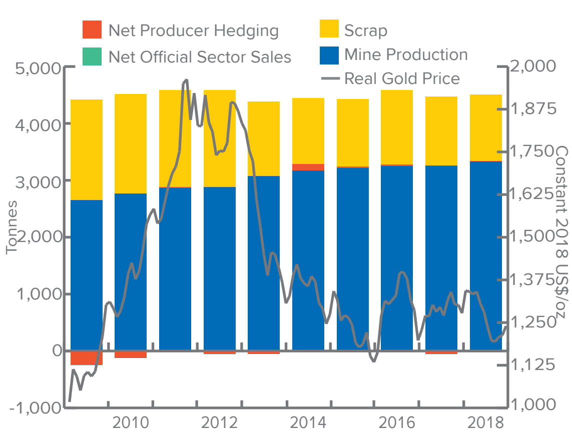
Global **mine production** rose by 2% in 2018 to 3,332 tonnes, due in part to higher grades and throughput at Indonesia's Grasberg and full-year operation at Canada's Rainy River and Brucejack mines. Substantial output increases were also posted at Mali's Fekola mine and DRC's Kibali mine, after an intensive ramping-up of their operations. On the other hand, lower grades at Veladero and Peñasquito mines and lower throughput at Lagunas Norte produced a combined loss of 16 tonnes. While remaining the largest gold producer, China's efforts to reduce the mining industry environmental impact pushed production down by a further 6% in 2018. At a regional level, North America's gold production increased 7% or 35 tonnes from 2017, while Africa's output contracted by 11% or 17 tonnes, the biggest annual decrease since 2012.

Mining costs rose once again last year on a **Total Cash Cost** (TCC) basis by 5% to an average of $696/oz, while All-In-Sustaining Costs (AISC) increased by 4% to $897/oz. Higher fuel costs and lower grades were the main reason behind the cost rise, partially offset by a significant currency depreciation in Australia, Argentina and Indonesia, among other producing countries. South Africa continues to be the most affected by a rise in mining costs, as electrical power disruptions and lower output pushed TCC forward by 10% to $1,107/oz and AISC by 12% to $1,335/oz.

The **global producer hedge book** increased by 4% year-on-year to total 219 tonnes. The strength of the U.S. dollar during most of the year pushed local gold prices in Australia and Canada to record-high levels, which many companies secured through forward contracts, especially during Q4 2018. The top three net-hedgers were Gold Fields, Newcrest and Westgold, incorporating a combined 29 tonnes to the hedge book, while de-hedging was led by Russian companies, as Polyus exercised 15 tonnes of barrier options and Petropavlovsk delivered 6 tonnes in forwards.

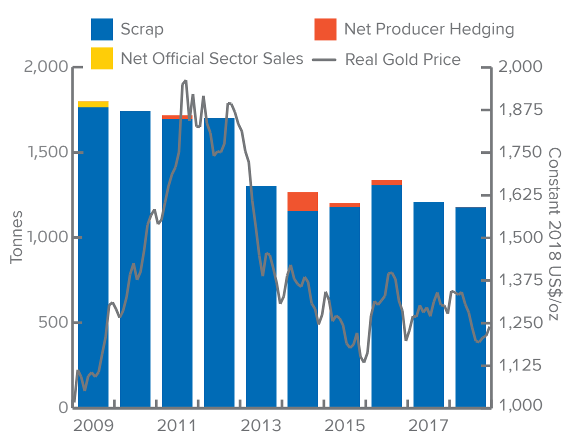
Global **scrap supply** declined for the second year in succession in 2018, slipping 3% to 1,178 tonnes as a broadly stable U.S. dollar gold price failed to illicit higher recycling rates. The Asian markets dominate supply at almost 55% of the total, with this grouping recording a 4% annual fall last year, despite a material rise in India. Japanese scrap flows fell sharply following a government crackdown on smuggled gold, with recycling volumes slumping by almost a third. Elsewhere, a stronger economic footing helped drive recycling volumes lower in North America, while in Europe, scrap flows rose by 2%, primarily as a result of the surge in Turkish scrap volumes following the collapse of the lira that propelled domestic gold prices sharply higher encouraging profit taking.

WORLD GOLD SUPPLY



Source: GFMS, Refinitiv

SUPPLY FROM ABOVE-GROUND STOCKS



Source: GFMS, Refinitiv

DEMAND IN 2018

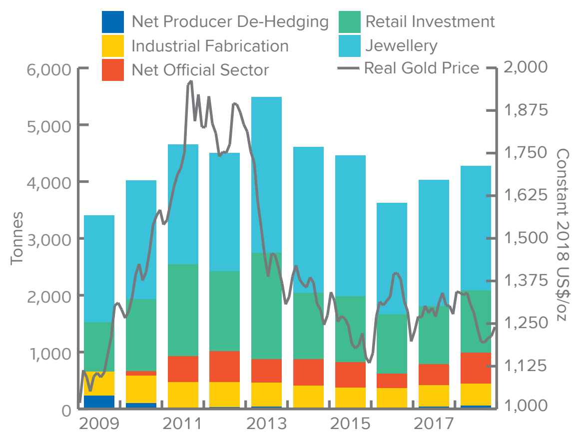
- **Jewellery fabrication declined 4% year-on-year to 2,129 tonnes, with healthy gains from North America offset by falls across Europe and Asia.**
- **Gold used in industrial fabrication saw a modest increase in 2018, rising 3% to a four-year high 391 tonnes, helped higher by a robust electronics segment which enjoyed a 4% annual rise on the back of strong growth in the semi-conductor market.**
- **Total physical demand rose 4% in 2018, with a stronger official sector coupled with gains in industrial demand and retail investment, offset by a contraction in jewellery fabrication.**
- **Net official sector purchases reached their second highest level this century, standing at 536 tonnes in 2018 on the back continued and fresh acquisitions from Emerging Markets (EM).**

Total **physical gold demand** increased by 4% in 2018, after a double-digit rise the previous year. Jewellery fabrication retreated, slipping 4% on an annual basis as gains in North America were offset by falls in Europe and the Middle East, with offtake in Asia sliding 5% year-on-year as a double-digit decline in Indian fabrication dragged the total lower. Meanwhile, gold demand for retail investment rose 6% last year, driven higher by a rise in both investment bar and coin fabrication, while demand from the official sector surged in the final quarter of the year to reach net purchases of 536 tonnes, a 47% annual rise and the highest level since 2012. Elsewhere, industrial demand recorded its second consecutive annual increase, gaining 3% over 2017 volumes, helped by continued growth from the electronics sector, which hit a four year high of 288 tonnes.

Global **jewellery fabrication** edged 4% lower in 2018 to an estimated 2,129 tonnes. Weakness across Europe, following turbulent internal politics and cooling trade, saw fabrication demand across the region slide 6% year-on-year to a record low, driven lower by a precipitous decline in Turkey following the collapse of the local currency, and a fall in Italian offtake. Counterbalancing this weakness was a strong performance from North American fabrication which jumped by an impressive 8% in light of a stronger dollar and improving economy, with demand from the United States 10% stronger on a year-on-year basis.

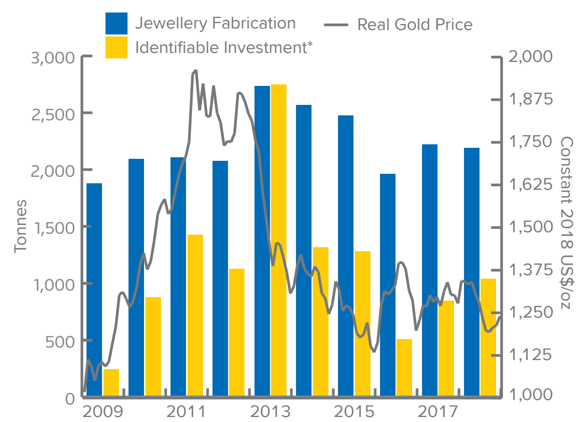
Meanwhile **fabrication demand** in Asia, which as a bloc dominates demand at over 80% of the global total, was weaker last year retreating 5% from 2017 volumes. Chinese jewellery fabrication returned to growth for the first time since 2013, rising 2% to 688 tonnes, with demand boosted by the market's preference for a return to pure gold items. Falling short of China in terms of overall tonnage, and following a surge in growth in 2017, Indian fabrication demand retreated 12% on an annual basis, reaching an estimated 632 tonnes. Demand in the Middle East was weak with some markets in the region severely impacted by the introduced Goods and Services Tax (GST) in the UAE.

WORLD GOLD DEMAND



Source: GFMS, Refinitiv

JEWELLERY FABRICATION AND IDENTIFIABLE INVESTMENT



* Identifiable Investment is the sum of physical bar investment, official coins, medals & imitation coins and net ETF inventory build.

Source: GFMS, Refinitiv

Gold used in **industrial applications** rose 3% in 2018, the second consecutive annual rise, to 391 tonnes, helped higher primarily by continued growth from the electronics sector, which hit a four year high of 288 tonnes last year. However, demand was tempered in the final months of 2018 as a result of the United States-China trade dispute and the uncertainly that it created across the supply chain. Demand for gold used in other **industrial** and **decorative** applications edged 1% higher, while **dental** demand continued the long term down trend, slipping 2%.

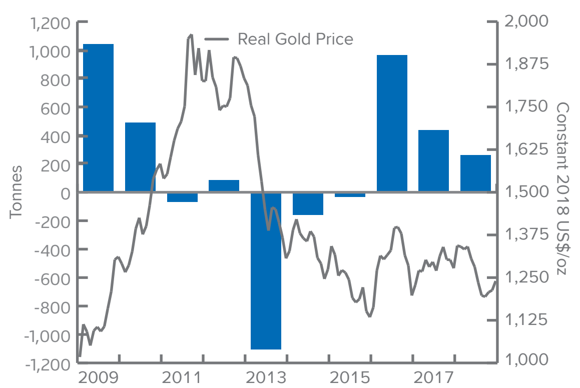
Net official sector purchases continued to increase in 2018, marking the ninth consecutive year of purchasing at a strong level, with activity rising by 46% or 274 tonnes to 536 tonnes, marking the second highest level of demand this century. While Russia continued its seventh consecutive year as the largest gold acquirer, buying 274 tonnes of gold in 2018, second place was split between Kazakhstan and Turkey which each bought 51 tonnes of gold. While Kazakhstan and other CIS countries remained key players increasing their gold reserves last year, the introduction of demand from other EM countries (which previously had recorded muted or zero transactions this century, such as India), supported this positive result. Alongside purchases (with gross sales levels remaining unimpressive), another key theme last year was ongoing gold repatriation, with countries such as Hungary and Turkey keen to hold their gold on home soil. Total **identifiable investment**, which includes physical bar and coin investment plus ETP movements, posted a 19% decline, to 982 tonnes, its lowest level since 2007, with a surge in coin demand of 14% unable to offset the weakness in physical bar demand. Meanwhile, ETPs inflows were 67% lower than in 2017, recording 59 tonnes last year.

PRICE AND MARKET OUTLOOK

By 19th February this year, the gold price had increased by $10/oz to $1,341/oz, its highest level since April 2018 (although prices have retreated since then falling back below $1,300/oz). Behind this surge, was a return of positive investor sentiment towards the metal, with ETPs recording their highest level of inflows since April 2013 by 30th January, while net managed positions jumped by 71 tonnes (at the time of writing), driven by a rise in gross long positions (after a short covering rally took gross short positions to their lowest level since June 2018 by January). We forecast that supply will outpace physical demand again this year, leaving the market in its fourth year of surplus at 250 tonnes. However, on a growth basis, while supply is expected to modestly contract (on the back of falling mine production), physical demand growth is forecast to be boosted by 6%, driven by a significant lift in retail investment, while jewellery and industrial demand will also pick up. Given the recent downgrade in economic growth, unemployment and inflation data coming out of the United States (limiting the upwards momentum in the U.S. dollar), the Fed announced in March that it will leave interest rates unchanged this year (a move away from the estimated two rate rises previously expected). While this is positive for gold, further supportive factors may arise from a possible equity market correction, as the health of emerging market and developed countries are questioned, particularly in light of the ongoing and unresolved trade tariff war between the United States and China.

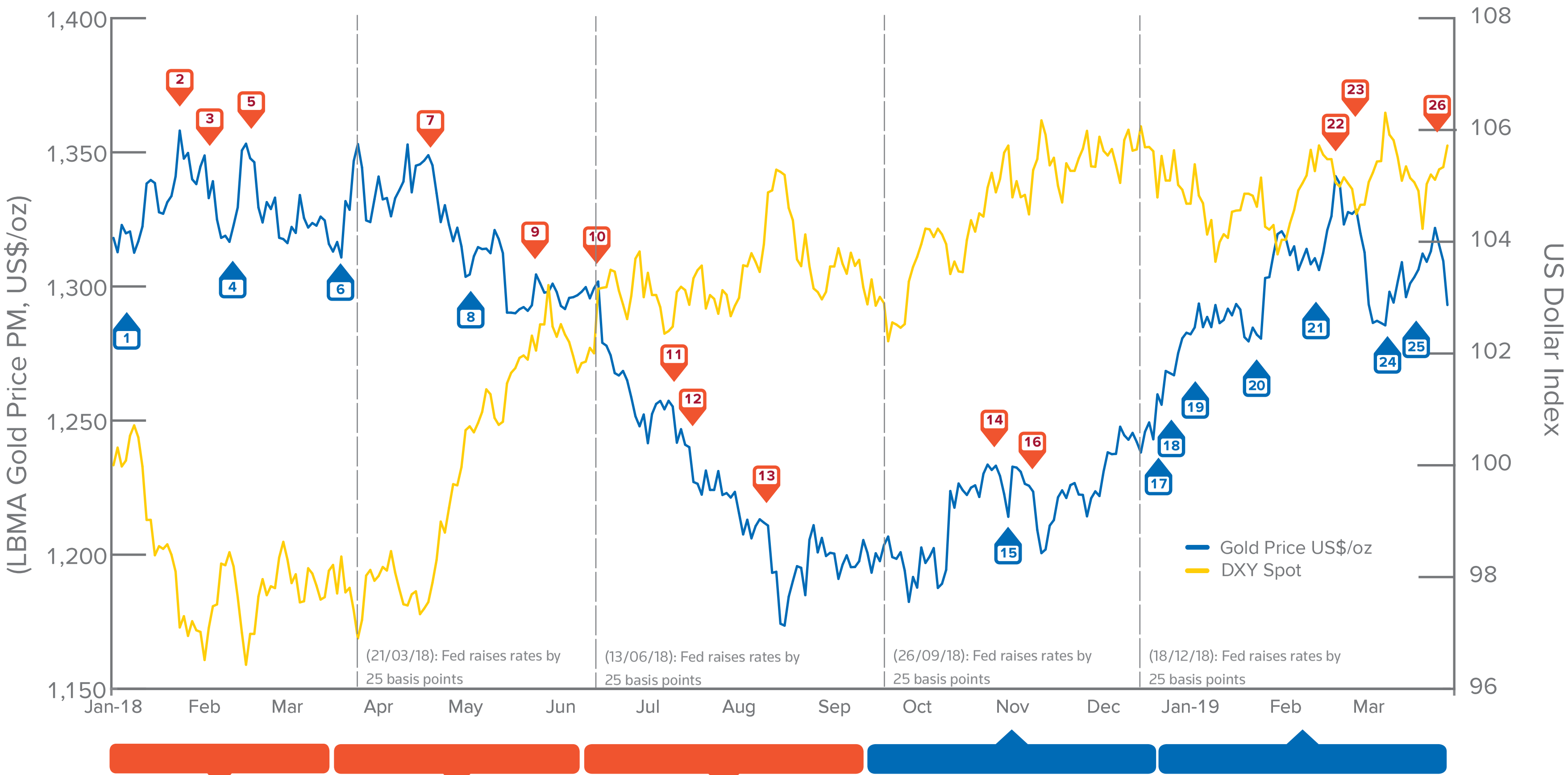
On a regional basis, major economies such as China and indeed Europe will continue to face uncertain growth this year, specifically in the face of Brexit and indeed Europe's general elections in May (in which Italy could crash out of the EU leading to possible contagion across the bloc). We believe central banks will continue to build their gold holdings at a robust pace this year in order to diversify their assets, while higher gold prices will boost scrap levels coming back from the market (to levels last recorded in 2016).

GOLD; PHYSICAL SURPLUS / DEFICIT



Source: GFMS, Refinitiv

GOLD PRICE & US DOLLAR INDEX - DAILY



Source: GFMS, Refinitiv

1 (01/02/2018): Bitcoin prices drop, wiping over $40 bn in value.

2 (05/02/2018): Jerome Powell is sworn in as new Federal Reserve Chairman

3 (06/02/2018): U.S. wage growth triggers market concerns. Investors unwind short volatility positions; VIX surges

4 (14/02/2018): Jacob Zuma resigns as President of South Africa

5 (24/02/2018): President Trump stated the U.S. will extend tariff hikes on Chinese imports.

6 (18/03/2018): Vladimir Putin is re-elected for a fourth term

7 (26/04/2018): Kim Jong Un crosses the border into South Korea, after years of escalating tensions

8 (08/05/2018): PresidentTrump backs out of Iran's nuclear deal

9 (31/05/2018): U.S. levies tariffs on Canada, EU and Mexico, while announces taxes on steel and aluminium imports of 21% and 10%, respectively

10 (12/06/2018): Kim Jong Un announces plan to denuclearize North Korea

11 (06/07/2018): U.S. tariffs on Chinese goods come into effect.

12 (17/07/2018): The EU and Japan sign a free-trade agreement

13 (07/08/2018): The U.S. renewed sanctions on Iran

14 (22/10/2018): Moody's Analytics Survey for Business Confidence posts higher confidence in the market

(04/11/2018): U.S. imposes crude oil sanctions on Iran's oil exports

15 (25/11/2018): EU approves Brexit bill

16 (01/12/2018): Trade war tensions ease after a truce is promised between U.S. and China at the Buenos Aires G20 Summit

17 (21/12/2018): S&P drops 2.1% and Dow drops 500 points in 1 week after Fed's rate hike

18 (22/12/2018): U.S. sees the largest government shutdown in history

19 (02/01/2019): Barrick - Randolg merger is complete

20 (14/01/2019): Newmont signed an agreement to acquire Goldcorp

21 (12/02/2019): North Korea-United States Summit in Vietnam

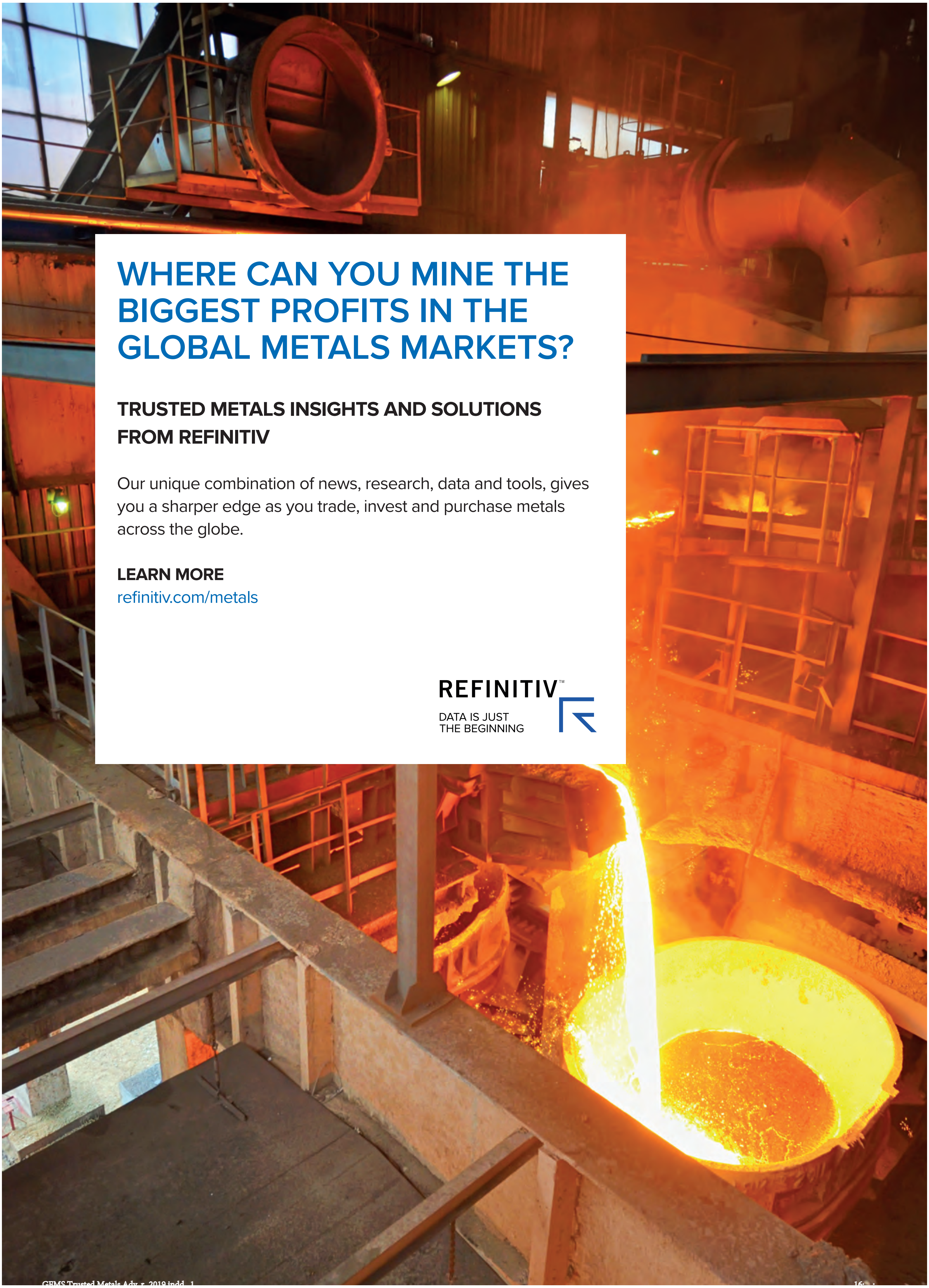
22 (20/02/2019): Barrick announces bid for Newmont

23 (26/02/2019): UK Prime Minister Theresa May pleads in Parliament to delay departure from the EU if no deal has been reached by mid-March

24 (11/03/2019): Barrick and Newmont signed an agreement for a Joint Venture on Nevada complex

25 (20/03/2019): Fed cuts growth expectation for the U.S economy

26 (27/03/2019): No consensus is reached over Brexit in the British Parliament, postponing Brexit date to April 12th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2. INVESTMENT

- **Total identifiable investment, which includes physical bar investment, all coin fabrication and ETP inventory build, posted a 4% annual decrease in 2018, to 1,155 tonnes. This was the lowest global identifiable investment figure 2015. Measured in value terms, total identifiable investment fell by 4% to $47 bn.**

- **Demand for physical bars rose 4%, or 29 tonnes year-on-year. Demand from the North American region continued to see a more substantial decline, due to the solid performance of the U.S. equities market. Increased bar demand from Asia, Europe and the Middle East region were sufficient to offset the decline from the American continent.**

- **Official gold coin fabrication increased by 17%, or 33 tonnes to 224 tonnes in 2018. It was at its highest level since 2016, with Asia contributing to the bulk of the growth, by increasing 68%, or 22 tonnes year-on-year. Asia's fabrication volume was also at the highest level since 2013.**

- **ETP inventory recorded another year of positive additions in 2018, though the rise was modest. 59 tonnes of gold were added into the ETPs, which represented a 3% year-on-year growth. The 2,300 tonnes inventory level was still 14% lower than the 2,700 tonnes level reached in 2016, which was the historical high.**

- **Investor activity on COMEX continued to rise last year, increasing by 10% with full year trading volume representing 249,794 tonnes of gold equivalent. The increase in turnover demonstrated COMEX' dominance in global commodity exchanges.**

OVERVIEW

The attractive return generated from the U.S. equities market, along with concerns over the global trade front, supported the U.S. dollar strength throughout most of 2018, which in turn put downward pressure on metals, including gold. Investors in the North American region were getting out of gold (demand for ETPs, physical bars and coins all recorded double-digit declines) last year, and a pick up in demand from other regions was not enough to compensate for the fall. Despite the U.S. Fed becoming more dovish this year, stating that the interest rates will be left intact at the current level in 2019, the dollar index has remained strong. Along with a rebound in the economy, a strong U.S. dollar has been a reflection of the weakness in both the euro and the pound, as the European economy is losing steam and the central banks are ready for more stimulus. The lack of concrete progress in the Brexit talks has put further pressure on the euro and the British pound. Looking forward, we expect global investment in gold to continue to rise in 2019 on concerns over a worsening global economic and political climate, but the strength in the U.S. dollar will limit any substantial upside in the gold price, hindering investment interest. However, there is a good chance that the Fed may actually cut interest rates towards the end of 2019 to stimulate the economy, and the market may turn more positive towards gold as this anticipation increases.

IDENTIFIABLE INVESTMENT*

(tonnes)	2014	2015	2016	2017	2018
Retail Investment	1,165	1,172	1,051	1,031	1,097
of which bars	886	875	785	771	800
of which coins*	279	296	266	261	297
ETP Inventory Build	-155	-117	539	177	59
Total Identifiable Investment	**1,010**	**1,055**	**1,590**	**1,209**	**1,155**
Indicative Value US$ (bn) **	**41**	**39**	**64**	**49**	**47**

Excludes activity in the futures and OTC markets.
*Official Coins and Medals & Imitation Coins.
**Indicative value calculated on an annual basis using annual average LBMA Gold Price PM.
Source: GFMS, Refinitiv

ACTIVITY ON COMMODITY EXCHANGES

Total futures trading volumes on **COMEX** rose by 10% in 2018, to 249,794 tonnes equivalent. COMEX has continued to demonstrate its dominance in the gold futures market among global commodity exchanges, with its market share increasing from 83% in 2017 to 86% in 2018. In addition to its high liquidity and transparency, COMEX is also attractive to many overseas traders, who simply want to bet on the direction of the gold price without the influence of domestic currency fluctuations, or to act as a hedge on the difference between the U.S. dollar gold price and the price in domestic terms.

GOLD TRADED ON COMMODITY EXCHANGES

(total volume in nominal tonne equivalents)

	2016	2017	2018	Change y-o-y
COMEX	179,047	226,467	249,794	10%
SHFE	34,760	19,478	16,124	-17%
SGE	15,492	15,710	10,931	-30%
TOCOM	8,541	6,398	8,091	26%
LME	0	1,989	2,276	14%
MCX	4,094	2,297	2,256	-2%
DGCX[1]	453	359	314	-13%
ICE Futures US	294	152	73	-52%
Borsa Istanbul[2]	243	457	265	-42%

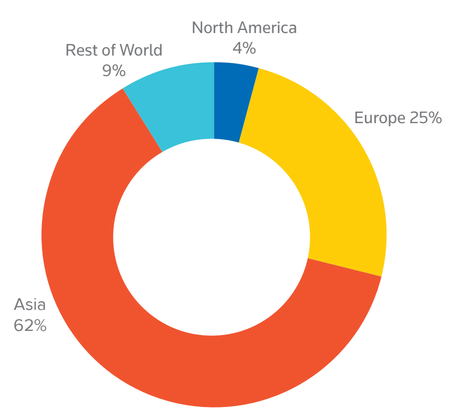
[1] Physically backed. [2] 100% Physical Delivery

Source: Refinitiv, Relevent Exchanges

If we look at CFTC weekly reports to understand gold managed money positions on COMEX, it is obvious that investor sentiment in 2018 was lacklustre, and this pattern was visible in other metal markets. Since the CFTC has amended its disclosure format in 2007, there were only three times in history when COMEX gold was in a net short position – occurring twice in 2015 (when the gold price bottomed by the end of the year), and again in 2018. Indeed, COMEX gold recorded 21 consecutive weeks of net shorts last year – its longest streak since 2007, at an average of 173 tonnes equivalent on a weekly basis, compared to 8 consecutive weeks of net short and an average of 51 tonnes equivalent that started in mid-November 2015. It is fair to suggest that last year the market sentiment on gold (and many other metals) was at an all-time low.

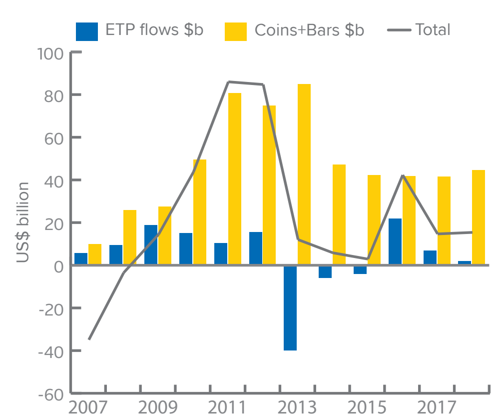
Trading volumes on China's commodity exchanges continued to retreat as a whole in 2018, as the fluctuation of the yuan exchange rate ironically translated into less volatility in the gold price in domestic terms, which made it less attractive as a trading tool. As a result, an increasing number of local speculators found trading overseas a more attractive option. Trading volumes at the **Shanghai Futures Exchange** (SHFE) fell 17% last year, to 16,124 tonnes equivalent, as local investors focused their attention on tin and nickel. Meanwhile, trading volumes at the **Shanghai Gold Exchange** (SGE) fell by a more pronounced 30% (all gold contracts combined) in 2018. While the trading fee on the SGE is higher than the SHFE (it is also the highest in the world), traders were still willing to trade on the SGE as extra costs could potentially be offset by generating extra income through the receivable of the deferral fee (whether long or short, traders with larger position can receive a deferral fee from the traders with a smaller position). However, last year large domestic banks became active traders on the SGE, and with the size of the capital they deployed, they strongly influenced the distribution of the deferral fees. As a result, many small gold traders were squeezed out.

DEMAND FOR BARS AND COINS REGIONAL SPLIT (2018)



Source: GFMS, Refinitiv

DEMAND FOR PHYSICAL INVESTMENT, BARS + COINS + ETPS



Source: GFMS, Refinitiv

EXCHANGE TRADED PRODUCTS

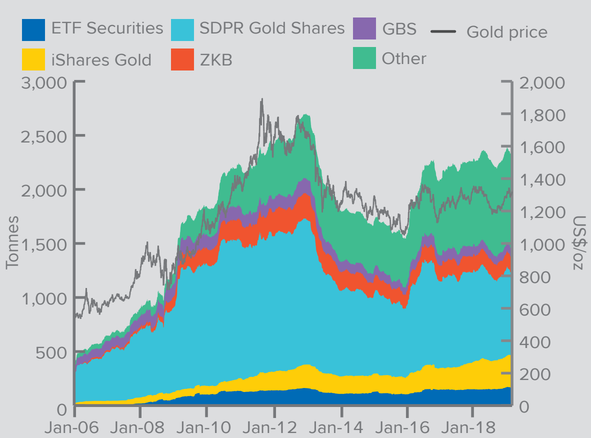
Total gold holdings in global ETPs increased by 3%, or close to 59 tonnes (2 Moz) in 2018, to a total of 2,321 tonnes by year-end. While concerns on the U.S.- China trade war took centre stage in the financial world for most of 2018, the growing uncertainty did not help the gold price, as funds chose the U.S. dollar (and to a lesser extent, the U.S. equity market) as the safe haven asset instead of the yellow metal. In value terms, total ETP holdings increased by a modest 1%, to $95.6 billion, and total net flows were $2.7 bn for the full year. That is compared to an additional 2,262 tonnes (or 9%), or $17 bn in 2017, with total net flows of $7.3 bn.

The dollar index, which is one of the more dominant factors influencing the gold price, continued its downward momentum in the first quarter of 2018, being carried forward from 2017. Gold ETPs absorbed an inflow of 29 tonnes as the gold price rose 2.5%. Meanwhile, the dollar index lost 2.3% during the quarter, and closed below 90, which turned out to be the bottom throughout the year. The dollar index then began heading higher in the second quarter, as the strong domestic economy increased market expectations towards another rate hike by the Fed in the June meeting last year. Alongside this, President Trump fired his first official shot against China, which sparked the beginning of the global trade war, stimulating the dollar index higher as demand for the dollar increased as a hedge against uncertainty. The dollar index spiked 5.2% during the second quarter, compared to a 5.5% drop in the gold price. Despite this fall, gold holdings in ETPs still managed to increase by 22 tonnes in the quarter, due to time lag issues. In the third quarter, the continual drain of market capital heading to the United States due to the differential in interest rates resulted in tumbling domestic EM currencies and equities. The gold price lost 5.1% with gold ETPs recording a 105 tonne net outflow over the period. Starting in October, investment began flowing back into ETPs, with the market anticipating a pickup in seasonal demand to positively stimulate metal prices. The gold price first returned above the $1,200/oz level in early October, and never looked back. It was rare that both the dollar index and gold were heading in the same direction, as the former advanced 2.2% in October and November, and the latter increased by 2.6% over the same time span. Things got interesting in December, when concerns over the slowing U.S. economy forced investors to start liquidating in the domestic stock market, with lower expectations towards the prospect of further rate rises in 2019, contributing to a weaker dollar index. The decline in both the dollar and the U.S. stock market formed a perfect storm for commodities, especially gold in December which rose over 5% for the month. Inflows into ETPs accelerated towards the end of the year, as the market for safe haven demand (against a backdrop of the U.S. economy) increased, and 117 tonnes of gold were added into ETPs in the final quarter of the year.

SPDR Gold shares, the largest gold ETP, lost 6% of its physical holdings in 2018, and reported a total of 788 tonnes by the end of the year. SPDR's market share fell from 37% in 2017 to 34% in 2018. Contrary to the decline in SPDR holdings, the Perth Mint launched a new gold ETP named Perth Mint Physical Gold ETP in August 2018.

The strong momentum seen in the market which favours gold as an investment tool in tough times, continued into the first month of 2019, with physical holdings peaking at almost 2,400 tonnes towards the end of January. However, market interest in gold began losing steam in February as the dollar index remained at high levels, despite the dovish signal sent by the Fed. The softening of the Eurozone economy as well uncertainties surrounding Brexit provided strength to the U.S. dollar. After rising 3.5% in January, the gold price lost a modest 0.3% in February. The financial markets concerns have picked up in recent times over the slowdown of the U.S. economy, especially after the yield of the 10-year Treasury bond dipped below the yield of a short term note, which usually indicates a recession is coming. Not only has the Fed stated that they will keep interest rates unchanged this year, the market has begun to speculate that the Fed may actually start cutting interest rates towards the end of 2019. This scenario should be bullish for gold and encourage further buying of gold ETPs.

GOLD ETFS AND OTHER SIMILAR PRODUCTS



Source: GFMS; Refinitiv, collated from respective ETP issuers' data

Volumes improved in 2018 on the **MCX,** after they nosedived in the previous year. Total volumes recorded on the benchmark gold futures and options reached 2,629 tonnes, a rise of 14% year-on-year. Among these, the majority of volumes remained in the futures segment at 2,256 tonnes, which meant volumes actually contracted by 2% year-on-year. Cumulative delivery consisting of all gold contracts fell further in 2018 to two tonnes, from five tonnes in the previous year. The unofficial market appears to have stalled, which, in our view, will make the market more mature and transparent over time.

PHYSICAL BAR INVESTMENT

— **Demand for bullion bars rose by 4% year-on-year to 800 tonnes in 2018, with a rise in demand from Europe, Asia and the Middle East regions offsetting losses in North and South America.**

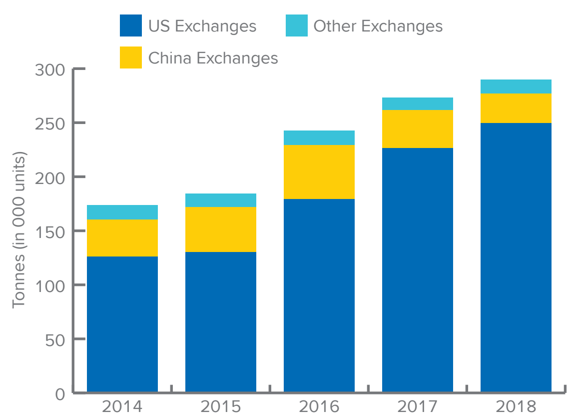
Following two years of consecutive declines, physical bar investment in **Europe** returned to growth in 2018, rising 7% year-on-year to 204 tonnes. Last year's increase was largely a function of a material rise in demand from the United Kingdom due to Brexit uncertainty and slowing economic growth in the country. Physical investment in gold bars in the UK surged by 168% or 17 tonnes last year, to 26 tonnes, the highest level of demand recorded in the country this century. The UK has struggled with a moribund economy (GDP growth for the UK declined for a fourth consecutive year) and the inability to agree upon a workable solution and timetable to separate from the European Union. The uncertain political and economic landscape in Italy, following on from the new government and economic reforms also set the tone for higher safe haven purchases last year, with physical bar investment jumping by 11% to 3 tonnes, its highest level this century. Other countries in the region that recorded modest annual gains last year included Turkey, Austria, and Russia, which rose by 7%, 5%, and 1% respectively. Some of these gains were partially offset by losses in some other key markets last year. The crucial German market, which accounts for approximately 45% of total European physical bar demand, retreated 2% in 2018, the third fall in succession and the lowest level since 2007, as a weaker euro gold price failed to excite retail investors. Joining Germany on the same side of the ledger was France and Switzerland, with demand in these markets retreating by 11% and 5% respectively.

For the second year in a row, net bar demand in **North America** slumped by another 30% to 16 tonnes in 2018. The lack of consumer interest has all to do with continued investor optimism surrounding other asset classes like the U.S. stock markets. In spite of a wobbly performance, a large chunk of the investment community was still convinced that allocating capital to the various stock markets in the United States was the best way to generate returns. That was supported by the continued Fed interest rate hikes and a positive general consumer sentiment throughout the year.

India's physical bar investment demand contracted 12% year-on-year to 82 tonnes owing to the high Rupee gold price. A sluggish rural economy on account of poor agricultural returns, along with less availability of unaccounted cash, pushed demand down. The largest falls were observed in the fourth quarter, (typically the strongest quarter of the year as rural India buys gold during this period following the harvest), as the price remained at its highest point for the year. Demand contracted 41% year-on-year to 22 tonnes in Q4, dragging overall demand down in 2018.

Demand for semi-refined bars (fabricated in local refineries) continued to remain high in certain markets, such as in northern India. During our field research, we observed that counterfeit bars are in plentiful supply, as local refiners sell them at a discount to 995 pure caste or

GLOBAL EXCHANGE ACTIVITY



Source: GFMS, Refinitiv

minted bars. The purity of these locally fabricated gold caste bars are normally between 0.5% and 1% lower than a pure bar. These bars are manufactured by melting down old jewellery that comes back to the market.

Chinese gold investment demand fell by 3% last year to 213 tonnes, a second consecutive year of decline. Gold demand in China was relatively weak, particularly in the first half of 2018, falling 10% year-on-year. Gold investment demand finally rebounded in the final quarter of the year, and was particularly strong in December. Speculators usually see the fourth quarter as a period of strong seasonal demand. The weakening of the domestic economy, along with the depreciation in the yuan made gold an attractive investment. When the U.S. stock market crashed in December 2018 and the Fed lowered expectations of possible interest rate increases in 2019, the Chinese community became more bullish on the future prospects of gold, and this strong momentum was carried forward into January this year.

Due to fluctuations in the yuan currency, which hampered gold investment returns, Chinese gold investors have received the shorter end of the stick for two years in a row. While the international dollar gold price rose 13% in 2017, the Chinese yuan denominated gold price only rose by a mere 3%, due to the appreciation of the yuan. Similarly, when the international gold price lost 1% in 2018, the Chinese yuan denominated gold price actually rose by 4% due to, this time, the depreciation of the yuan. Overall the lack of price volatility in domestic terms has made gold an unattractive investment for the local investors.

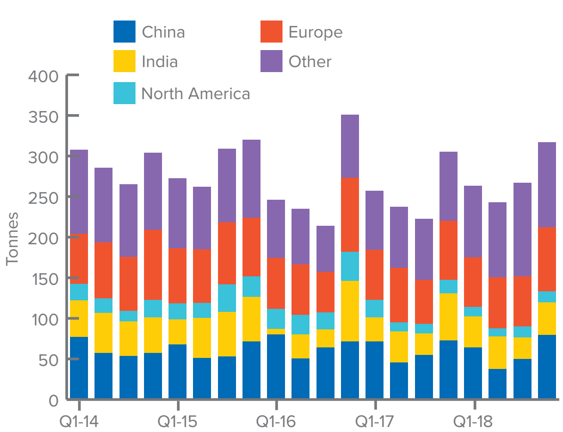
Elsewhere in Asia, a surge in demand in the third quarter of the year, on the back of a drop in the gold price in local terms below 19,000 baht per baht bar, helped to lift **Thai** investment higher last year. This was the first time when gold in domestic terms stayed below this level since January 2016 and it spurred a frenzy of retail activity as investors rushed to replenish gold assets. However, as gold prices tracked higher in the fourth quarter, investment demand fell sharply, but with the help of the stellar third quarter, annual demand rose by 3% for the full year, the highest level since 2014.

Japanese retail investment for gold was underwhelming for most of the year before picking up briefly in August, when gold prices retreated below 4,200 yen per gramme; the first time gold had traded at that level since October 2016. However, this wave of buy-side activity was short lived with the market swinging back into disinvestment in the fourth quarter as profit takers re-emerged. Overall net retail investment reached nine tonnes last year. Despite higher domestic gold prices, **Indonesian** retail investment was robust, delivering gains in 2018. For the full year, investment demand jumped 3% year-on-year to 13 tonnes.

OFFICIAL COINS

- **Global official coin minting rebounded last year, rising to its highest level of fabrication since 2016.**

RETAIL INVESTMENT



Source: GFMS, Refinitiv

Official gold coin fabrication rose by 17% or 33 tonnes to its highest level since 2013 standing at 224 tonnes. While the first quarter of the year recorded a modest decline of 4% on a year-on-year basis, the remainder of the year was boosted by consistently higher quarterly increases, particularly in the second half of the year which recorded an increase of 39% or 131 tonnes compared to H1 at 94 tonnes. Similarly, comparing fabrication results to our GFMS' proprietary quarterly bullion survey, strength in coin sales was also recorded in 2018, with annual demand for bullion coins increasing by 19% year-on-year, rebounding from weaker demand in 2017.

INVESTMENT

Asia recorded the largest increase in fabrication last year, rising by 68% or 22 tonnes to 54 tonnes, the region's highest level since 2013. Given the increasing intensification of tariff trade talks between Asia and the United States throughout the year, in conjunction with China reporting its lowest level of growth in 28 years, it is unsurprising that fabrication levels and indeed demand for gold coins surged over the year, with the H2 production rising by a significant 123% over H1 production. Meanwhile, South Africa (which holds the largest market share of gold coin fabrication at 30%), was the second largest contributor to this positive result, with fabrication jumping by 43% or 21 tonnes to 68 tonnes, its highest level on record. South Africa has increased its market presence dramatically over the last ten years, moving its market share up by an impressive 21% over the period. Last year, despite rand denominated prices remaining almost unchanged (on an annual average basis), we believe the introduction of new sizes and extended ranges from the country's mint (as demand in South Africa is largely created domestically) helped to boost demand, particularly following the release of a host of coins under the theme of 'Celebrating South Africa'. Elsewhere, demand in Australia rebounded in 2018, jumping by 17% or 1 tonne to 10 tonnes, marking the highest level of fabrication in the country in two years.

Turning to the western markets, the greatest tumble in demand came from North America, which saw production fall by 15% or five tonnes to 28 tonnes, its lowest level since 2005. Following a U.S. dollar rally, which rose by 4% over 2018, the release of positive economic data, four instalments of higher interest rates from the Fed and domestic equity markets reaching record high levels, the desire to hold gold weakened. Meanwhile in Europe, fabrication fell by 8% or 6 tonnes to 65 tonnes, its lowest level since 2016. While both euro and sterling denominated gold prices fell over the year (-1.1% and -1.3% on an annual average basis), we believe weakness in fabrication occurred as a result of uncertainty across the region, limiting consumer spending in light of the upcoming Brexit deadline and downbeat forecast in economic growth. It is interesting to note however, that investors are likely to have preferred to purchase physical gold bars over coins, with bar fabrication rebounding by 7% or 13 tonnes in Europe last year.

Indian demand for medallions and coins increased for the second year in row, rising 6% year-on-year to 63 tonnes. This was quite impressive given the broader market contracted in 2018. The stronger performance can be attributed to better merchandising and marketing campaigns. Indeed, several refiners, leading jewellers, and jewellery associations such as the Indian Bullion and Jewellers Association (IBJA), are selling coins via e-commerce websites in various denominations with aesthetics of various religious and cultural emblems. While the strongest demand was observed in the 22-carat (916) and 24-carat (995) categories, growing consumer interest was also observed for the 24-carat (999) range. Jewellers are even offering 10 gramme gold coins in the 24-carat (999) category. This market segment is mainly meant for collector coins rather than those bought for gifting purposes.

OFFICIAL COINS (INCLUDING THE USE OF SCRAP)

(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
South Africa	23.2	20.0	23.8	23.7	27.5	21.5	27.7	35.2	47.3	67.9
Iran	29.2	39.6	52.3	55.0	58.0	33.6	27.0	2.5	6.2	34.2
Turkey	30.9	35.6	58.9	39.9	90.6	40.5	19.8	22.4	38.0	27.8
China	6.7	8.5	23.9	21.4	21.8	14.8	22.9	31.1	25.4	19.3
Canada	38.2	34.1	35.8	23.9	35.5	22.1	29.7	30.6	18.6	14.7
United Kingdom	4.7	4.4	5.8	6.8	4.9	4.7	9.5	8.9	7.6	12.5
Germany	5.0	5.0	4.7	5.0	4.2	7.3	9.3	6.2	9.9	11.6
Austria	33.4	17.9	21.1	12.4	20.3	15.0	23.5	17.4	12.8	11.4
United States	50.5	44.5	36.5	27.5	34.1	21.8	31.8	37.5	12.5	11.4
Australia	11.0	8.4	10.6	10.0	16.2	11.6	9.9	10.9	8.2	9.6
Mexico	0.3	2.3	0.2	1.4	1.4	1.2	1.3	0.9	1.5	1.4
Russian Federation	6.5	5.4	4.6	6.4	5.7	4.5	4.1	4.2	0.8	0.8
France	0.2	0.2	0.2	0.2	0.4	0.8	0.8	0.4	1.5	0.5
Other	5.2	2.9	2.9	2.6	1.9	2.0	1.2	1.1	0.8	1.0
World Total	**245.1**	**228.7**	**281.4**	**236.2**	**322.5**	**201.5**	**218.6**	**209.3**	**191.2**	**224.1**

Source: GFMS, Refinitiv

PHYSICAL BAR INVESTMENT

(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Europe										
Germany	128.7	121.7	154.5	104.1	112.5	97.0	109.2	103.2	99.9	88.3
Switzerland	97.1	92.4	115.9	80.5	65.1	44.6	44.5	41.2	38.6	36.9
United Kingdom	4.7	9.3	10.4	15.1	13.4	7.4	6.9	9.6	9.8	26.3
Belgium	12.2	18.7	23.8	19.2	21.0	20.4	20.3	17.2	15.3	15.3
Other Countries	11.1	-4.0	46.4	37.4	41.4	41.4	40.5	39.1	37.5	37.1
Total Europe	**253.7**	**238.1**	**350.8**	**256.2**	**253.4**	**210.7**	**221.4**	**209.3**	**191.4**	**204.0**
North America										
United States	63.5	62.0	47.5	25.9	33.4	24.8	27.3	28.7	21.0	14.3
Canada	7.4	3.4	5.1	2.6	5.0	1.5	2.0	1.5	1.5	1.4
Mexico	53.3	2.8	2.9	2.8	0.1	0.1	0.1	0.1	0.1	0.1
Total North America	**74.3**	**68.3**	**55.5**	**31.3**	**38.4**	**26.4**	**29.3**	**30.2**	**22.5**	**15.8**
South America										
Venezuela	2.0	2.0	2.0	2.0	2.6	2.0	2.0	2.0	2.2	1.4
Other Countries	0.6	0.3	0.4	0.5	1.2	0.3	0.3	0.3	0.3	0.3
Total South America	**2.6**	**2.3**	**2.4**	**2.5**	**3.8**	**2.3**	**2.3**	**2.3**	**2.4**	**1.7**
Asia										
China	102.3	178.6	237.8	249.3	412.1	231.5	220.9	236.8	220.0	212.7
Thailand	-10.1	63.0	103.6	101.9	148.9	84.4	68.6	55.0	81.2	82.8
India	117.5	266.3	288.0	205.9	265.8	109.8	124.1	87.6	93.9	82.2
Vietnam	58.2	67.0	87.8	71.4	81.8	53.3	42.0	42.3	35.4	52.4
Iran	15.7	33.8	40.4	44.2	46.4	31.5	27.2	0.0	17.4	27.8
South Korea	-16.2	1.2	6.0	5.5	14.2	16.0	20.6	15.6	16.6	17.7
Indonesia	-6.0	15.3	24.8	22.1	43.1	18.1	11.3	14.7	12.7	13.1
Singapore	-0.3	0.9	3.9	5.2	8.4	8.7	6.3	7.0	7.1	8.8
Saudi Arabia	10.9	14.5	17.4	16.3	17.8	14.6	14.5	11.2	9.3	8.8
Pakistan	-19.4	7.0	14.6	12.3	23.9	13.4	15.6	10.5	9.7	8.5
Other Countries	-15.4	-26.7	-22.1	-1.7	17.2	53.7	39.6	48.9	47.7	47.8
Total Asia	**226.0**	**625.6**	**822.6**	**751.3**	**1,116.1**	**620.9**	**600.0**	**528.5**	**538.1**	**562.8**
Oceania & Other										
Australia	4.4	10.2	15.5	14.8	17.6	16.2	15.1	15.0	13.8	12.6
Egypt	0.7	1.2	0.7	0.8	15.2	9.9	7.4	-1.4	2.4	2.3
Total Oceania & Other	**5.1**	**11.3**	**16.2**	**15.6**	**32.8**	**26.1**	**22.5**	**13.6**	**16.2**	**14.9**
World Total	**561.7**	**945.6**	**1,247.6**	**1,057.0**	**1,444.5**	**886.5**	**875.4**	**784.9**	**770.6**	**800.0**
...of which:-										
Middle East*	35.1	65.8	93.1	85.0	113.1	88.1	72.2	29.9	50.6	62.0
East Asia*	167.3	333.9	486.2	475.4	736.1	428.3	396.3	400.2	386.6	413.6
CIS*	4.9	3.1	2.8	2.7	2.7	2.8	2.6	2.4	2.2	2.2
Indian Sub-Continent*	118.0	273.8	304.4	220.8	293.0	126.0	142.6	101.6	107.1	94.4

Source: GFMS, Refinitiv; *The key regional bullion markets

MEDALS AND IMITATION COINS (INCLUDING THE USE OF SCRAP)

(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
India	53.5	82.6	80.0	106.3	96.3	70.8	66.5	45.8	59.1	62.9
Other Countries	5.4	5.7	7.8	7.1	7.5	6.6	11.1	11.1	10.4	9.6
World Total	**58.9**	**88.3**	**87.8**	**113.4**	**103.8**	**77.4**	**77.6**	**56.9**	**69.5**	**72.5**

Source: GFMS, Refinitiv

INVESTMENT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3. MINE SUPPLY

- **Global mine production rose by 2% in 2018 to a total of 3,332 tonnes, representing the largest y-o-y growth in the last four years.**
- **The largest production increases year-on-year were posted in Indonesia and the United States, while the biggest drop was posted in China, after a 6% decrease in its gold production. At a mine level, Grasberg posted the largest increase in its production year-on-year, while Peñasquito and Veladero's combined production dropped by 11 tonnes in 2018.**
- **Average Total Cash Costs rose by 5% in 2018 to $696/oz, while AISC increased by 4% to $897/oz. The largest costs increase at a country level was posted in South Africa.**
- **The delta-adjusted hedge book increased by 4% or 8 tonnes, reaching a total of 219 tonnes by the end of 2018.**

TOP 20 GOLD MINING COUNTRIES

Rank			Production (t)	
2017	**2018**		**2017**	**2018**
1	1	China	426.1	399.7
2	2	Australia	295.0	312.2
3	3	Russia	270.7	281.5
4	4	United States	230.0	253.2
5	5	Canada	175.6	193.0
7	6	Indonesia	154.3	190.0
6	7	Peru	162.3	155.4
8	8	South Africa	139.9	123.5
9	9	Mexico	126.8	121.6
10	10	Ghana	101.7	101.8
11	11	Uzbekistan	84.9	83.4
12	12	Brazil	80.0	82.2
14	13	PNG	62.5	70.9
16	14	Kazakhstan	59.9	69.8
15	15	DRC	60.1	64.8
13	16	Argentina	63.3	63.3
17	17	Mali	52.2	57.8
20	18	Burkina Faso	49.1	55.0
18	19	Colombia	50.6	51.2
21	20	Philippines	47.9	46.6
		Rest of the World	566.4	555.5
		World Total	**3,259.3**	**3,332.2**

Source: GFMS, Refinitiv

MINE PRODUCTION

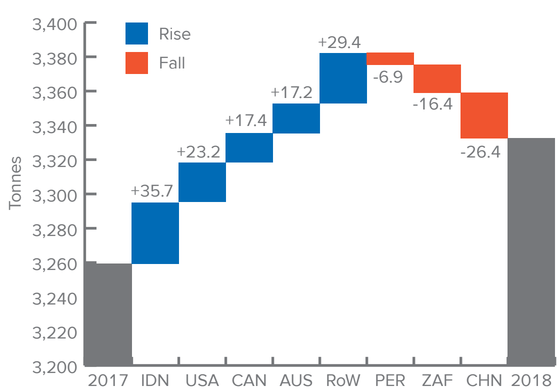
SUMMARY

Global **mine production** in 2018 reached a total of 3,332 tonnes, representing a 2% increase over 2017. While a 3% output decrease was posted in Africa, production increased by 7% in North America and Oceania, after a great performance in Grasberg and a first full year of operation at Rainy River and Brucejack mines. The commercial production of mines in Argentina and the United States and the ramp-up of operations in Mali and Russia were the main factors in driving global production up. On the other hand, China's production decreased once more, as environmental restrictions pressured small and medium tier miners.

Total Cash Costs (TCCs) increased by 5% to an average of $696/oz, while **All-In-Sustaining-Costs** (AISC) grew from $864/oz to $897/oz. High diesel prices, lower grades and several operational disruptions were the main source of the costs increase, partially offset by currency depreciation in many producing countries. While most companies are focusing on cost-cutting and de-bottlenecking processes, we anticipate costs will continue to rise in 2019.

The **hedge book** expanded by eight tonnes in 2018 on a delta-adjusted basis to a total of 219 tonnes. The biggest additions were posted by Newcrest and Gold Fields, which reported a combined net-hedging for over 24 tonnes. Australian based companies accounted for over 34% of the total hedge book, after gold prices in Australian dollars hit an all-time high, fuelling hedging activity. Turning to the net de-hedgers, Russian Polyus and Petropavlovsk delivered a combined 25 tonnes into the hedge book, while 5 tonnes of Fresnillo's options expired during the year.

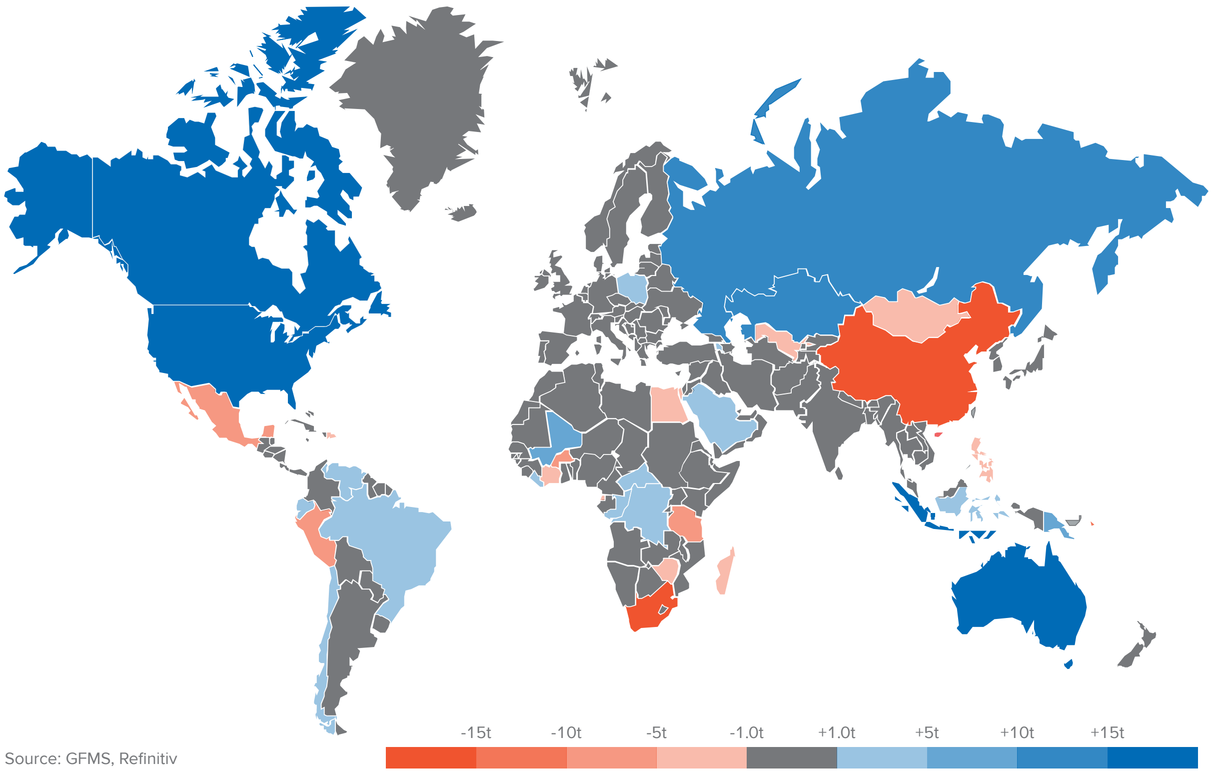
YEAR-ON-YEAR VARIANCE IN MINE PRODUCTION



Source: GFMS, Refinitiv

MINE SUPPLY

MINE PRODUCTION WINNERS AND LOSERS, 2018 VERSUS 2017



Source: GFMS, Refinitiv

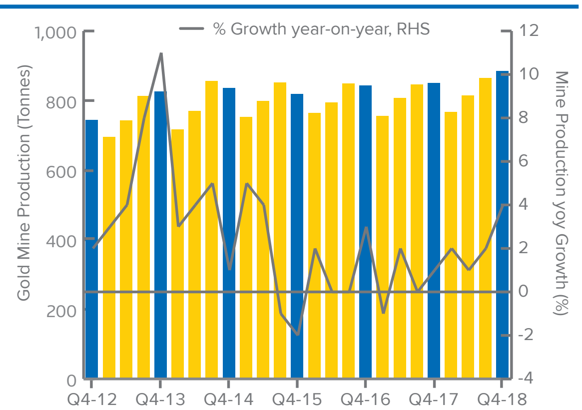
REGIONAL AND COUNTRY OVERVIEW

Gold output in **China** dropped by 6% to 400 tonnes, the fourth consecutive decline. Tighter environmental policies imposed by the government have been seriously affecting gold production, as many zinc and copper mines were forced to take a step back in scheduled ramp-ups, while a stricter control over the use of cyanide in the gold mining industry forced several gold mines to cut-down their production. While the mining industry is fighting to increase its environmental standards, we estimate production at the world's largest producer will somewhat rebound this year, as an output increase is expected at Zijin Mining and China Gold International, in addition to better efficiency achieved in some treatment plants after important upgrades were made during 2018.

Indonesia posted the biggest production increase in 2018, growing by 23% to 190 tonnes. The main driver behind this gain was the development of a high-grade phase at Grasberg's open pit operation. The mine is expected to transition to the Grasberg Block Cave (GBC) underground mine during the first half of 2019, after which throughput and grades will fall sharply. The copper-gold giant produced around 40% of the country's total gold output in 2018 and was recently granted an extension on its mining rights until 2031. Indonesia has been re-structuring its environmental and taxation policies, which has negatively impacted the mining industry over the last few years, as the country aims to develop a stronger control over its own natural resources, while improving the value chain by supporting investment on smelters.

Strong results were also posted in **Russia**, where production increased by 4% to 282 tonnes. The country's policy makers are focused on boosting the mining industry, pushing forward tax incentives, royalty waivers and low-costs loans.

QUARTERLY GLOBAL GOLD PRODUCTION



Source: GFMS, Refinitiv

Polyus operations reported a 10% increase in their gold output, after achieving the first full year of operation at the Natalka mine, in addition to greater outcomes in Olimpiada, Verninskoye and the Kuranakh mine. Olimpiada stood as the fifth largest gold mine, after reporting a production of 33 tonnes, 6% larger than 2017. Petropavlovsk production dropped by 4%, following lower grades and lower throughput, while its POX Hub project poured the first gold on 21 December 2018. The ramp-up of this project will act as a partial offset for declining grades, while the company expects that further improvements on the processing plant, scheduled for Q2 2019, will allow the treatment of third-party concentrates. We estimate the neighbouring country Kazakhstan produced 10 additional tonnes in 2018, where production increases were posted in the Kaz Minerals operations, as a result of higher grades and recoveries, in addition to the ramp-up of Polymetal's Kyzyl mine, which produced 3 tonnes during the year.

Australia posted the sixth consecutive increase in its gold production, as it grew by 6% to 312 tonnes in 2018. Newcrest's Cadia Hill mine achieved a record-high production of 23 tonnes, representing a 38% rise from 2017, fuelled by higher grades and considerable higher throughput. A scheduled maintenance on the operation's two concentrators will reduce its mill throughput during Q1 2019. The Australian business of AngloGold Ashanti posted a 12% output increase, triggered by higher grades at Sunrise Dam and higher throughput and metallurgical recovery at Tropicana. Kirkland Lake reported a production of 23 tonnes, representing a 21% increase from the previous year, after the company's average grade climbed from 9.8 g/t to 13.9 g/t. Gold Road's Gruyere mine is expected to achieve commercial production in June 2019, adding over 9 tonnes per annum to the country's total. Output in **PNG** rose 13% to 71 tonnes, mainly fuelled by a 5 tonnes increase at Harmony's Hidden Valley, following an improvement in its operations efficiency, in addition to a 6% rise in Newcrest's Lihir gold output.

Turning to the African region, labour disruptions and lower grades were the main source for a 3% decline in gold output. Production in **South Africa**, which accounts for over 21% of the region's total, dropped by 12% to 124 tonnes, the lowest record in our database. Numerous strikes, power shortages and ground stability problems affected Sibayne Stillwater's Driefontein, Beatrix and Kloof operations, while large-scale restructuring followed by operational difficulties at Gold Field's South Deep, also reflected in lower gold production. Elsewhere in the region, **Mali**'s Fekola mine realised its first full-year of production, posting a production of 13 tonnes, while **Tanzania**'s government imposed restrictions on gold and copper concentrate exports, after which Acacia reduced operational activity at the Bulyanhulu Gold Mine. The government of the **Republic of Zambia** also announced several changes to the country's mining tax regime, increasing the export levy on precious metals, including gold, to 15%, also declaring that mineral royalties will no longer be deductible for corporate tax, which could affect the economic balance at current operations as well as the development of future projects.

South America's gold production in 2018 was 550 tonnes, slightly lower than the previous year. We estimate **Peru**, which accounts for over 28% of the region's total output, produced 155 tonnes, 7 tonnes lower than 2017, representing the third consecutive decrease. Lower tonnage processed and lower grades at Barrick's Lagunas

LARGEST MINE ADDITIONS YOY

(tonnes)			Production		Change
	Mine name	Country	2017	2018	yoy
1	Grasberg	Indonesia	48.3	75.1	+26.8
2	Fekola	Mali	3.3	13.7	+10.4
3	Kibali	DRC	18.5	25.1	+6.6
4	Hounde	Burkina Faso	2.1	8.6	+6.5
5	Escondida	Chile	7.9	14.4	+6.5
6	Cadia Hill	Australia	17.0	23.4	+6.4
7	Rainy River	Canada	0.9	7.1	+6.2
8	Brucejack	Canada	5.5	11.5	+6.0
9	Paracatu	Brazil	11.2	16.2	+5.0
10	Natalka	Russia	0.1	4.1	+4.0

Source: Company Reports

LARGEST MINE LOSSES YOY

(tonnes)			Production		Change
	Mine name	Country	2017	2018	yoy
1	Penasquito	Mexico	14.8	8.5	-6.3
2	Veladero	Argentina	22.2	17.3	-4.9
3	Lagunas Norte	Peru	12.0	7.6	-4.4
4	Bulyanhulu	Tanzania	5.5	1.3	-4.2
5	Fort Knox	United States	11.9	7.9	-3.9
6	South Deep	South Africa	8.7	4.9	-3.9
7	Buzwagi	Tanzania	8.4	4.5	-3.8
8	Pueblo Viejo	Dominican Republic	33.7	30.1	-3.6
9	Siguiri	Guinea	11.9	8.4	-3.5
10	Meadowbank	Canada	11.0	7.7	-3.2

Source: Company Reports

WORLD GOLD MINE PRODUCTION

(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Europe										
Russia	200.9	195.0	204.4	214.9	232.7	247.5	249.5	253.6	270.7	281.5
Turkey	14.5	16.6	24.1	29.6	33.5	31.0	27.5	26.0	26.1	26.3
Finland	3.8	5.6	6.4	8.9	8.6	7.6	8.2	8.8	9.0	8.3
Sweden	5.5	6.3	5.9	6.0	6.4	6.4	6.3	6.6	7.8	7.9
Bulgaria	3.3	2.5	3.4	4.3	4.6	5.4	5.4	4.7	6.7	6.8
Poland	0.8	0.8	0.7	0.7	1.1	2.6	2.7	3.5	3.6	2.6
Other	2.9	2.3	2.1	3.2	4.8	4.3	3.8	2.9	3.7	4.8
Total Europe	**231.7**	**229.1**	**247.1**	**267.6**	**291.6**	**304.7**	**303.5**	**306.1**	**327.6**	**338.1**
North America										
United States	221.4	229.7	233.5	232.4	229.6	208.7	216.2	222.0	230.0	253.2
Canada	96.0	103.5	107.8	107.8	133.6	152.5	162.5	165.0	175.6	193.0
Mexico	62.4	79.4	88.6	102.8	119.8	118.1	141.3	133	126.8	121.6
Total North America	**379.9**	**412.5**	**429.9**	**443.1**	**483.0**	**479.3**	**519.9**	**520.3**	**532.4**	**567.8**
South America										
Peru	201.4	184.8	189.6	184.4	187.7	173.0	177.9	168	162.3	155.4
Brazil	64.7	67.5	67.3	67.3	80.1	83.0	81.8	84.0	80.0	82.2
Argentina	48.8	63.5	59.1	54.6	50.1	59.7	63.8	58.1	63.3	63.3
Colombia	27.4	35.9	41.9	45.6	49.6	55.5	56.1	57.1	50.6	51.2
Chile	40.8	38.4	44.5	48.6	48.6	46.8	44.0	43.2	35.9	39.6
Suriname	20.4	20.5	20.2	20.1	18.6	18.2	17.0	20.5	33.4	33.6
Dominican Republic	0.3	0.5	0.5	4.1	26.5	35.6	31.1	38.0	35.3	31.8
Venezuela	24.8	24.9	25.5	21.8	22.9	23.2	24.2	24.8	25.4	27.2
Guyana	11.9	12.8	14.4	14.4	14.4	14.4	15.7	21.0	20.4	21.1
Ecuador	14.0	17.2	17.6	17.6	17.4	17.8	17.6	15.1	13.8	15.3
Nicaragua	2.6	4.9	6.3	6.9	8.7	8.8	8.0	8.7	7.7	7.9
Bolivia	7.2	6.4	6.5	6.4	6.1	6.3	6.1	6.3	6.4	6.2
Panama	0.9	1.8	2.1	2.3	1.3	0.6	0.7	0.3	6.6	6.2
French Guiana	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.8	2.7	2.7
Honduras	2.6	2.4	1.9	1.9	2.0	2.8	2.6	2.4	2.6	2.4
Guatemala	9.0	9.4	12.1	6.6	6.5	6.3	5.8	4.1	1.6	1.4
Other	3.0	2.6	2.7	2.9	3.0	2.7	2.4	1.9	2.0	2.0
Total South America	**483.0**	**496.6**	**515.2**	**508.4**	**546.7**	**557.6**	**557.7**	**556.9**	**549.9**	**549.6**
Asia										
China	324.0	350.9	371.0	411.1	432.2	478.2	454.1	453.5	426.1	399.7
Indonesia	204.5	184.1	165.1	131.0	152.7	158.4	176.3	174.9	154.3	190.0
Uzbekistan	70.5	71.0	71.4	73.3	77.4	81.0	83.2	82.9	84.9	83.4
Kazakhstan	22.5	29.9	36.7	40.0	42.6	46.1	48.2	49.8	59.9	69.8
Philippines	37.0	40.8	37.1	41.0	40.3	42.8	46.7	48.7	47.9	46.6
Mongolia	14.1	13.9	12.4	12.8	17.8	30.5	31.3	20.5	16.0	20.5
Kyrgyzstan	17.0	18.5	19.7	11.3	20.2	19.2	18.4	19.7	20.3	19.4
Saudi Arabia	5.1	4.5	4.6	4.7	4.5	5.2	5.6	7.4	10.8	13.2
Japan	7.7	8.5	8.7	7.2	6.4	7.1	7.7	6.5	6.4	6.3
North Korea	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Laos	5.4	5.5	4.4	6.7	7.2	5.6	5.7	7.0	6.3	6.0
Armenia	1.4	1.6	2.1	2.1	3.5	4.7	4.4	4.7	4.9	5.8
Tajikistan	1.4	2.0	2.2	2.4	2.7	3.4	4.5	5.0	5.5	5.0
Azerbaijan	0.4	2.1	1.8	1.6	1.6	2.9	3.2	2.9	2.6	3.0
Malaysia	4.2	5.2	5.0	5.3	5.1	4.5	4.2	3.6	3.0	2.9
Vietnam	3.1	3.4	3.7	3.9	4.1	2.6	2.4	2.4	2.4	2.4
Georgia	0.8	3.6	3.2	3.5	2.0	2.5	2.3	2.3	2.1	2.1
Iran	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.5	1.6	1.8
Other	11.1	10.6	9.0	10.5	10.5	10.4	9.1	10.1	5.7	5.7
Total Asia	**737.5**	**763.5**	**765.4**	**775.7**	**837.9**	**912.4**	**914.8**	**909.6**	**867.2**	**890.1**

WORLD GOLD MINE PRODUCTION

(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Africa										
South Africa	219.5	199.9	190.8	163.5	168.9	159.2	151.0	145.7	139.9	123.5
Ghana	90.3	92.4	91.0	95.7	107.4	107.4	95.1	94.1	101.7	101.8
Congo (DRC)	10.0	17.0	22.0	26.1	25.3	40.0	45.7	60.4	60.1	64.8
Mali	49.1	43.9	43.5	50.3	48.2	47.4	49.0	49.8	52.2	57.8
Burkina Faso	13.8	25.3	34.1	31.3	35.0	38.5	38.0	40.9	49.1	55.0
Tanzania	40.9	44.6	49.6	49.1	46.6	45.8	46.8	49.7	49.1	42.3
Zimbabwe	9.8	16.3	19.0	19.5	19.6	18.8	22.0	21.8	23.3	20.2
Guinea	22.5	20.4	19.7	18.4	19.0	21.0	20.0	19.6	22.4	18.6
Ivory Coast	8.6	7.3	13.4	14.0	13.6	18.0	22.2	22.6	22.7	18.5
Sudan	4.0	10.1	22.5	27.9	20.1	21.5	16.5	15.5	14.5	14.5
Egypt	0.0	4.7	6.3	8.2	11.1	11.8	13.7	17.1	16.9	14.0
Ethiopia	5.5	6.6	11.5	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Mauritania	8.4	9.1	8.7	8.2	10.0	10.1	9.3	7.6	9.6	9.7
Senegal	5.2	4.5	4.3	6.8	6.5	6.7	5.8	6.8	7.4	7.7
Namibia	2.4	2.7	2.1	2.3	2.0	2.4	7.0	7.6	8.4	7.6
Zambia	3.1	3.4	3.5	4.2	5.2	4.8	4.2	4.6	4.4	4.0
Liberia	0.5	0.5	0.5	0.5	0.5	0.5	1.2	2.5	2.9	3.9
Eritrea	0.5	0.5	12.8	10.2	3.4	1.3	1.3	2.0	2.8	3.0
Other	235.2	217.5	208.6	181.0	185.8	174.0	165.8	160.2	154.4	137.1
Total Africa	**509.7**	**526.8**	**572.9**	**565.9**	**571.3**	**582.0**	**575.6**	**594.9**	**613.6**	**592.3**
Oceania & Other										
Australia	223.5	256.7	258.7	250.4	267.1	274.0	279.2	290.2	295.0	312.2
PNG	70.6	69.7	63.5	57.2	62.4	56.3	57.2	62.8	62.5	70.9
New Zealand	13.4	13.7	11.6	10.2	12.4	11.3	12.2	9.4	9.6	9.8
Fiji	1.1	2.1	1.6	1.6	1.4	1.3	1.4	1.5	1.3	1.3
Solomon Islands	0.1	0.1	1.7	2.0	2.0	0.8	0.3	0.1	0.1	0.1
Other	0.9	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Oceania & Other	**309.6**	**342.3**	**337.3**	**321.6**	**345.2**	**343.8**	**350.3**	**364.0**	**368.5**	**394.3**
World Total	**2,651.3**	**2,770.9**	**2,867.7**	**2,882.2**	**3,075.7**	**3,179.7**	**3,221.9**	**3,251.8**	**3,259.3**	**3,332.2**

Source: GFMS, Refinitiv

project to treat refractory sulfide ore, leaving few options to extend the mine's life. Buenaventura is ongoing with an ambitious de-bottlenecking program in its Orcopampa operation, temporarily ceasing its production. An output decrease was also posted at La Zanja, while the ramp-up of Tambomayo partially offset the losses.

Mixed results were posted in **Argentina**, where lower production at Veladero and Gualcamayo were offset by the ramp-up of Cerro Moro, which achieved a production of 3 tonnes on its first 6 months of operation. Chile realized a 10% increase in its production, as gold in concentrates produced by Escondida grew to 14 tonnes, favoured by higher throughput and an improvement on recovery rates. Other output gains were posted in Los Pelambres, Guanaco and Sierra Gorda mines. **Brazil**, South America's second largest gold producer, achieved a production of 82 tonnes in 2018. Kinross Paracatu mine posted a record-high production of 16 tonnes, 45% higher than 2017, which was partially offset by a decrease in production at AngloGold Ashanti's Mineração, caused by strikes and infrastructure problems.

Production in the **United States** rose by 10% to 253 tonnes. Better grades at Newmont's Nevada operations pushed production up by 7% to 53 tonnes. Alio Gold declared commercial production in January 1, 2018 in its Florida Canyon mine, which produced 2 tonnes in 2018 and is expected to increase its production by 42% in 2019. Oceana Gold's Haile operation also completed its first full year of operation, achieving an output of 6 tonnes. Meanwhile, in **Canada**, production rose 17 tonnes in 2018, as the first full-year of operation at Brucejack and Rainy River was achieved, producing a combined 18 tonnes. Acting as a partial offset, Agnico Eagle's Meadowbank, reduced its output considerably in its final full-year of operation, feeding the processing plant with low-grades material from stockpiles. Production in **Mexico** dropped by 4% to 122 tonnes, representing the third consecutive drop, after lower throughput at Peñasquito and lower grades at some of Minera Frisco's operations were posted.

2018 TOP 10 GOLD PRODUCING COMPANIES

Rank 2017	Rank 2018		Output (t) 2017	Output (t) 2018
2	1	Newmont	163.8	158.7
1	2	Barrick Gold	165.6	140.8
3	3	AngloGold Ashanti	116.8	106.1
4	4	Kinross	83.9	77.0
6	5	Newcrest	71.1	76.4
11	6	Freeport McMoran	49.0	75.9
8	7	Polyus Gold	67.2	75.9
5	8	Goldcorp	79.9	71.4
7	9	Gold Fields Ltd	67.2	63.3
10	10	Randgold	52.3	55.1

Source: Company Reports; GFMS, Refinitiv

2018 TOP 10 GOLD PRODUCING MINES

Rank 2017	Rank 2018		Output (t) 2017	Output (t) 2018
4	1	Grasberg	48.3	75.1
1	2	Barrick Nevada 1	71.9	65.3
2	3	Muruntau 2	64.0	62.5
3	4	Newmont Nevada	49.3	52.8
5	5	Misc. Alluvial 2	38.3	38.3
7	6	Olympiada	31.3	33.1
8	7	Lihir	28.6	30.3
6	8	Pueblo Viejo	33.7	30.1
14	9	Kibali	18.5	25.1
19	10	Cadia Hill	17.0	23.4

Source: Company Reports; GFMS, Refinitiv

1 Reflects production on a 60% basis, which represents Barrick's equity share

2 Non-official data. Estimated over external sources

CORPORATE ACTIVITY IN 2018

An increase in M&A activity compared to previous years was registered in 2018, including one of the biggest deals in the mining industry so far. The premise during the year indicated it was more economically sound for companies to acquire operations than developing projects from an exploration stage, as capital expenditures in greenfield projects are decreasing.

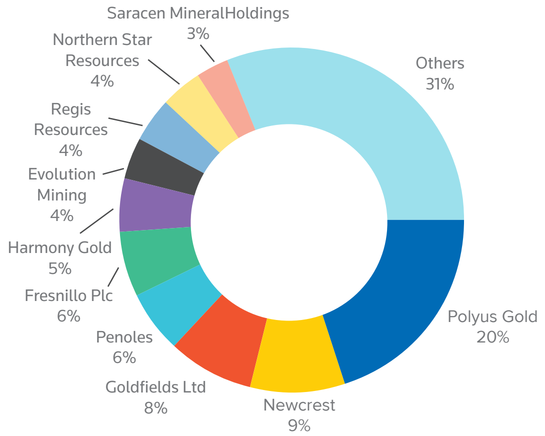
On May 10, 2018, First Majestic Silver corp. acquired Primero Mining Corp. on a $320 M deal (including debt), incorporating San Dimas Silver/Gold mine, in Mexico. The increase in M&A activities peaked in Q4 2018, after Northern Star Resources bought the Pogo operation from Sumitomo Metal Mining at $260 million on October 2018. The mine, located in a highly prospective area of Alaska, produced almost 7 tonnes last year. In November 2018, the Australian-based company offered over $100 million with the intention of acquiring the remaining 49% interests in the East Kundana underground mine, which was rejected at the end of the year. Elsewhere, Coeur Mining completed the acquisition of Northern Empire Resources on October 1, 2018. The deal, worth $90 million, includes the Sterling Gold project in Nevada, increasing Coeur's inferred resources by 26% to 83 tonnes. Later that month, the company further increased its participation in the Nevada region, after acquiring three projects from Alio Gold, which are located adjacent to the Rochester mine.

Turning to Barrick, the company made two major announces on September 24, 2018, including a partnership with Shandong Gold, with the aim of analysing potential synergies between the Veladero mine and the Lama project, in Argentina. The second statement consisted in the agreement for a Barrick-Randgold merger, which finally became effective on January 1, 2019. The newly formed company holds assets in 15 different countries, with strong presence in the Americas, Africa and Oceania. Barrick's proven and probable reserves increased by 17% to 2,336 tonnes, with an estimated 10 implied years of reserves at current production levels.

On January 14, 2019, Newmont announced an agreement with Goldcorp to create a world-class portfolio of assets. The transaction, valued at $10 bn consisting of equity value, is expected to get approval in the second quarter of 2019. Newmont Goldcorp is expected to produce up to 217 tonnes annually, thus becoming the world's largest gold miner. Following Newmont's announcement, Barrick took the markets by surprise on February 25, after proposing a merger with Newmont. After some weeks of heated press releases, Barrick dropped the offer, and on March 11, 2019, Barrick and Newmont announced the creation of a Joint Venture (JV) in their Nevada operations, in which the companies will maintain an ownership of 61.5% and 38.5%, respectively. The Nevada JV is expected to become the world's largest gold producing operation and will be operated by Barrick.

PRODUCER HEDGING

CORPORATE HEDGE BOOK



Source: GFMS, Refinitiv

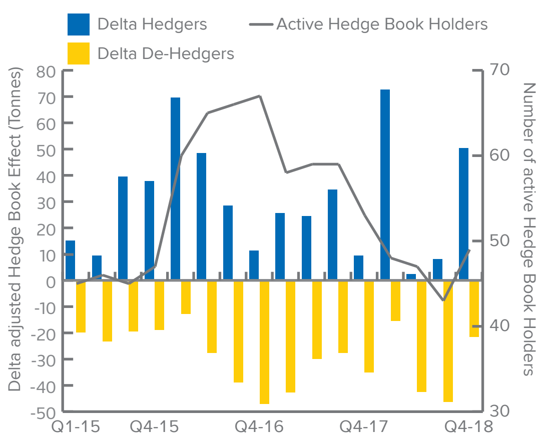
The delta-adjusted hedge book expanded by eight tonnes in 2018, representing a 4% increase compared to 2017. A total of 26 companies took a net-hedging position, while 23 companies were net de-hedgers. Higher gold prices from the second half of 2018 resulted in an increase of hedging activity, particularly represented in forwards contracts, which we estimate grew by 25 tonnes. As a result, the hedge book stood at a total of 219 tonnes at the end of 2018.

On the net-hedging side, an 11% depreciation of the Australian dollar in 2018 resulted in high gold prices during most of the year, pushing many Australian-based companies to expand their hedging positions, which accounted for 34% of the total hedge book. As an example, Newcrest increased its forward sales by 12 tonnes, which consists of a portion of Telfer's expected production for the next four years, with quarterly deliveries until June 2023. Westgold Resources, St. Barbara Mines and Northern Star Resources also increased their net position, adding 6 tonnes, 5 tonnes and 4 tonnes in 2018, respectively. Elsewhere, South African based Gold Fields reported an increase of over 12 tonnes in its hedge book, representing 16% of the total net-hedging positions, thus becoming the largest net-hedger of 2018.

Turning to net de-hedging, Polyus reported once again the largest hedge book reduction, after it exercised 22 tonnes of barrier options in 2018. Petropavlovsk delivered 6 tonnes into forward contracts, while 5 tonnes of Fresnillo's options expired during the year. B2Gold delivered 4 tonnes the last year, reducing its hedge book to zero.

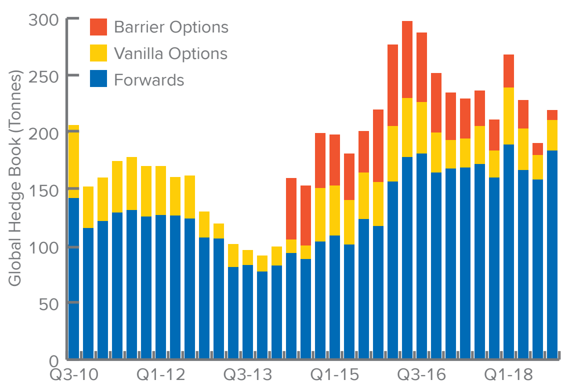
The delivery schedule for 2019 is 140 tonnes, while we estimate 34 tonnes will expire in the first quarter. Considering the announcement made by the U.S. Fed of its intentions not to raise rates for 2019, due to lower growth expectations, we estimate over the next few months Australian and Canadian gold miners will try to "lock in" current favourable gold prices in local currencies, fuelling hedging activity. It is important to note a larger preference on forwards contracts over vanilla and non-vanilla options for the last three years. In 2017, the forwards represented 76% of all hedging activity, while at the end of 2018 it stood at 85%. While options are preferred in Asian and Mexican based companies, forward contracts are favoured in growing gold producing companies in Canada and Australia.

ACTIVE HEDGE BOOK HOLDERS



Source: GFMS, Refinitiv

EVOLUTION OF THE GLOBAL HEDGE BOOK



Source: GFMS, Refinitiv

MINE SUPPLY

PRODUCTION COSTS

During 2018 Total Cash Costs (TCCs) rose by 5% to $696/oz, led by increasing fuel costs, lower grades and disruptions in several operations. Many major companies continue selling or downsizing deficit-making operations, while the effect of labour disruptions increased considerably during the year, especially in South Africa. Higher costs led by tightening environmental policies and governmental tax impositions were partially offset by weaker local currencies against the U.S. dollar in several producing countries. As a result, the average All-In-Sustaining-Cost (AISC) grew to $897/oz, a 4% increase from 2017.

COST OF PRODUCTION, TCC AND AISC

(US$/oz)		2017	2018
North America	Total cash costs	615	644
	All-in Sustaining costs	778	823
South America	Total cash costs	619	633
	All-in Sustaining costs	834	836
Australia	Total cash costs	674	756
	All-in Sustaining costs	905	952
Africa	Total cash costs	769	795
	All-in Sustaining costs	974	1005
Rest of the World	Total cash costs	541	555
	All-in Sustaining costs	780	792
World	**Total cash costs**	**662**	**696**
	All-in Sustaining costs	**864**	**897**

Source: GFMS, Refinitiv

Africa, the world's highest costs region, posted a 3% increase in its costs in 2018, as TCC averaged $795/oz, and AISC $1,005/oz. Costs rose most dramatically in South Africa, where multiple operation disruptions, due to power cuts, seismic damage at Driefontein and Kloof and labour unrest pushed TCC and AISC forward by 10% and 12% respectively, to near sub-economical values. On the other hand, South America remains the most cost-competitive region, after posting a 2% increase in TCC while AISC stood at $836/oz, roughly the same level as the previous year. Currency devaluations and lesser labour disruptions played a key role in maintaining costs.

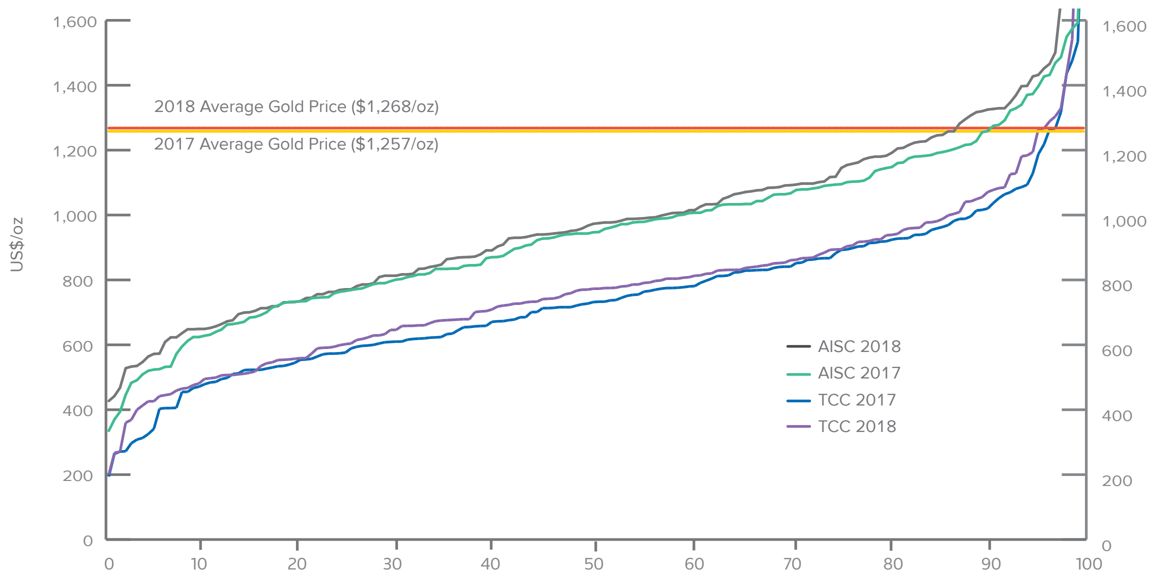
On a company level, AngloGold Ashanti continues with an intense cost-cutting strategy, restructuring some of its loss-making South African assets, as the Vaal River mining operations. The company managed to cut its TCC by 8% to $726/oz, while AISC dropped by 7% to $976/oz. After achieving a 35% gold production increase in DRC's Kibali mine, costs went down by 23% on a TCC basis to $600/oz and AISC dropped 31% to $752/oz. Higher production at the Cerro Vanguardia mine and a considerable devaluation of the Argentine peso pushed TCC down 9% to $476/oz and AISC a further 15% to $652/oz. For 2019, the company anticipates TCC in a range between $730-780/oz and AISC $935-$995/oz.

Yamana's TCC and AISC on a co-product basis dropped by 3% and 5% to $649/oz and $843/oz, respectively, after higher production was realised, particularly at Cerro Moro. For 2019 the company anticipates costs will remain at similar values, as higher costs at the Chapada, Jacobina and Cerro Moro mines will be partially offset by better performance at the Canadian Malartic and Minera Florida operations. Turning to Barrick, its operations achieved one of the lowest costs on a co-product basis, as the company reported TCC for $607/oz and AISC totalling $825/oz, an increase by 11% and 7% respectively, following the impact of lower grades and recoveries, as well as higher energy costs and an increase in sustaining capital expenditures, mainly in the Nevada operations.

Goldfields AISC grew from $955/oz to $981/oz in 2018. Labour restructuring in its South Africa's operations and poor ground conditions resulted in a considerable decrease in South Deep's gold output, pushing AISC up to $1,903/oz, representing a 42% increase from 2017. As a partial offset, strong results were posted at the Cerro Corona mine, in Peru, where higher gold production grew and higher by-product credits, as a result of higher copper grades, put AISC at one of the lowest in the mining industry, at $282/oz.

Newmont and Goldcorp posted an AISC of $909/oz and $851/oz in 2018, an increase of 2% and 3% respectively, from 2017. After the merger between these two companies (still pending approval), and the following agreement for a JV with Barrick in its Nevada operations, Newmont plans a costs optimisation program to take advantage of the new synergies. In the case of Kinross, AISC rose by 1% to $965/oz, which was lower than the 2018 guidance range, as record gold production was posted in Paracatu and Bald Mountain and lower capital expenditures helped maintain costs at the same level than the previous year.

GLOBAL TOTAL CASH COST AND ALL-IN SUSTAINING COST CURVE



Source: GFMS, Refinitiv

Russian Polyus was one of the few companies to report a costs reduction in 2018, after achieving a TCC of $348/oz and AISC of $605/oz, 4% and 1% lower respectively, from 2017. Local currency depreciation and higher production levels were the main factors behind this decrease. The company expects to remain below a TCC of $425 in 2019.

We estimate costs will continue to rise in 2019, especially in Africa, following a restriction on gold and copper concentrates sales by Tanzania's government, which led Acacia's to reduce operational activity at Bulyanhulu mine, dropping production by 46% and increasing costs by 43%. South Africa is experiencing an electrical power crisis, after several shortages and considerable power costs increases imposed by Eskom, the main provider. Zambia's government implemented several changes on its tax regime, including an increase in the gold export levy to 15%, while mineral royalties will no longer be deductible for corporate tax, which previously companies could partly claim back. Elsewhere, China's mining operations are still struggling to improve its environmental standards, especially regarding the use of cyanide in leaching pads, which will continue to influence costs in 2019.

PRODUCTION OUTLOOK

We expect mine production to decline around 2% to 3,266 tonnes on a year-on-year basis in 2019. Production is expected to drop sharply in Indonesia, as the transitioning from the high-grade open pit phase of the Grasberg mine to underground operations will affect grades and throughput considerably.

At a company level, Agnico Eagle anticipates a production of 54 tonnes for 2019, a 6% increase in its gold output, following the ramp-up at LaRonde, besides including the pre-commercial production at Amaruq and Meliadine projects. Buenaventura's production is expected to drop up to 15% to 27 tonnes, following a decision to temporary cease production at Orcopampa to prioritise the ongoing de-bottlenecking program, while lower grades and throughput are expected at Tambomayo and La Zanja mines. AngloGold Ashanti and Kinross are expecting a marginally higher gold production in 2019, especially in their America's operations, while fewer shutdowns are forecast at Newcrest's operations, pushing annual production up by 6%. Further ramp-ups are expected at Resolute's Syama mine, Polyus' Natalka mine and Polimetal's Kyzyl mine, while the improvements on Petropavlovsk's POX plant would allow the company to increase concentrate throughput to 11%, including concentrates sourced by third-parties.

Barrick released a production outlook for 2019 between 159 tonnes and 174 tonnes, while Newmont posted a guidance production of 162 tonnes for the year. A ramp-up at Goldcorp's Pyrite Leach pad is expected, boosting production at Penasquito. If the shareholders and later the regulatory jurisdictions approve the Newmont-Goldcorp deal, the company's output is expected to be between 187 and 217 tonnes.

4. SUPPLY FROM ABOVE-GROUND STOCKS

- **Total above-ground gold bullion stocks, or much of the accumulated historical mine production, rose another 2% to 193,900 tonnes in 2018.**
- **In value terms, total above-ground stocks stood at $7.9 Tr last year, a 3% increase compared to 2017, based on the respective annual average gold prices.**
- **Total inventory of fabricated products, excluding coin fabrication, increased another 1%, or 1,500 tonnes, to 115,400 tonnes in 2018. This is equivalent to 60% of total above-ground stock.**
- **Of our above-ground stock series, jewellery remained the largest category, representing 47% of the total. Holdings rose by 1,000 tonnes to a total of 91,600 tonnes last year.**
- **Private sector bullion stocks also rose by 3% or 1,300 tonnes to reach 42,400 tonnes in 2018.**
- **The Official sector, combined with private investment holdings, accounted for about 39% of total above-ground bullion stocks, which was 1% higher than the prior year. Gold held by central banks continued to rise last year, by 2%, reaching 32,500 tonnes, which was 17% of total holdings and 77% compared to private investment. Official holdings account for $1.3 Tr, 3% higher compared to the prior year.**

SCRAP SUPPLY

— Global scrap supply retreated for the second year in succession in 2018, dipping 3% to 1,178 tonnes. Economic instability and currency weakness accounted for a rise in recycling rates in Europe and the Middle East, while the stable dollar gold prices accounted for the decline in the other key markets.

Last year, global scrap declined for the second consecutive year, retreating 3% to an estimated 1,178 tonnes. The lack of volatility and relatively stable dollar gold price failed to illicit tightly held gold assets in North America which dipped 4%, while the annual rise in Europe and the Middle East was largely a function of currency weakness in Turkey and Iran which boosted supply in those markets. Asian scrap flows declined 4% in 2018 despite a 18% increase in Indian supply due to the weakness of the rupee, which boosted gold prices in local terms and encouraged profit taking.

India's total scrap supply is estimated to have increased by 18% year-on-year to 103 tonnes. We estimate that 70% of old gold was exchanged for new jewellery, while the rest of the old gold was sold directly into the market either to scrap dealers or local refiners. The rise in the gold price augmented higher scrap supply in the market, with supply highest in the fourth quarter.

China's scrap supply was broadly steady in 2018, retreating at the margin to an estimated 222 tonnes. Lower gold prices discouraged consumers from liquidating their gold assets for much of the year. One interesting development worth highlighting has been the arrival of several domestic start-up companies that have recently entered the scrap trade through developing mobile phone applications. Consumers can simply order a pickup at a location of their choice and have their old gold items collected for recycling, with the funds, post analysis, transferred directly to their bank account.

Japanese gold scrap flows fell sharply in 2018 following a government crackdown on smuggled bullion into the country. This gold is smuggled into the country and after avoiding the 8% consumption tax payable on gold transactions and sold into the domestic supply chain. Total scrap flows in Japan last year look to have fallen almost 35% from the record high in 2017 to an estimated 48 tonnes. It was reported that in June the Finance Minister met the heads of several of the country's leading trading firms requesting that they refrain from purchasing foreign branded bars without full point of origin documentation. This had an immediate impact in the second half of the year as those at the top of the supply chain removed themselves from purchasing this metal, leaving few traders with the required liquidity to purchase and re-export.

Elsewhere in East Asia, scrap flows were mainly weaker across the board as higher gold prices in several markets (due to currency weakness) failed to illicit higher scrap returns. There were brief periods of consumer selling but these were intermittent and well below volumes seen previously. **Thailand**, **Indonesia**, and **Vietnam** all recorded significant falls in scrap receipts, retreating 11%, 18%, and 24% respectively. Scrap collection from the Middle East as a bloc rose 3% over 2017 volumes.

VISIBLE SUPPLY OF GOLD TO THE MARKET

	2016		2017		2018	
	tonnes	share	tonnes	share	tonnes	share
Mine Production	3,252	71%	3,259	73%	3,332	74%
Above-Ground Stocks	1,338	29%	1,210	27%	1,164	26%
- Scrap	1,306	-	1,210	-	1,164	-
- Hedging Supply	32	-	-	-	-	-
- ETP Inventory Drawdown	-	-	-	-	-	-
Total	**4,590**	**-**	**4,469**	**-**	**4,496**	**-**

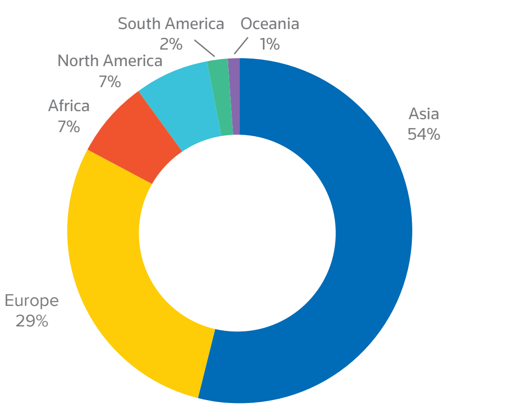
Source: GFMS, Refinitiv

Note: This is "visible supply" and therefore for the purposes of this table, the withdrawal of metal via ETP growth or via de-hedging has been treated as zero.

European scrap flows rebounded from 2017 levels, jumping by a modest 2%, or eight tonnes, to 334 tonnes; its highest level since 2016. While this higher level of scrap aided supply volumes in the market on a regional basis, on a country-by-country level, results were highly mixed, with more countries recording a decline in scrap levels than those who recorded an increase. **Turkey** was the best performing country in Europe for scrap last year, increasing by a significant 25% or 16 tonnes to 77 tonnes, the highest scrap level in the country in two years. A depreciating lira, which tumbled by a remarkable 33% (on an annual average basis in 2018), sent the gold price above 260 lira per gramme for the first time in history, driving those who held gold towards profit taking. **Russia**, the fourth largest scrap market last year, saw scrap levels increase by 5% or two tonnes to 38 tonnes, its highest level since 2015, with an improving economic outlook for the country and a gold price which was elevated by 8% on an annual basis. Elsewhere, increased scrap flows came from **Sweden**, **Switzerland** and **Austria**. The worst performing country in Europe was **Italy**, which holds the position as the second largest scrap market in the region, with scrap levels declining by 2%, or two tonnes, to 68 tonnes; its lowest level since 2008. Political and economic turmoil in the country has seen Italy not only almost receive sanctions from the EU, but resulted in a GDP contraction of 1.2% last year. Elsewhere, further declines in scrap volumes came from a host of countries, namely the **United Kingdom**, **Germany**, **Spain** and **France** each falling by one tonne or 3%, 3%, 3% and 2% respectively as both the euro and British pound sterling denominated gold prices weakened by 4% and 3%.

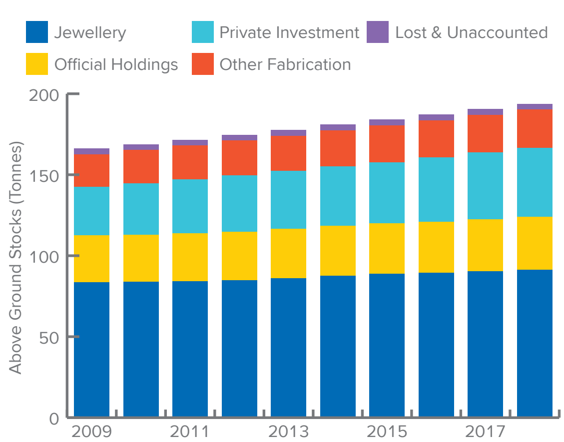
For the seventh successive year, scrap supply in **North America** contracted, easing 4% to 83 tonnes last year; a 13 year low. Scrap tends to be more abundant when the U.S. dollar gold price advances, particularly in the case of old jewellery, which did not happen last year. Industrial scrap also fell on higher rates of miniaturisation and continued lower gold waste from the manufacturing process. Lower scrap volumes has forced refiners in the region to look for more primary metal for their feed which we estimate rose slightly last year compared to scrap.

SCRAP SUPPLY BY REGION 2018



Source: GFMS, Refinitiv

ABOVE-GROUND JEWELLERY STOCKS & RETURN OF SCRAP



Source: GFMS, Refinitiv

SUPPLY FROM ABOVE-GROUND STOCKS

SUPPLY OF GOLD FROM FABRICATED OLD GOLD SCRAP

(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Europe										
Turkey	217.2	122.0	78.0	72.3	56.3	41.4	72.4	77.3	61.7	77.4
Italy	78.0	98.0	116.5	122.6	85.5	75.4	68.9	70.4	69.2	67.5
United Kingdom	59.4	69.8	76.0	69.0	41.0	31.2	30.4	38.2	41.9	40.7
Russian Federation	28.7	26.4	23.5	24.2	18.6	29.8	37.9	34.1	35.7	37.6
Germany	32.7	44.1	45.5	40.3	31.1	23.8	23.1	24.7	24.4	23.7
France	24.9	29.2	40.3	33.5	26.7	21.5	22.0	23.0	22.8	22.4
Spain	20.1	31.9	32.7	35.9	23.5	18.7	15.7	17.3	16.4	15.9
Portugal	1.5	8.6	15.5	16.0	11.2	9.1	9.4	9.7	9.4	9.1
Other Countries	55.3	66.6	76.1	73.3	53.2	45.1	43.7	44.8	44.2	39.6
Total Europe	**517.8**	**496.6**	**504.1**	**487.1**	**347.0**	**296.1**	**323.4**	**339.5**	**325.8**	**333.9**
North America										
United States	124.0	143.0	159.9	149.4	105.8	83.5	63.8	58.8	58.7	56.4
Mexico	40.8	45.6	47.6	54.1	37.2	27.2	24.5	27.1	24.1	23.6
Canada	9.2	11.1	10.8	9.8	6.7	5.7	5.1	3.5	3.3	3.0
Total North America	**174.0**	**199.7**	**218.3**	**213.3**	**149.7**	**116.3**	**93.3**	**89.3**	**86.1**	**83.1**
South America										
Brazil	11.4	16.1	22.2	24.6	16.0	9.8	6.8	7.4	7.8	7.7
Other	39.8	48.9	49.8	50.2	15.9	15.1	15.2	16.1	17.0	18.1
Total South America	**51.2**	**65.0**	**72.0**	**74.8**	**31.9**	**24.9**	**22.0**	**23.6**	**24.8**	**25.9**
Asia										
China	116.3	133.2	143.6	165.6	176.3	197.7	225.0	232.5	222.8	222.1
India	115.5	81.0	58.5	113.0	100.8	74.2	87.5	131.4	87.7	103.1
Japan	35.3	43.9	55.1	42.2	36.2	26.1	36.5	62.1	70.4	48.2
South Korea	57.1	48.8	47.2	37.8	26.1	27.7	29.4	31.0	32.4	32.9
Indonesia	79.9	64.9	58.3	49.0	36.2	36.3	46.1	55.1	38.6	31.6
Iran	32.2	32.7	32.4	32.9	24.3	22.1	17.7	17.3	17.4	29.8
UAE	70.6	110.0	71.4	73.4	57.0	51.4	43.5	42.2	27.4	25.1
Thailand	66.0	44.7	52.4	43.6	30.6	25.7	24.6	27.6	24.2	21.6
Vietnam	51.5	49.8	41.1	36.4	28.2	26.2	22.8	27.5	22.1	16.9
Taiwan	34.9	27.5	19.5	15.4	12.0	11.1	10.7	12.7	14.2	15.0
Kazakhstan	3.1	3.0	3.1	3.2	2.9	7.9	11.5	14.1	14.1	14.5
Saudi Arabia	57.3	44.1	37.1	33.5	23.6	20.8	16.8	16.0	16.1	13.0
Pakistan	53.9	50.4	42.7	47.2	37.2	28.8	22.5	24.0	11.7	9.8
Malaysia	19.3	22.2	19.2	16.7	13.3	12.4	10.9	10.4	9.5	8.2
Iraq	20.3	19.1	17.1	15.3	10.8	10.4	8.4	8.0	8.4	7.5
Other	99.5	107.6	94.4	89.0	70.9	60.8	51.6	51.9	53.0	47.2
Total Asia	**912.4**	**882.8**	**793.0**	**814.0**	**686.3**	**639.6**	**665.3**	**763.7**	**669.9**	**646.4**
Africa										
Egypt	65.0	48.0	47.6	53.6	43.2	39.9	35.1	47.4	55.4	45.9
Morocco	9.7	9.3	12.0	11.3	9.4	9.0	8.8	9.3	9.2	9.0
Algeria	5.8	6.1	7.9	7.6	6.8	6.6	6.8	7.4	7.5	7.6
Other	25.6	28.4	31.3	28.6	21.0	19.8	19.5	20.9	20.0	17.6
Total Africa	**106.1**	**91.8**	**98.8**	**101.0**	**80.4**	**75.2**	**70.1**	**85.0**	**92.1**	**80.2**
Oceania										
Australia	3.1	6.8	12.0	10.2	7.6	6.7	5.5	5.3	11.0	8.6
Total Oceania	**3.1**	**6.8**	**12.0**	**10.2**	**7.6**	**6.7**	**5.5**	**5.3**	**11.0**	**8.6**
World Total	**1,764.6**	**1,742.7**	**1,698.0**	**1,700.4**	**1,302.8**	**1,158.9**	**1,179.7**	**1,306.4**	**1,209.6**	**1,178.0**
...of which:-										
Middle East*	531.1	453.8	352.3	341.4	263.6	224.7	226.3	238.5	217.0	224.5
East Asia*	479.9	454.2	451.9	425.0	372.6	377.6	419.1	473.8	449.4	410.2
CIS*	35.3	32.8	30.1	31.2	25.0	41.0	52.9	52.3	54.2	56.7
Indian Sub Continent*	176.9	138.3	107.7	166.5	143.3	107.4	112.4	157.9	102.1	115.8

Source: GFMS, Refinitv * The key regional bullion markets

5. OFFICIAL SECTOR

- **Net central bank activity rose for its second consecutive year in 2018, with net purchases jumping by 46% to its second highest level this century.**

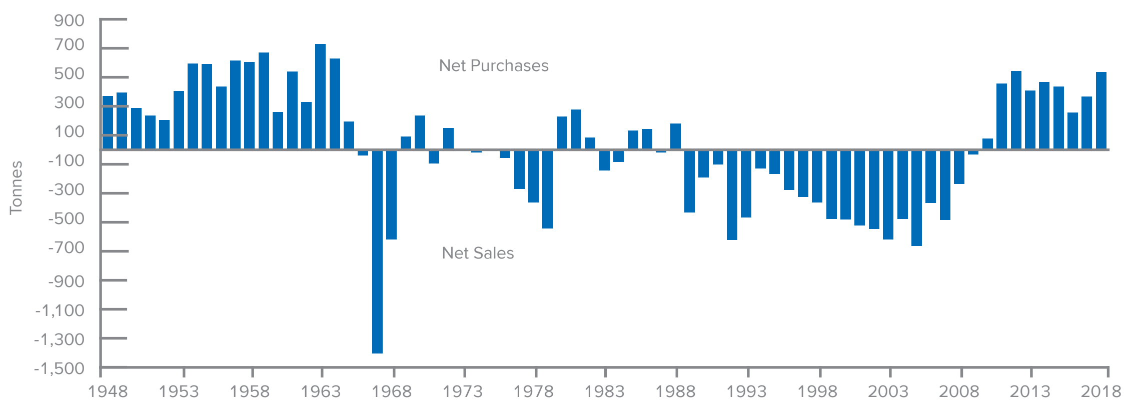
- **The People's Bank of China (PBOC) reported an increase in gold holdings in December, the first reported change in gold holdings since October 2016.**

Central bank **net purchases** rose for a second consecutive year in 2018, rising by 46% or 170 tonnes, to mark the second highest level of net purchasing this century at 536 tonnes. While robust purchases were recorded in each quarter of 2018 (jumping by double digit figures on a year-on-year basis), it was the second half (H2) of the year that was largely responsible for the annual result, with H2 purchases a significant 81% higher than H1. While it is true that central bank acquiring has been dominated by a handful of countries over the last few years, the significant elevation in gold holdings recorded last year occurred as not only a result of these countries continuing to increase their holdings, but the introduction of central bank activity from more EM countries, with some EM central banks having recorded muted or zero transactions (prior to H2) this century.

Total **gross purchases** for 2018 rose by 36% to 579 tonnes, its highest level since 2012. The **Russian** Central Bank was a key contributor to this, with total net purchases rising to their highest level on record of 274 tonnes, marking the country's 13th year of net purchasing and 7th consecutive year as the largest single purchaser of gold. Indeed, it is important to point out that the pace of purchasing has also increased over the last two years, with average monthly purchases jumping from 19 tonnes in 2017 to 23 tonnes last year (the fastest pace of purchasing in our records). A weakening in the rouble (which fell by an annual average of 8% last year), in conjunction with rising domestic mine production (jumping by 4% to 852 tonnes) and a pleather of extended and newly implemented sanctions against the country (from the United States and the European Union), encouraged Russia to continue to diversify its assets.

The second largest acquirer of gold last year was split between two countries, **Kazakhstan** and **Turkey**. While CIS countries are no stranger to purchasing gold (with Tajikistan and Kyrgyzstan acquiring seven and four tonnes last year respectively), Kazakhstan's level of purchasing in 2018 at 51 tonnes marked its highest level since the turn of the century. Meanwhile, the Central Bank of Turkey (CBT), which only begun reporting changes in official sector holdings in May 2017 (instead of merely reflecting changes just to commercial bank holdings under the Reserve Option Mechanism Policy), recorded an increase in gold holdings of 51 tonnes. While this figure is 40% lower than 2017 levels (driven by a net sale in gold holdings in the final quarter of the year), the tumble in the lira (for the most part of 2018), in conjunction with concerns over foreign currency debts (largely built up of U.S. dollar) and indeed the country's strained relationship with Germany and the United States, refreshed the country's favour towards holding gold.

HISTORICAL NET OFFICIAL SECTOR PURCHASES & SALES



Source: BIS; IMF; GFMS, Refinitiv

REFINITIV

Elsewhere, more than a handful of EM countries similarly sought out building their gold holdings, with **India**, **Hungary**, **Poland** and **Mongolia** each increasing the amount of gold held by double figures, rising by 42 tonnes, 28 tonnes, 26 tonnes and 14 tonnes respectively. While smaller purchases were made by **Columbia**, **Egypt**, **Philippines**, **Qatar, Guinea**, **Malaysia** and **Serbia**, with **Iraq** recording its first purchase (six tonnes) since April 2014 in September.

Gross **official sector sales** continued to decline in 2018, falling by 26% year-on-year to reach their lowest level since 2013. With the exception of **Venezuela** (of which we will touch upon in the next paragraph), global sales have remained limited in the last few years, with a rising gold price, worsening economic outlook and turbulent global politics supporting the desire to hold gold in reserve. Both **Germany** and **Australia** recorded the largest sale of gold last year, selling four tonnes each, reflecting a regular pattern of small scale sales as part of their respective official coin programmes. While elsewhere, smaller sales of two tonnes were recorded for **Sri Lanka** and **Indonesia**, with the **Ukraine**, **Czech Republic** and **Venezuela** selling one tonne each.

Based on the latest International Monetary Fund (IMF) statistics, The Central Bank of **Venezuela** stopped reporting its gold holdings in July 2018, after a sale in January (12 tonnes), a purchase in April (four tonnes) and a sale in June (three tonnes) occurred. While not reporting its latest gold holdings is not entirely unusual for the central bank, it has gleaned high press coverage this year, with the media reporting that gold has been sold from the central bank under the disputed President Nicolas Maduro orders, in the hope to gain liquidity for the country, which is suffering from hyperinflation and political turbulence. These claims, which also include the sale of unrefined gold in 2018, run alongside the intent of the country to repatriate or recover ownership of gold placed in swap deals. Last year, Venezuela paid around $700 million to recover a portion of gold held as collateral by Deutsche Bank, however, given that this gold is still sitting in the Bank of England's vaults (held indefinitely based on international sanctions against the country), Venezuela has since let its other swap deal with Citbank (created in 2015) lapse in March this year. It is believed that total central bank holdings of gold in the country fell below 130 tonnes by end-2018 from 150 tonnes at the beginning of the year.

As we come to the end of the first quarter of the year, we believe that net central bank purchases will continue to remain robust (especially in the first half of the year), with additional transactions coming from further EM central banks, remaining a theme, as they continue to build up their gold holdings. Gross purchases are likely to continue to be dominated by **Russia** with a weakening rouble, threat of fresh sanctions from the West and booming domestic gold production (which will be bought at a discount to benchmark prices from May onwards in order to "further the development of the domestic precious metals market"). **China,** which has reportedly purchased 12 tonnes of gold in January is likely to continue building its reserves from its current low base (accounting for a mere 2.4% of total foreign exchange reserves compared to 60%-80% held by most European countries). (Please see Gold and Other Reserves Table). On the other hand, gross gold sales will remain unimpressive in an environment supporting holding the gold metal, while any further developments in transactions out of **Venezuela** will be one to watch. Meanwhile, the theme of repatriation, particularly away from the United States continued last year, with the CBT reportedly transferring 220 tonnes of gold held in the Federal Reserve back to Istanbul, while the **Hungarian** Nation Bank (MNB) announced in March last year that it intends to take back all of its gold reserves (three tonnes or 98,999 ounces) currently stored in the Bank of England.

GOLD AND OTHER RESERVES (END - 2018)

	Gold Reserves (tonnes)	Total Reserves (US$ bn)*	% Held in Gold*
United States	8,134	447.6	74.9%
Germany	3,370	197.7	70.2%
IMF	2,814	n/a	n/a
Italy	2,452	151.6	66.6%
France	2,436	166.6	60.2%
Russian Federation	2,113	466.2	18.7%
China, P.R.: Mainland	1,853	3,157.4	2.4%
Switzerland	1,040	798.1	5.4%
Japan	765	1,259.6	2.5%
Netherlands	612	37.9	66.7%
India	600	397.9	6.2%
Turkey**	402	88.2	18.8%
Portugal	383	24.3	65.0%
Kazakhstan	350	31.0	46.5%
Saudi Arabia	323	517.3	2.6%

Source: IMF

Gold valued using market prices

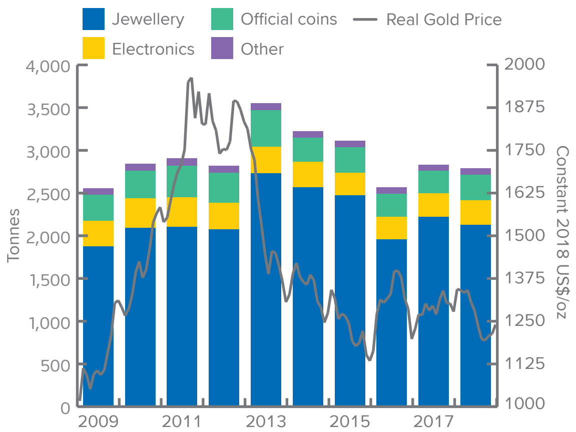
**Statistics taken from the Central Bank of Turkey

6. FABRICATION DEMAND

- Following a double-digit rise the previous year, global fabrication fell 2% in 2018, to an estimated 2,816 tonnes.
- The bulk of the fall was due to a 6% drop in jewellery fabrication last year, dragged lower by a material fall in Indian consumption and a drop in demand from the Middle East. Elsewhere it was currency weakness that impacted demand as the average gold price in U.S. dollar terms remained relatively stable.
- Global jewellery fabrication, excluding the use of scrap, saw a slightly larger fall than in 2017, retreating 6%, equivalent to a loss of 98 tonnes of new gold demand.
- Jewellery fabrication in East Asia rose for the first time in five years, rising 3% in 2018 to 887 tonnes. The annual increase was primarily a function of a return to growth from China, with the Asian giant enjoying the first yearly increase since 2013.
- Indian jewellery fabrication recorded a precipitous decline in 2018, sliding 12% to 632 tonnes, as a weaker rupee drove domestic gold prices to near record levels, leaving many consumers unwilling to purchase non-essential items.
- Jewellery fabrication in the Middle East was down quite sharply in 2018, falling 10% to a record low of 249 tonnes, dragged down by material falls in the UAE and Iran. European demand was also weaker last year, retreating 6% on a year-on-year basis. North American fabrication jumped by an impressive 8% in light of a stronger U.S. dollar and an improving economy, with demand from the United States 10% stronger on a year-on-year basis.
- Official gold coin fabrication rose by 17% or 33 tonnes to its highest level since 2013, reaching 224 tonnes.
- Gold used for industrial applications increased 3% in 2018, the second consecutive rise, to 391 tonnes, driven higher by another year of expansion from the electronics sector.
- Substitution losses and societal changes pushed dental and medical demand to a record low of 29 tonnes, a decline of 2% year-on-year.
- Other industrial and decorative demand rose 1% in 2018 to 74 tonnes, the second consecutive annual increase.

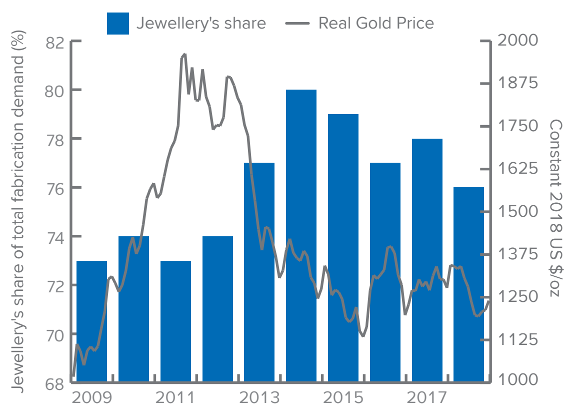
FABRICATION DEMAND

WORLD GOLD FABRICATION



Source: GFMS, Refinitiv

JEWELLERY'S SHARE OF TOTAL FABRICATION DEMAND



Source: GFMS, Refinitiv

WORLD GOLD FABRICATION (INCLUDING THE USE OF SCRAP)

(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Europe										
Turkey	111.3	109.0	136.3	114.2	178.1	155.8	111.9	100.5	121.7	98.4
Italy	134.6	126.3	103.3	95.9	92.3	96.0	94.3	88.3	88.7	83.6
Russia	57.5	61.0	66.2	72.2	74.3	70.1	51.8	46.9	47.1	47.4
Germany	38.1	40.8	38.8	36.4	36.8	39.4	40.8	36.8	40.6	43.7
Switzerland	37.5	40.8	47.9	47.8	46.0	44.3	40.9	34.4	33.0	35.7
United Kingdom	15.2	13.9	15.5	15.2	13.9	15.4	20.2	19.4	16.5	21.4
Austria	34.6	19.1	22.3	13.7	21.5	16.2	24.7	18.5	14.0	12.5
France	11.0	11.1	10.1	8.4	7.6	7.8	7.4	6.9	7.9	6.8
Spain	13.6	8.4	7.1	6.3	5.8	5.5	5.6	5.2	5.2	5.3
Greece	6.2	6.2	4.5	4.0	3.5	3.9	4.0	3.8	3.9	3.9
Poland	4.4	2.9	2.7	2.4	2.2	2.5	3.0	2.9	2.8	2.8
Netherlands	2.9	3.0	2.8	2.6	2.4	2.3	2.3	2.2	2.2	2.2
Portugal	2.9	2.3	1.7	1.4	1.4	1.7	1.5	1.4	1.5	1.5
Czech Republic	1.6	1.5	1.3	1.2	1.1	1.3	1.0	0.9	0.9	1.1
Belgium	1.0	0.9	0.9	0.9	0.8	0.9	0.9	0.8	0.8	0.8
Luxembourg	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Finland	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Slovakia	0.1	0.2	0.2	0.2	0.0	0.0	0.1	0.1	0.0	0.0
Other Countries	0.4	0.5	0.4	0.4	0.4	0.3	0.0	0.0	0.0	0.0
Total Europe	**483.1**	**457.4**	**470.8**	**431.4**	**496.4**	**470.8**	**417.8**	**376.3**	**393.8**	**372.5**
North America										
United States	173.1	179.1	166.7	146.9	160.0	150.4	167.1	171.9	149.6	156.0
Canada	48.4	43.7	44.9	32.4	44.5	31.7	40.1	40.7	28.6	25.0
Mexico	18.9	18.2	13.2	13.2	7.7	8.5	9.1	8.9	9.4	9.6
Total North America	**240.4**	**241.0**	**224.9**	**192.6**	**212.2**	**190.6**	**216.5**	**211.5**	**187.7**	**190.6**
South America										
Brazil	24.9	29.5	27.7	29.5	32.9	34.0	24.2	22.9	23.3	23.8
Chile	2.8	2.9	2.2	2.2	2.4	2.4	2.3	2.3	2.4	2.5
Costa Rica	1.1	1.2	1.3	1.3	1.0	1.2	1.7	1.7	1.7	1.8
Other Countries	111.5	10.5	8.6	8.3	7.8	8.6	9.2	8.7	8.6	8.5
Total South America	**40.3**	**44.0**	**39.7**	**41.3**	**44.2**	**46.3**	**37.4**	**35.6**	**36.0**	**36.6**
Asia										
China	431.3	522.5	650.7	697.7	1,288.6	1,013.4	920.0	787.6	771.2	785.2
India	571.0	783.4	761.0	736.0	715.8	770.6	811.7	505.8	782.8	700.5
Japan	140.5	157.5	147.2	126.1	124.2	118.6	102.2	99.3	99.6	99.9
South Korea	90.6	92.6	88.5	86.1	83.9	81.5	79.2	77.8	79.8	80.9
Iran	60.2	72.4	84.1	86.7	93.3	61.6	56.1	35.1	42.1	62.8
Indonesia	50.8	44.7	48.1	52.8	60.9	53.3	49.7	44.9	45.0	49.1
UAE	35.9	32.9	31.9	29.7	37.8	41.6	45.1	45.0	55.7	42.7
Saudi Arabia	66.6	58.9	46.6	41.1	52.4	47.2	51.7	40.0	33.5	34.4
Malaysia	45.0	44.8	41.1	38.7	48.6	44.7	39.4	33.8	30.2	30.1
Singapore	26.3	28.3	26.6	24.8	28.3	29.0	29.1	27.0	27.8	28.2
Thailand	30.5	27.4	24.9	21.8	29.8	27.1	27.4	23.9	24.3	24.7
Taiwan	23.1	26.1	24.0	22.5	22.2	21.3	20.2	21.1	22.8	23.9
Vietnam	16.0	14.7	13.6	11.9	12.8	13.9	15.5	15.7	16.8	20.0
Pakistan	29.7	26.1	22.1	20.6	24.6	20.9	22.6	16.1	19.4	17.9
Kuwait	11.4	10.6	10.2	9.6	10.3	11.0	10.8	9.8	10.6	11.8
Jordan	9.6	9.9	9.2	8.6	9.5	11.4	12.5	10.5	10.0	11.4
Sri Lanka	3.8	3.7	3.2	3.1	3.5	3.5	3.2	7.1	11.2	9.8
Uzbekistan	8.8	10.4	11.4	10.9	11.1	11.2	9.7	8.7	8.6	8.3
Lebanon	6.5	6.0	6.6	7.8	10.7	10.3	13.8	9.0	8.6	8.1
Kazakhstan	8.8	10.4	11.4	10.9	11.1	10.5	8.4	7.4	6.0	6.0

WORLD GOLD FABRICATION (INCLUDING THE USE OF SCRAP)

(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Bahrain	6.5	5.7	5.1	4.6	5.8	5.6	5.8	5.1	5.5	5.6
Israel	7.2	6.3	5.5	5.1	5.9	6.9	6.0	5.4	5.0	5.1
Iraq	3.8	3.7	3.8	3.9	5.0	4.9	5.1	4.1	3.8	3.6
Oman	4.5	4.1	3.5	3.2	3.8	3.6	3.7	3.3	3.0	3.2
Myanmar	3.0	2.6	2.3	2.3	2.7	2.4	2.6	2.7	2.8	3.0
Nepal	3.5	3.5	3.3	3.5	3.9	3.0	2.9	2.1	2.4	2.6
Philippines	3.1	2.9	2.3	2.1	2.4	2.4	2.5	2.3	2.3	2.4
Hong Kong	14.7	15.8	16.5	6.8	4.2	3.6	3.0	2.1	1.9	1.8
Qatar	2.1	1.9	1.6	1.7	2.1	1.9	2.1	1.9	1.7	1.8
Bangladesh	4.6	4.2	3.8	4.4	4.5	6.0	4.5	3.7	2.1	1.5
Other Countries	17.8	16.6	12.5	9.4	8.6	6.7	5.9	5.1	4.9	4.8
Total Asia	**1,723.6**	**2,038.0**	**2,113.0**	**2,085.6**	**2,717.1**	**2,449.4**	**2,372.2**	**1,863.1**	**2,141.1**	**2,091.1**
Africa										
South Africa	28.3	24.6	27.4	27.2	30.8	24.9	30.7	37.7	50.0	70.7
Egypt	44.9	43.3	30.2	38.7	41.8	41.5	38.6	27.5	23.6	24.5
Morocco	7.6	7.0	6.8	6.6	6.5	6.8	6.8	6.2	6.4	6.3
Libya	3.9	3.5	2.4	2.3	2.5	2.7	2.3	2.0	2.5	2.8
Other Countries	9.9	9.4	9.2	8.8	9.2	9.5	9.3	8.6	8.7	8.6
Total Africa	**94.7**	**87.7**	**76.0**	**83.5**	**90.8**	**85.3**	**87.7**	**82.0**	**91.1**	**112.9**
Oceania										
Australia	14.6	12.0	13.9	13.3	19.6	14.8	13.3	13.9	11.2	12.7
Total Oceania	**14.6**	**12.0**	**13.9**	**13.3**	**19.6**	**14.8**	**13.3**	**13.9**	**11.2**	**12.7**
World Total	**2,608.0**	**2,890.7**	**2,946.5**	**2,855.3**	**3,589.9**	**3,257.3**	**3,144.8**	**2,592.3**	**2,860.9**	**2,816.5**
...of which:-										
East Asia*	877.5	982.4	1,088.0	1,095.7	1,711.0	1,413.5	1,292.9	1,140.1	1,126.2	1,151.3
Indian Sub-Continent*	612.5	820.9	793.4	767.6	752.3	803.9	844.9	534.7	817.9	732.3
Middle East*	382.3	376.1	383.0	360.2	460.5	405.7	364.9	298.6	326.0	314.7
CIS*	78.1	84.2	90.9	95.9	98.5	93.6	71.7	64.5	63.3	63.2

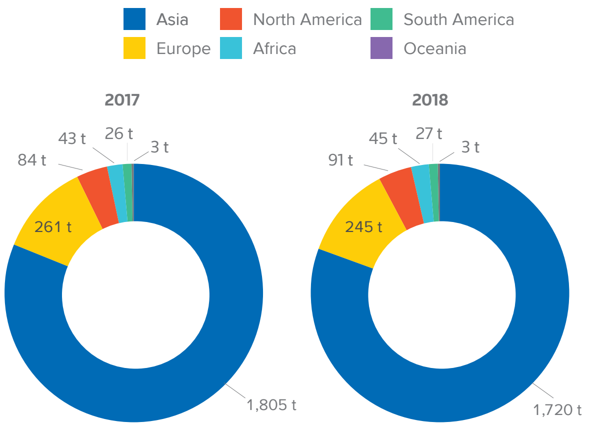
Source: GFMS, Refinitiv *The key regional bullion markets

CARAT JEWELLERY

INDIAN SUB-CONTINENT

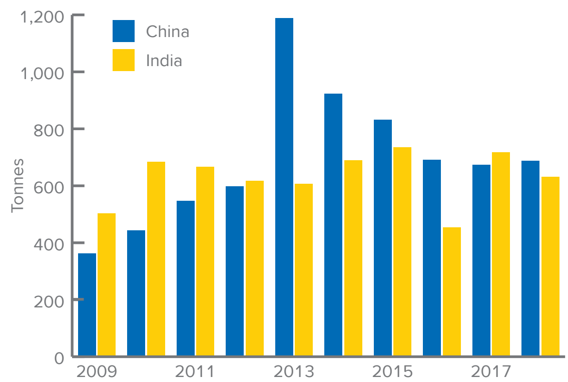
In 2017 the Indian jewellery market saw a significant capacity increase from retailers in the organised segment, resulting in higher fabrication volumes. However, in 2018 the expansion drive of organised retailers stalled, while at the same time, overall market demand fell sharply owing to the higher gold price, driving fabrication demand

GLOBAL JEWELLERY FABRICATION



Source: GFMS, Refinitiv

CHINESE AND INDIAN JEWELLERY FABRICATION



Source: GFMS, Refinitiv

FABRICATION DEMAND

GOLD FABRICATION IN INDUSTRIAL AND DEVELOPING COUNTRIES (INCLUDING THE USE OF SCRAP)

(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Industrial Countries*										
Jewellery Fabrication	372.1	357.9	329.7	303.2	309.1	315.8	313.7	295.8	293.1	297.7
Electronics	229.6	274.4	262.1	232.4	228.3	222.1	202.9	199.9	206.4	213.1
Dentistry	48.9	44.6	39.3	35.1	32.9	30.7	29.0	27.7	26.9	26.6
Other Industrial	38.6	41.0	39.3	37.6	37.1	37.3	36.8	35.5	36.6	36.5
Official Coin	147.2	116.6	116.9	87.6	116.5	84.6	115.4	112.5	71.7	72.3
Medals	1.8	1.9	3.3	2.3	2.4	2.4	6.5	7.0	7.1	6.3
Sub Total	**838.1**	**836.3**	**790.6**	**698.3**	**726.3**	**692.9**	**704.2**	**678.4**	**641.7**	**652.5**
Developing Countries*										
Jewellery Fabrication	1,507.4	1,737.7	1,779.1	1,771.5	2,427.9	2,253.3	2,160.7	1,665.9	1,928.7	1,831.5
Electronics	65.3	71.6	79.9	77.4	78.1	74.8	64.5	64.5	70.6	75.3
Dentistry	3.8	3.8	3.6	3.5	3.4	3.3	2.9	2.6	2.5	2.2
Other Industrial	40.2	44.5	46.0	46.2	48.1	42.6	39.5	35.5	36.7	37.8
Official Coin	97.9	112.1	164.5	148.6	205.9	116.9	103.2	96.8	119.6	151.7
Medals	57.1	86.5	84.5	111.1	101.5	75.0	71.1	49.8	62.4	66.2
Sub Total	**1,771.7**	**2,056.2**	**2,157.5**	**2,158.2**	**2,864.9**	**2,565.7**	**2,441.8**	**1,915.1**	**2,220.4**	**2,164.7**
World Total	**2609.8**	**2,892.4**	**2,948.0**	**2,856.7**	**3,591.3**	**3,528.6**	**3,146.0**	**2,593.5**	**2,862.0**	**2,816.5**

Source: GFMS, Refinitiv

*Industrial and Developing countries consistent with IMF definitions

JEWELLERY CONSUMPTION * (INCLUDING SCRAP)

(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
China	376.3	453.8	550.9	608.7	1,025.4	823.7	743.1	621.8	600.3	567.4
India	471.4	657.6	618.3	552.0	612.7	662.1	674.5	463.1	623.7	539.1
United States	150.3	121.4	111.5	104.2	122.0	128.2	135.3	136.0	122.0	133.9
Hong Kong	24.3	30.5	41.8	38.6	73.6	56.9	47.3	37.2	39.8	44.0
UAE	74.6	71.6	62.1	55.5	68.6	59.9	55.3	46.2	52.1	41.4
Indonesia	45.0	37.7	42.2	46.7	53.6	47.7	40.1	34.2	36.2	40.4
South Korea	47.5	43.4	43.1	44.3	42.1	42.2	41.8	41.3	40.4	40.2
Saudi Arabia	99.3	88.1	68.6	58.3	73.2	67.8	73.6	50.7	37.5	35.4
Iran	39.9	42.3	41.3	43.4	47.9	35.7	35.4	39.7	44.9	33.5
Turkey	75.2	67.4	70.1	61.5	73.3	68.2	49.3	41.2	39.4	33.2
Iran	45.8	39.9	42.3	41.3	43.4	47.9	35.7	35.4	39.7	44.9
Russian Federation	56.7	60.1	64.7	69.6	73.3	70.6	34.1	30.2	34.0	33.2
Egypt	56.7	53.4	33.8	39.7	45.1	46.9	40.9	27.9	23.2	23.6
Kuwait	19.1	18.1	16.9	16.1	21.2	24.9	23.1	20.1	22.6	23.4
Vietnam	16.4	15.6	14.2	12.6	13.5	14.2	15.8	16.3	17.1	20.6
United Kingdom	31.8	27.3	22.6	21.4	23.4	27.6	27.4	25.2	21.6	20.5
Israel	26.6	25.7	21.9	21.5	25.3	23.3	24.8	20.2	19.8	20.2
Bangladesh	4.6	4.2	12.3	15.2	15.6	16.2	16.5	18.1	19.8	19.9
Japan	22.3	21.3	16.6	16.7	21.4	20.0	19.7	19.8	19.1	18.6
Italy	41.4	34.9	27.6	22.3	20.2	18.8	18.1	17.6	17.2	16.4
Source: GFMS, Refinitiv										
Canada	22.3	18.6	17.5	16.3	15.7	16.3	16.7	16.9	16.2	15.4

Source: GFMS, Refinitiv

*Fine gold content of all new jewellery sold at the retail level (excluding the exchange of old for new jewellery), calculated by taking jewellery fabrication, plus imports less exports and adjusting for retail stock movements.

REFINITIV

INDIAN JEWELLERY FABRICATION AND CONSUMPTION

(tonnes)	Q1-18	Q2-18	Q3-18	Q4-18
Fabrication	148.0	143.2	156.0	185.0
Consumption	111.5	145.8	120.3	161.5
Average Price (Rs./10g)	30,352	31,081	30,101	31,221

Source: GFMS, Refinitiv

lower. Our field survey revealed that a cash crunch was the prime factor behind the stalling of expansion. Banks demanded that they cut their credit exposure by 35% for the majority of leading jewellers, following a $40 million fraud executed by Nirav Modi, primarily a diamond merchant. Many of the leading jewellers postponed their expansion plans to 2019. Secondly, a higher gold price in the local currency on account of the depreciation of the rupee kept buyers away. The largest falls in fabrication demand were seen in the first two quarters of the year, with offtake declining by 15% and 26% respectively. In volume terms, fabricators having diversified products suffered relatively less compared to those fabricators specialising in a single product or two. Trade margins also came down as fabricators added less value to jewellery. Wholesalers preferred to quote for jewellery with standard designs as gold was already expensive and adding more value as a result of higher making charges would only make the final product more expensive.

EAST ASIA

Jewellery fabrication in East Asia rose for the first time in five years, rising 3% in 2018 to 887 tonnes. The annual increase was primarily a function of a return to growth from China, given the Asian giant accounts for more than 75% of this regional grouping. Chinese jewellery offtake rose 2% last year, enjoying the first yearly increase since the market exploded in 2013, due in part to greater emphasis towards pure gold jewellery (having been focused on carat jewellery in recent years), which helped lift fine gold consumption. The removal of the Goods and Services (GST) tax in Malaysia mid-year was not sufficient to offset first half losses with fabrication volumes stable overall in 2018. Meanwhile, Thailand and Singapore both recorded modest gains last year, edging 2% and 1% higher respectively, helped in both cases by a surge in demand in the third quarter, when the U.S. dollar gold price dipped below $1,180/oz. The stand out in the region was again Vietnam which saw jewellery fabrication volumes jump 20% last year as consumers looked to pure gold items as a means of storing wealth and protecting themselves from currency weakness.

EUROPE

European fabrication fell in 2018, dropping by 5% or 22 tonnes to its lowest level since 2016 at 373 tonnes. With the exception of the electronics segment, which rose by 4% or 1 tonne to 31 tonnes, its highest level in three years (on the back of increased semi-conductor chip fabrication, a crucial component of modern devices), all other areas of demand recorded declines. Jewellery fabrication, which constitutes the largest share of fabrication at 66%, was the worst hit, dropping by 6% or 16 tonnes to mark the lowest level of fabrication this century at 245 tonnes, with a general slowdown in the economic outlook across the Eurozone, in conjunction with falling consumer confidence and internal political turmoil pausing spending. Meanwhile, fabrication across official coins fell by 6% to its lowest level since 2016, with consumer preferring to purchase physical bars, while dentistry and other industrials both fell by 6% and 1% respectively.

NORTH AMERICA

North American jewellery fabrication had a strong year in 2018, rising 8% to 91 tonnes, largely on the back of robust underlying sentiment in the United States where the economy, particularly in the first half of the year, saw healthy gains. It should be noted that demand slowed considerably towards year's end with the market showing significant signs of fatigue in the final quarter and most notably in December, tempering the full year outcome. Jewellery imports, which have been on the rise for five consecutive years, declined 7% last year, but so did exports, and to the tune of 9%, which resulted in a rise of jewellery consumption of 9% year-on-year, with North American offtake reaching 157 tonnes last year.

CARAT JEWELLERY FABRICATION (INCLUDING THE USE OF SCRAP)

(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Europe										
Italy	123.3	116.0	93.8	86.2	82.6	86.2	84.9	79.3	79.7	74.9
Turkey	80.0	73.0	77.0	73.8	87.1	114.8	91.6	77.6	83.2	70.1
Russia	34.9	39.4	45.1	49.2	51.9	49.8	33.3	29.5	33.0	33.2
Switzerland	20.1	21.1	29.4	31.1	30.1	28.7	25.4	19.3	17.4	20.0
Germany	14.8	15.0	15.3	14.7	14.7	14.7	14.0	13.3	13.2	13.6
United Kingdom	9.2	8.2	6.9	6.7	7.3	8.9	9.0	8.8	7.2	7.3
France	10.1	10.2	9.2	7.6	6.5	6.3	6.0	5.8	5.8	5.6
Spain	12.3	7.4	6.2	5.4	4.9	4.6	4.7	4.4	4.4	4.6
Greece	5.8	5.8	4.1	3.7	3.5	3.9	4.0	3.8	3.9	3.9
Poland	3.7	2.6	2.3	2.0	1.8	2.1	2.7	2.5	2.6	2.5
Portugal	2.8	2.2	1.6	1.3	1.3	1.5	1.4	1.3	1.4	1.4
Other Countries	7.7	7.2	6.7	6.4	6.3	6.8	6.8	6.5	6.4	4.7
Total Europe	**328.3**	**311.6**	**300.9**	**290.9**	**301.1**	**331.4**	**286.8**	**255.2**	**261.1**	**244.9**
North America										
United States	63.0	66.0	60.3	53.7	61.4	63.8	66.8	66.1	67.6	74.0
Canada	9.8	9.3	8.7	8.2	8.7	9.3	10.1	9.7	9.6	9.9
Mexico	17.3	14.4	11.5	10.6	5.1	6.3	6.5	6.5	6.6	6.8
Total North America	**90.1**	**89.7**	**80.5**	**72.5**	**75.2**	**79.3**	**83.4**	**82.4**	**83.8**	**90.7**
South America										
Brazil	17.7	22.6	19.4	19.3	21.6	25.1	16.0	14.7	14.8	15.2
Chile	2.8	2.9	2.2	2.2	2.4	2.4	2.3	2.3	2.4	2.5
Costa Rica	1.1	1.2	1.3	1.3	1.0	1.2	1.7	1.7	1.7	1.8
Dominican Republic	2.8	2.5	1.9	1.8	1.2	1.5	1.8	1.7	1.7	1.7
Colombia	1.2	1.1	1.2	1.1	1.1	1.3	1.5	1.5	1.5	1.5
Other Countries	6.5	5.9	4.4	4.2	4.2	4.5	4.7	4.3	4.2	4.1
Total South America	**32.1**	**36.1**	**30.3**	**29.8**	**31.5**	**36.1**	**27.9**	**26.1**	**26.4**	**26.7**
Asia										
China	363.6	444.3	547.4	598.8	1,188.3	923.2	832.6	691.4	673.9	688.2
India	503.4	685.0	667.0	618.2	607.4	690.0	736.2	454.4	718.1	632.2
Indonesia	49.6	43.4	46.8	51.4	59.5	51.9	48.2	43.5	43.5	47.5
South Korea	48.0	43.8	43.2	42.6	41.7	41.4	41.0	40.7	40.4	40.2
UAE	34.0	31.0	29.8	26.9	34.4	38.7	41.5	41.7	53.1	40.1
Saudi Arabia	66.6	58.9	46.6	41.1	52.4	47.2	51.7	40.0	33.55	34.4
Malaysia	45.0	44.8	41.1	38.7	48.6	44.7	39.4	33.8	30.2	30.1
Iran	31.0	32.8	31.8	31.7	35.3	28.0	29.1	32.6	35.8	28.6
Thailand	28.0	24.7	22.2	19.1	27.0	24.4	24.6	21.1	21.5	21.9
Vietnam	16.0	14.7	13.6	11.9	12.8	13.9	15.5	15.7	16.8	20.0
Pakistan	29.7	26.1	22.1	20.6	24.6	20.9	22.6	16.1	19.4	17.9
Singapore	7.9	8.9	9.7	10.4	15.0	15.9	17.6	16.0	15.9	16.1
Japan	14.4	14.3	12.9	13.3	14.5	13.3	13.0	13.0	12.7	12.2
Kuwait	11.4	10.6	10.2	9.6	10.3	11.0	10.8	9.8	10.6	11.8
Jordan	9.6	9.9	9.2	8.6	9.5	11.4	12.5	10.5	10.0	11.4
Sri Lanka	3.8	3.7	3.2	3.1	3.5	3.5	3.2	7.1	11.2	9.8
Lebanon	6.5	6.0	6.6	7.8	10.7	10.3	13.8	9.0	8.6	8.1
Uzbekistan	7.6	9.2	10.2	9.7	9.9	10.1	8.6	7.8	7.7	7.3
Bahrain	6.5	5.7	5.1	4.6	5.8	5.6	5.8	5.1	5.5	5.6
Kazakhstan	7.6	9.2	10.2	9.7	9.9	9.3	7.4	6.5	5.1	5.1
Israel	6.6	5.7	4.9	4.5	5.3	6.5	5.6	5.0	4.8	4.9
Iraq	3.8	3.7	3.8	3.9	5.0	4.9	5.1	4.1	3.8	3.6
Taiwan	5.8	5.3	4.6	4.6	4.9	4.5	4.0	3.4	3.4	3.4
Oman	4.5	4.1	3.5	3.2	3.8	3.6	3.7	3.3	3.0	3.2

CARAT JEWELLERY FABRICATION (INCLUDING THE USE OF SCRAP)

(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Myanmar	3.0	2.6	2.3	2.3	2.7	2.4	2.6	2.7	2.8	3.0
Nepal	3.5	3.5	3.3	3.5	3.9	3.0	2.9	2.1	2.4	2.6
Philippines	3.1	2.9	2.3	2.1	2.4	2.4	2.5	2.3	2.3	2.4
Qatar	2.1	1.9	1.6	1.7	2.1	1.9	2.1	1.9	1.7	1.8
Bangladesh	4.6	4.2	3.8	4.4	4.5	6.0	4.5	3.7	2.1	1.5
Armenia	3.1	2.5	1.9	1.9	2.0	1.9	1.8	1.5	1.5	1.5
Cambodia	2.0	1.8	1.6	1.6	1.7	1.7	1.5	1.4	1.3	1.4
Other Countries	14.3	14.5	15.0	5.5	3.2	2.8	2.5	2.2	2.1	2.1
Total Asia	**1,355.2**	**1,588.6**	**1,643.5**	**1,620.0**	**2,264.1**	**2,056.6**	**2,014.2**	**1,549.2**	**1,804.8**	**1,720.0**
Africa										
Egypt	44.0	42.1	28.7	37.5	40.7	40.6	37.8	26.9	23.0	24.0
Morocco	7.6	7.0	6.8	6.6	6.5	6.8	6.8	6.2	6.4	6.3
South Africa	5.1	4.5	3.7	3.5	3.3	3.4	3.0	2.5	2.7	2.8
Libya	3.9	3.5	2.4	2.3	2.5	2.7	2.3	2.0	2.5	2.8
Algeria	2.5	2.4	2.1	2.1	2.3	2.3	2.2	2.0	2.1	2.1
Tunisia	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.5	1.4	1.3
Other Countries	5.9	5.5	5.4	5.2	5.4	5.6	5.5	5.1	5.2	5.2
Total Africa	**70.5**	**66.5**	**50.7**	**58.5**	**62.1**	**62.9**	**59.2**	**46.2**	**43.3**	**44.5**
Oceania										
Australia	3.2	3.2	2.9	2.8	2.9	2.7	2.8	2.6	2.5	2.5
Total Oceania	**3.2**	**3.2**	**2.9**	**2.8**	**2.9**	**2.7**	**2.8**	**2.6**	**2.5**	**2.5**
World Total	**1,866.4**	**2,083.2**	**2,099.0**	**2,065.9**	**2,726.0**	**2,559.2**	**2,463.6**	**1,953.3**	**2,214.4**	**2,129.2**
...of which:-										
East Asia*	598.3	664.2	761.0	800.7	1,420.5	1,140.7	1,043.5	885.8	865.6	887.3
Indian Sub-Continent*	544.9	722.6	699.4	649.8	643.9	723.4	769.4	483.3	753.2	664.0
Middle East*	317.8	296.2	266.5	259.6	305.8	326.6	312.9	268.9	277.9	248.9
CIS*	53.1	60.2	67.4	70.4	73.7	71.1	51.1	45.2	47.6	47.2

Source: GFMS, Refinitiv *The key regional bullion markets

MIDDLE EAST

Gold used in jewellery fabrication in the Middle East was down quite sharply in 2018, falling 10% to a record low 249 tonnes. As was the case the previous year, the region as a whole was quite diverse, with several markets recording significant contractions while others registered annual growth. Fabrication demand in the UAE fell acutely following the implementation of the Good and Services Tax (GST) at the start of the year with the higher chargers and supply chain uncertainty driving fabrication volumes down by 24% year-on-year. Following a strong performance in 2017, jewellery fabrication in Iran fell sharply, slumping 20% to a record low 29 tonnes as continued sanctions and a rapidly weakening economy ravaged domestic consumption. Locals were inclined to purchase gold coins as a means of protecting wealth rather than purchasing discretionary jewellery items. Economic pressures also played a role in Lebanese fabrication losses, with offtake 5% lower than the previous year.

There were several markets in the region to register gains in jewellery fabrication in 2018. However, not all were in response to stronger domestic consumption. The introduction of the GST in the UAE at the beginning of the year created higher costs across the supply chain and this in turn saw wholesalers in the region choose to purchase more items from local fabricators. This was most notable across the GCC with Saudi Arabia, Kuwait, and Bahrain recording modest year-on-year gains due to a drop of imported product in favour of locally fabricated items. In Jordan, local fabrication recorded a healthy 14% rise following a higher stamping charge on imported items, but jewellery consumption was hit hard by higher prices and a fragile economy.

CARAT JEWELLERY FABRICATION (EXCLUDING THE USE OF SCRAP)

(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Europe										
Italy	90.3	70.0	49.8	46.2	58.6	66.2	66.8	60.9	61.5	57.3
Turkey	24.8	18.5	29.0	30.8	51.4	88.5	45.7	29.7	46.1	34.3
Switzerland	20.1	21.1	29.4	31.1	30.1	28.7	25.4	19.3	17.4	20.0
Germany	9.8	10.0	10.4	9.7	11.6	12.7	12.0	11.2	11.1	11.6
Russia	43.2	21.2	27.4	34.6	38.2	43.9	31.9	8.9	9.1	11.7
France	8.1	7.7	6.2	4.6	4.5	5.0	4.6	4.3	4.3	4.2
United Kingdom	4.8	3.4	2.4	1.7	4.3	6.8	6.9	5.9	3.9	4.1
Greece	2.8	2.5	0.8	0.6	2.1	2.8	2.8	2.5	2.7	2.7
Spain	3.7	0.5	0.5	0.2	1.9	2.3	2.7	2.1	2.3	2.5
Poland	1.5	0.2	0.1	0.5	0.7	1.3	1.8	1.5	1.6	1.6
Other Countries	5.9	3.3	1.8	1.7	5.2	7.1	7.1	6.6	6.6	5.5
Total Europe	**193.0**	**164.6**	**165.0**	**164.9**	**214.1**	**253.1**	**184.6**	**153.3**	**169.3**	**154.6**
North America										
United States	41.0	39.5	34.4	27.3	33.4	35.3	40.0	41.5	43.2	50.7
Canada	5.3	4.6	4.2	4.6	5.3	6.3	7.1	7.9	7.9	8.2
Mexico	4.5	1.3	0.4	2.0	4.7	4.8	4.5	4.3	4.5	4.8
Total North America	**50.8**	**45.4**	**39.0**	**33.9**	**43.4**	**46.4**	**51.6**	**53.7**	**55.6**	**63.7**
South America										
Brazil	8.1	9.3	6.7	6.5	6.4	16.2	10.0	8.0	7.8	8.2
Chile	2.1	2.1	1.3	1.3	1.6	1.7	1.5	1.4	1.4	1.5
Other Countries	2.8	1.9	2.1	1.8	2.9	3.9	5.1	4.4	4.2	4.3
Total South America	**13.0**	**13.3**	**10.0**	**9.7**	**11.0**	**21.7**	**16.5**	**13.8**	**13.5**	**14.0**
Asia										
India	387.9	604.0	608.5	505.2	506.6	615.8	648.7	323.1	630.4	529.1
China	262.7	334.6	438.4	468.1	1048.4	762.6	643.9	494.5	484.8	500.1
Indonesia	20.8	20.6	24.5	33.9	46.8	39.8	35.0	28.3	29.3	34.5
UAE	19.3	9.4	14.7	15.2	24.6	29.6	33.7	33.9	49.0	34.2
Saudi Arabia	35.5	33.4	24.3	21.1	38.6	34.5	41.8	30.4	24.0	26.7
Malaysia	36.0	36.3	33.9	32.3	43.0	39.6	35.0	29.4	25.7	26.2
South Korea	7.3	10.3	13.1	18.9	26.6	25.4	23.8	22.2	21.9	21.3
Iran	11.7	15.0	14.3	15.7	23.0	16.8	19.8	22.5	25.8	17.0
Thailand	11.4	11.5	9.7	8.8	20.7	18.8	18.7	13.9	15.7	16.3
Vietnam	4.6	4.5	6.8	6.0	7.7	9.1	11.0	10.2	12.1	16.2
Singapore	3.4	4.9	5.5	6.9	12.8	13.8	15.7	13.9	13.7	13.9
Kuwait	6.9	7.0	7.1	7.1	8.5	9.3	9.3	8.3	9.2	10.9
Jordan	8.7	8.5	7.8	7.2	8.5	10.2	11.6	9.2	8.6	10.2
Pakistan	3.9	6.3	6.0	3.8	11.7	6.9	9.8	1.9	11.0	9.6
Sri Lanka	1.1	1.3	0.9	0.9	1.6	2.1	2.4	6.4	10.3	8.8
Lebanon	4.5	4.2	5.3	6.7	8.6	8.2	12.1	7.7	7.1	6.8
Uzbekistan	5.9	7.6	8.7	8.1	8.5	8.8	7.1	6.0	5.9	5.4
Bahrain	3.0	2.8	2.5	2.5	4.2	4.1	4.5	3.9	4.2	4.5
Israel	1.7	1.0	0.9	1.0	2.6	3.6	3.3	2.8	2.5	2.,8
Kazakhstan	5.9	7.6	8.7	8.1	8.5	8.0	5.4	4.0	2.6	2.6
Myanmar	1.8	1.6	1.4	1.5	2.1	1.9	2.1	2.1	2.2	2.5
Taiwan	1.1	1.2	1.5	2.7	3.6	3.5	3.2	2.5	2.4	2.4
Iraq	0.0	0.2	0.7	1.3	3.2	3.2	3.7	2.5	2.2	2.1
Oman	1.8	1.6	1.5	1.4	2.4	2.4	2.7	2.1	1.7	2.0
Philippines	1.6	1.6	1.0	0.9	1.5	1.5	1.7	1.5	1.4	1.7
Nepal	1.6	1.7	1.7	2.2	2.8	1.8	2.3	1.2	1.4	1.7
Other Countries	19.1	17.1	19.8	8.6	13.0	11.1	9.3	7.6	5.3	4.5
Total Asia	**869.0**	**1,155.7**	**1,269.1**	**1,195.7**	**1,889.6**	**1,692.2**	**1,617.3**	**1,091.8**	**1,410.3**	**1,313.9**

CARAT JEWELLERY FABRICATION (EXCLUDING THE USE OF SCRAP)

(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Africa										
Egypt	6.5	15.1	3.9	5.1	17.2	19.4	19.3	7.7	5.1	9.0
South Africa	3.8	3.2	2.1	2.0	2.2	2.4	2.0	1.3	1.6	1.7
Other Countries	5.8	6.1	4.8	4.7	6.6	7.9	7.5	5.4	6.3	6.9
Total Africa	**16.1**	**24.4**	**10.8**	**11.8**	**26.0**	**29.7**	**28.8**	**14.3**	**13.0**	**17.6**
Oceania										
Australia	1.9	1.5	0.5	0.5	1.4	1.0	1.9	0.7	0.3	0.4
Total Oceania	**1.9**	**1.5**	**0.5**	**0.5**	**1.4**	**1.0**	**1.9**	**0.7**	**0.3**	**0.4**
World Total	**1,143.6**	**1,404.8**	**1,494.5**	**1,416.7**	**2,185.6**	**2,044.1**	**1,900.8**	**1,327.6**	**1,662.0**	**1,564.1**
...of which:-										
Indian Sub-Continent*	396.0	614.8	618.3	513.7	524.9	630.8	666.7	335.2	654.3	549.8
East Asia*	359.4	434.5	549.5	583.6	1,220.7	919.9	792.9	621.0	610.9	636.6
Middle East*	130.4	122.8	115.5	116.8	194.1	231.2	208.8	162.0	186.9	162.0
CIS*	35.7	44.6	53.3	55.7	62.4	50.1	22.8	20.0	21.5	19.6

Source: GFMS, Refinitv; *The key regional bullion markets

INDUSTRIAL DEMAND

- **Gold demand in the electronics sector benefitted from a surge in semi-conductor demand, rising 4% in 2018 to 288 tonnes, with gold bonding wire production edging higher for the second year running.**
- **Worldwide sales of semi-conductors reached the industry's highest-ever annual total, increasing almost 14% compared to the 2017 total, with strong growth recorded across the board.**
- **Dental demand continued its long term down trend, slipping 2% year-on-year to a new record low of 29 tonnes. The annual decline a function of substitution-led losses, elevated gold prices, and societal change. Meanwhile, other industrial and decorative demand edged 1% higher to 74 tonnes.**
- **Total gold used for all industrial applications increased 3% in 2018, the second consecutive rise, to 391 tonnes, driven higher by another year of growth from the electronics sector.**

ELECTRONICS

Gold used in electronic applications rose for a second consecutive year in 2018, increasing 4% year-on-year to an estimated 288 tonnes, led higher by strong demand from the memory, wireless, and printed circuit board (PCB) sectors. The electronics sector accounts for 74% of total industrial demand and has enjoyed somewhat of a renaissance in recent years on a stronger economic footing and booming semi-conductor demand, jumping to a four year high last year. Demand may well have been stronger in 2018 if it were not for the trade-related conflict between the United States and China, with demand falling away in the latter stages of the year as a number of companies held off capital investment projects (whether to stay in China or shift overseas) and reduced orders to deplete inventory for fear of a trade induced slowdown.

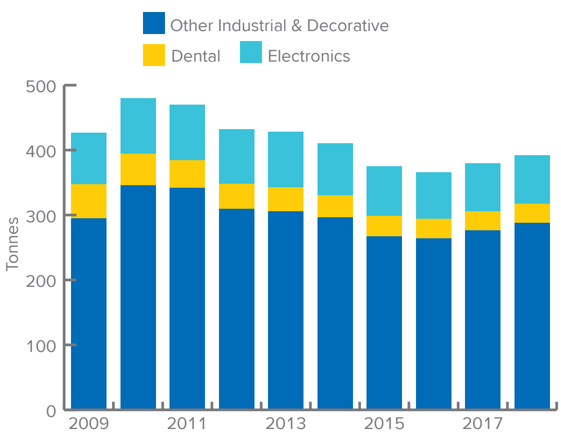
Most gold consumed in electronics occurs through the use of bonding wires which are used to make the interconnections between an integrated circuit (IC) or other semi-conductor device and its packaging. Gold was once dominant in this sector demanding over 90% market share, but substitution to cheaper alternatives such as copper, palladium-copper and increasingly silver and aluminium, have continued to erode the market share of gold used in this application. With these more affordable options dominating in the low cost electronics segment, gold's market share has fallen below 30% of the total bonding wire production volumes. The growth in gold used in the electronics segment in the last two years has been driven not by a rise in market share, but by the surge in demand for semi-conductor fabrication which has boosted overall bonding wire demand. We estimate gold used in bonding wire fabrication rose 3% in 2018 to an estimated 62 tonnes, the highest level since 2014. The outlook for 2019 is one of caution with demand in recent months well down on 2018 levels for the same period.

According to the Semi-conductor Industry Association (SIA) worldwide sales of semi-conductors reached $468.8 billion in 2018, the industry's highest-ever annual total and an increase of almost 14% compared to the 2017 total. Memory was the largest semi-conductor category by sales in 2018, and the fastest growing, with sales increasing 27%. Within the memory category, sales of DRAM products increased an impressive 36% and sales of NAND flash products increased 15%. Moreover, logic and micro-integrated circuits rounded out the top three product categories in terms of total sales. According to the SIA data, annual sales rose substantially across all regions with China, the Americas, and Europe the standouts, rising 20%, 16%, and 12% respectively.

There are signs that electronics demand may be easing in some segments but growth is expected to be especially high in the automotive market in coming years due to the development of advanced driver-assistance systems (ADAS), strength in connectivity and telematics and increasing sales associated with a range of automotive aftermarket products. Tyre pressure monitoring systems, airbags, anti-lock braking systems, satellite radio, and emission control are just some of the prominent applications that require the incorporation of an embedded system for their operations. Several other applications should also provide the platform for further growth in semi-conductor demand in the coming years, including the roll out of 5G networks and the internet of things (IoT). Semi-conductors are needed for a wide array of aspects of cloud integration and connectivity, including computing, sensors, communications, and interactivity. Estimates of the impact of the IoT vary widely, but by every account it will be enormous; the installed base of connected devices is forecasted to double or even quintuple through 2020.

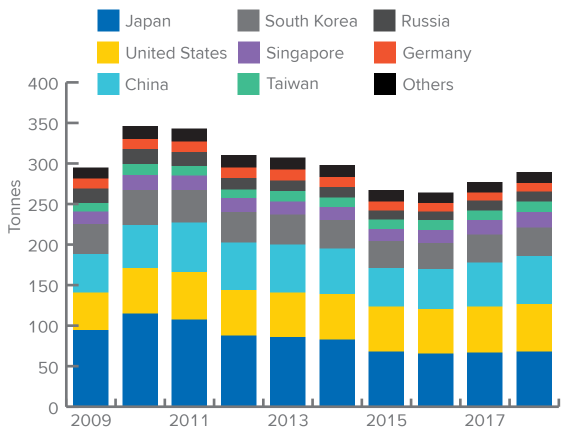
On a regional basis, Asia, which accounts for almost 70% of gold consumption in the electronics sector, recorded a 4% increase year-on-year, following on from a 6% rise in 2017. Demand at 198 tonnes was the highest level since 2014. As mentioned earlier, global demand towards the end of the year was tempered by a material slowdown in China, due in part to the ongoing trade dispute with the United States with several key markets reporting a year-on-year decline in the fourth quarter. Despite the end of year slowdown the strength in the first half saw most markets register modest gains on an annual basis, but the outlook for this year is not as optimistic after a slow start. Fabrication demand in Japan, South Korea, and Singapore, all manufacturing centres for bonding wire, rose by 1%, 4%, and 2% respectively. Elsewhere, a stronger economic footing helped boost North American demand 3% higher last year, while European offtake rose 4% on an annual basis.

GLOBAL INDUSTRIAL DEMAND



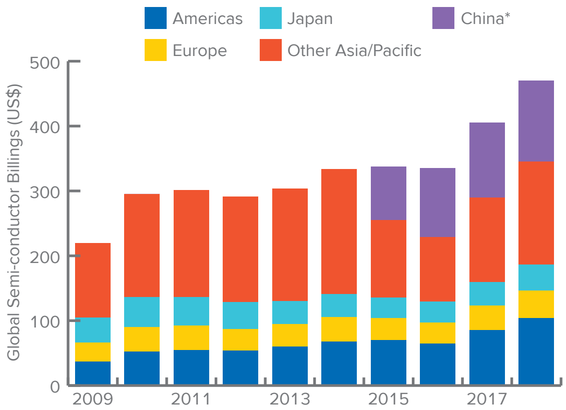
Source: GFMS, Refinitiv

GLOBAL ELECTRONICS DEMAND



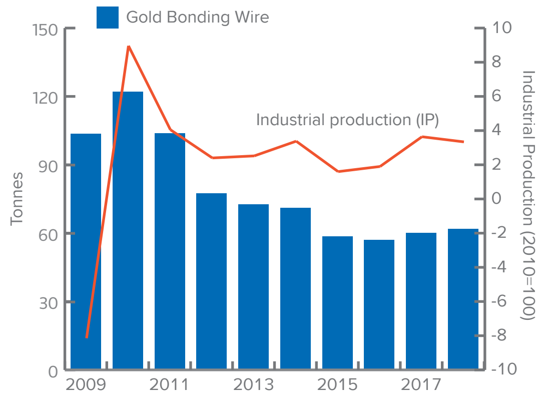
Source: GFMS, Refinitiv

GLOBAL SEMI-CONDUCTOR BILLINGS



*China was combined with Other Asia/Pacific prior to 2015
Source: SIA

FABRICATION OF GOLD BONDING WIRE



Source: GFMS, Refinitiv; OECD

DENTISTRY

Demand for gold used in dental applications maintained its secular retreat in 2018, slipping 2% year-on-year to a new record low of 29 tonnes. In the past decade or more, the proportion of gold used in this segment, especially in industrialised economies, has been eroded by alternatives, such as resin composites, ceramics and porcelain-fused metal due to both price and cosmetic reasons. The global dental market, in terms of gold consumption, is dominated by Japan which contributes just shy of 50% of the global total. Indeed, gold is still commonly used in the fabrication of a dental alloy known as Kinpala 12 which consists of gold, palladium and silver. Japanese demand last year largely mirrored that of 2017 with offtake on track for annual growth part way through the year, but fell away sharply as the price of palladium surged in the final quarter. This left the supply chain reluctant to replenish inventory levels as the price of the white metal was much higher than available via the government rebate, with annual demand slipping 1%. Elsewhere, demand in North America also retreated 1%, while gold used in this sector in North America was largely unchanged.

OTHER INDUSTRIAL & DECORATIVE

In 2018 gold consumed in the other industrial segment (OID) rose 1% year-on-year to an estimated 74 tonnes, the second consecutive annual rise. As was the case in 2017, there were two main factors in play last year in that the dollar gold price was relatively stable (the average price increased less than 1% last year) combined with a solid economic footing (especially in the United States), which helped boost demand for luxury branded items, and in turn, gold used in plating salts such as potassium gold cyanide (PGC). Gold plating of luxury branded items like sunglasses, handbag buckles and clasps, pens, and money clips continues to rise as branded high-end products gain in popularity among the emerging middle classes across Asia and indeed in the industrialised world. However, it is not just the luxury end of the market that drives demand in this segment, with demand for gold plated jewellery also gaining momentum as younger generations look to reduce expenditure on discretionary items. Fabrication demand in Europe edged 1% lower, while North American gold used in this sector was largely unchanged.

Asia as a bloc contributes more than 50% of the global total in this sector, with this group rising 5% in 2018. Chinese demand increased for the second consecutive year and was responsible for most of the annual rise in the region although Japan also recorded a modest increase. Indian demand saw yet another year of consolidation in the other industrial and decorative segment. Almost no demand came from jari manufacturers as the average gold price consistently remained high and using the metal in manufacturing would only make the final product overtly expensive. Meanwhile, the plated jewellery segment enjoyed a good year with gold plated silver jewellery attracting customers due to its affordability and as a symbol of luxury for the lower income groups. Some gold plating is also occurring on articles made out of brass. We expect this segment to grow further in coming years as retailers are aggressively marketing through leading online stores.

CHINA

- **China's total gold demand (excluding central bank purchases) amounted to 998 tonnes in 2018, a less than 1% year-on-year increase from the previous year. Following four consecutive years of declines, gold demand in China finally returned to growth in 2018.**

- **Jewellery fabrication, which accounts for 69% of the country's annual gold consumption, recorded a modest 2% annual increase to reach 688 tonnes last year. It was the first annual increase since the sector's demand peaked in 2013. Demand for gold bar retreated by more than 3% in 2018 to 213 tonnes, though the annual loss was lessened by a rebound in demand in the fourth quarter.**

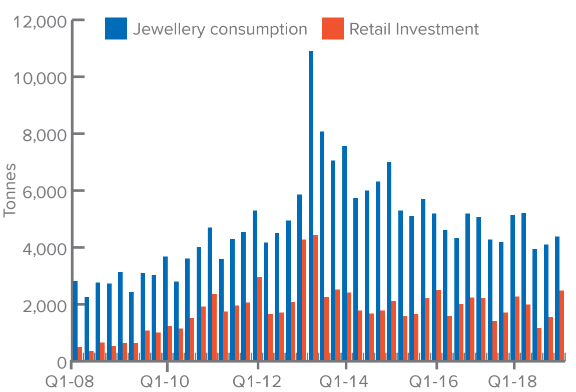
- **Looking forward to 2019, we are not overly optimistic towards the country's gold demand as negative spending sentiment could hamper the country's jewellery consumption, as demonstrated by a relatively lackluster sales performance during the Chinese New Year. In addition, volatile domestic equity markets have attracted capital that is looking for speculative opportunities to the detriment of gold trading activity, which has been perceived as dull by many investors considering its relatively stable price trajectory in recent years.**

As **Chinese** demand for gold peaked in 2013, when bargain hunters emerged trying to catch a falling knife with the international gold price breaking below $1,500/oz, many insiders working in the gold industry admitted that the resulting buying frenzy was something they had never seen and was unlikely to ever happen again. The gold price continued to fall until the end of 2015, and with investors having already stocked up in 2013, Chinese consumers lost interest in gold as an investment alternative that year. The fluctuation of the yuan currency against the U.S. dollar in 2017 and 2018 also saw local investors catching the short end of the stick, failing to benefit from the price volatility in dollar terms.

The jewellery sector has always been the largest segment of gold consumption in **China**, usually with a market share of at least 65% of the country's total consumption (excluding central bank purchases) in any given year. Last year, due to the rise in gold jewellery demand, its market share rose to 69%, higher than both 2016 and 2017. After peaking in 2013, gold demand from the domestic jewellery sector has fallen on average 17% per annum over the 2013-2016 period. While a 3% annual decline in 2017 and a less than 1% increase in 2018 might indicate that China's gold jewellery sector has bottomed out and started a new uptrend, we are, in fact, very cautious on the outlook and think that 2018 may have just been an anomaly.

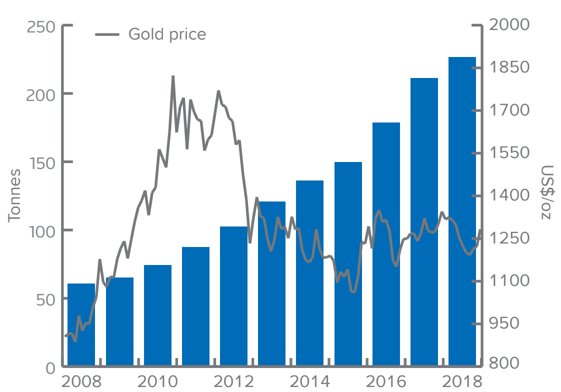
Unlike western culture, the Chinese consider gold jewellery both as a fashion item but also an asset that can preserve value and wealth. Therefore, gold jewellery demand also has an investment angle to consider. After the buying frenzy of 2013, industry participants have faced various challenges, such as declining revenue and profit margins, with consumer interest in gold waning. As a result, the entire industry has shifted its sales

CHINESE JEWELLERY CONSUMPTION & RETAIL INVESTMENT



Source: GFMS, Refinitiv

CHINESE DEMAND FOR GOLD BARS



Source: GFMS, Refinitiv

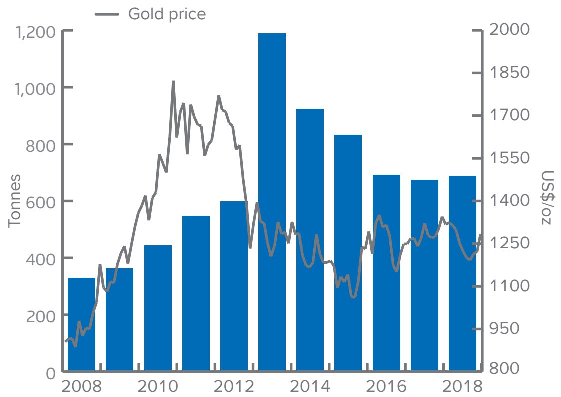
strategy, from focusing on volume selling, specifically on pure gold pieces with low margins, towards non-pure gold pieces, such as gem sets, for example, that attract higher profit margins. This was done by promoting items that are charged by piece instead of by weight as was the norm in previous years. Following a series of industry consolidation and bankruptcies in 2014 and 2015, the industry became profitable again in 2016. The benefits of focusing on selling high margin products are plentiful – other than the obvious reason that profitability trumps revenue, selling high margin products allows for easier differentiation between manufacturers compared to pure gold pieces, and thus can be more beneficial to brand building. In addition, high margin inventories have also contributed towards cost control and better cash flow management. For example in the past, approximately two-thirds of inventory in a general retail store was made up of pure gold pieces (24-carat). In recent years, however, the proportion of 24-carat gold items has fallen to about one-third and was replaced by 18-carat and 22-carat gold items, which cost less while occupying the same showcase space. As a result, the market share of the pure gold segment has taken a hit since 2013, which has been replaced by the 18-carat and the 22-carat segments, which can offer more sophisticated designs for consumers.

However, last year was slightly different. First, consumer's preference shifted back to pure gold items, especially those with 999.9 purity. Assuming all else equal, a piece that is in 999.9 purity is sold for much higher margin than a similar piece that is of 999 purity, in that the margin is much higher than the extra costs for the higher purity. More marketing dollars were also spent on promoting the pure gold pieces. For example, consumers were enamoured by a marketed series of pure gold pieces that were introduced with retro designs, which quickly became the flavour of the year.

A segment that we have witnessed high growth in the last few years, was the non-pure gold segment, (18-carat and 22-carat) which slowed down notably in the second half of 2018 due to the emergence of consumer saturation. In the last two years, a substantial number of jewellery retailers purchased non-pure gold pieces to fill their displays, because the lower inventory cost reduced the financial burden and improved cash flow. However, with the majority of Chinese population being farmers, this particular segment still prefers pure gold items based on the conviction that it offers more value. After recording moderate growth in the first half 2018, wholesalers endured a reduction in throughput of carat gold jewellery in the absence of offering discounts in the third quarter. By the fourth quarter, many industry participants complained that demand for carat gold jewellery had actually retreated. However, overall, we estimated that gold tonnage used in the 18-carat and 22-carat markets combined still rose by more than 20% in 2018. The decline in the non-pure gold demand is also due to the emergence of the '3D Hard Gold' segment.

In addition to pushing for high margin products, jewellery fabricators have also been focusing on research and development, hoping to invent new products that will capture greater market share. Although having existed for many years, the technique of 3D Hard Gold has matured in recent years to become the bright spot in the Chinese jewellery industry in 2018, with fabrication demand estimated to have grown by 30% last year. 3D Hard Gold is relying on an electroplating technique, which enables fabricators to make jewellery pieces that look big but are light in weight due to its hollow nature. In China's wedding culture, relatives and families purchase and gift the bride with all sorts of gold jewellery, including gold bracelets and necklaces that can be quite heavy. However, with the emergence of 3D Hard Gold, a gold jewellery piece would only contain approximately 35% - 50% of the gold content compared to a traditional piece. These 'new' designs bring benefits for both consumers and retailers as they are cheaper to purchase and offer higher margins.

CHINESE JEWELLERY FABRICATION



Source: GFMS, Refinitiv

REFINITIV

COUNTRY SECTIONS

While we expect that 3D Hard Gold will remain popular this year, there has been another new line of products that emerged at the end of last year and in the beginning of 2019. While names vary across different brands, this new product line is commonly referred to as ‘5G Gold’. To simplify, 5G Gold is basically a new 24-carat segment, but with a hardness comparable to 18-carat gold jewellery. As such, it is considered a pure gold piece but has the ability to be fabricated in 18-carat designs.

With the Chinese’s affinity to gold, and with the majority of the Chinese population situated in suburban areas still favouring jewellery in high gold purities, many fabricators, who have either focused on 24-carat or the 18-carat segment, are all rushing into this segment, developing their own line. As a result, the volume of 5G Gold is growing at a very fast rate and will likely become an important segment in the Chinese gold jewellery industry in the next few years, along with the 3D Hard Gold. 5G Gold is also a high margin product line, as it uses approximately half of the gold content compared to a standard pure gold item, assuming the same product characteristics. The emergence of 5G Gold has become a direct threat to the 22-carat gold jewellery segment. Although both fabrication techniques can support sophisticated designs, the 5G Gold technique offers higher purity gold items, which consumers tend to prefer and are willing to pay more for, which results in higher margin for fabricators and retailers. Indeed, we heard that there is at least one large jewellery fabricator that showed willingness to fully commit to their 5G Gold product line, offering attractive discounts to their 22-carat inventories to clear out space.

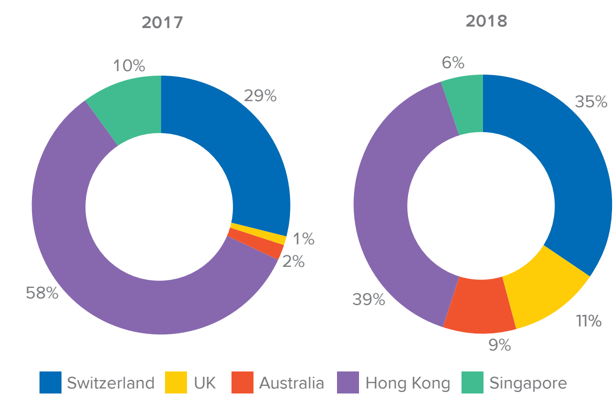
Another interesting observation we made in the jewellery industry last year was the polarisation among jewellery fabricators. The orders received by bigger players increased (implying an increase of their market share), while order books of many small and medium sized fabricators actually fell by more than 20% on an annual basis.

Jewellery scrap was broadly steady in 2018, as the lower gold prices discouraged consumers from liquidating their gold assets for much of the year. One interesting development worth highlighting has been the arrival of several Chinese startup companies trying to expand their scrap businesses and increase their market penetration through developing mobile phone applications. Consumers can simply order a pickup at a location of their choice to get their gold items collected that are deemed suitable for recycling. After laboratory testing, the collecting companies then offer a calculated price, based on various factors, such as the day rate of the gold price, the weight, the gold content and a premium for their services. If the seller agrees, cash will be deposited into their account. On a side note, due to the increase in the palladium price, retailers and jewellery scrap collectors have also encouraged consumers to bring in their old palladium jewellery in exchange for new gold jewellery pieces at a discount.

INVESTMENT DEMAND

Chinese gold investment demand fell by 3% last year to 213 tonnes, a second consecutive year of decline. Gold demand in China was relatively weak, particularly in the first half of 2018, falling 10% year-on-year. Gold priced in yuan actually fell 1% in the first quarter due to a strengthening yuan, once again offsetting any appreciation that was recorded in the international gold price. With such a lackluster price performance, investors decided to wait on the sidelines until a technical breakthrough in the gold price was confirmed. Despite the yuan depreciating 5% against the U.S. dollar in the second quarter, gold priced in yuan still lost 2% in the first half, and speculators had little reason to enter the market.

CHINESE GOLD IMPORTS BREAKDOWN (THE MAJOR SOURCES)



Source: GFMS, Refinitiv

COUNTRY SECTIONS

By the third quarter, the capitulation of various investment platforms (mostly peer-to-peer platforms which gather capital from various retail and institutional investors and lend it out for higher return) caused wealth destruction among many in China. The implementation of various government restrictions on the domestic property market also contributed to the decrease in liquidity, causing downward pressure on property prices. In short, the inclination of retail investors to invest was low, though we saw some major upticks in demand for gold bars in some areas in July and August, suggesting buying interest was slowly emerging.

Gold investment demand finally woke up in the final quarter of the year, and was particularly strong in December. Speculators understand that the fourth quarter is usually a strong month for the gold price, driven by a rise in seasonal demand. The weakening domestic economy, along with the depreciation in the yuan made gold an interesting investment. When the U.S. stock market crashed in December and the Federal Reserve lowered expectations of possible interest rate increases in 2019, the Chinese community became more bullish on the future prospects of gold, and this strong momentum was carried forward into January this year.

Due to fluctuation in the yuan, which hampered gold investment returns, Chinese gold investors have received the shorter end of the stick for two years in a row. While the international dollar gold price rose 13% in 2017, the Chinese yuan denominated gold price only rose by a mere 3%, due to the appreciation of the yuan. Similarly, when the international gold price rose less than 1% in 2018, the Chinese yuan denominated gold price actually rose by 4% due to the currency depreciation. While the 4% return in the Chinese gold price looks more attractive than a 1% rise in the international benchmark price, higher price volatility usually attracts more investors and speculators into gold. However, a mere 4% annual return is not attractive enough for sidelined investors to get involved.

China gold ETP holdings ended 2018 with a total of 44 tonnes, an 11% year-on-year decrease, after already falling 7% in 2017. Contrary to other gold ETPs trading in the Western Hemisphere, the Chinese gold ETPs can also invest in short term bonds or money market funds.

In the last few years, a handful of private enterprises specialising in the internet of things have emerged in the Chinese gold industry. These enterprises developed their own online applications to lower the barrier of gold trading, which can be accessed through smartphones and tablets. While features vary, the gold traded on these platforms are, in general, backed by physical gold and usually linked to a gold contract trading on the Shanghai Gold Exchange (SGE).

Last year in May, the People's Bank of China (PBOC) issued documentation for comment, indicating that Chinese internet companies would not be allowed to conduct transactions in gold that involve certain activities, including clearing and settlement, and particularly the transfer of ownership. This meant that these internet companies would not be able to operate gold trading activities on behalf of the investors anymore once this policy became law (which it was in late 2018), as most of them relied on their own business models and selling their own developed products. However, under the new law, these internet companies are still allowed to act as an agent, or broker, distributing financial products created by accredited financial institutions. Moreover, the burden of responsibility for the acts of the former lies with the latter.

The accredited financial institutions are certainly becoming clear winners under this new rule. While many small internet companies struggle to compete against the big players, they still offer an edge, including paying higher interest dividends (by lending physical gold to parties that may carry higher credit risk). Some of them are also trying to develop a whole new supply chain that is quite innovative and would actually see the allocation of investment gold put to good use in the real economy. In general, banks may consider developing the whole supply chain in the gold business to be too time consuming, with insufficient returns leaving room for small enterprises to engage and develop themselves in this part of the market. However, due to the recent new regulation, smaller enterprises are now being squeezed out of this business (unless they become an agent of these financial institutions). As a result, we assume that such innovation will come to a halt, due to the assumption that smaller enterprises in general tend to be more innovative compared to established institutions.

BULLION FLOWS

Turning the focus to the country's gold imports, China imported a total of 1,259 tonnes of gold in 2018 from Hong Kong, Australia, United Kingdom, Singapore and Switzerland combined, a 15% year-on-year increase, or approximately 170 tonnes more compared to 2017. That is actually a bit surprising, considering importing banks need approval on every shipment from the People's Bank of China (PBOC). Under normal circumstances, there is little reason for the PBOC to allow the annual import volumes to increase by such a wide margin, unless the country's demand for gold rose significantly.

Despite the considerable rise of gold imports, we estimate that gold consumption in the country has remained stable in 2018. Moreover, China's gold mine production continued to fall as well last year, with the loss in local mine production removing 170 tonnes of additional supply coming into the market. So where did the extra imported gold go?

One obvious possibility, and an excuse that is easy to make, is that the People's Bank of China has increased its gold reserves. Indeed, the central bank announced that for the first time in over two years China had increased its gold reserves by less than 10 tonnes to 1,853 tonnes as of end-December 2018. Many market watchers speculate that the central bank may hold much higher gold reserves than they have declared.

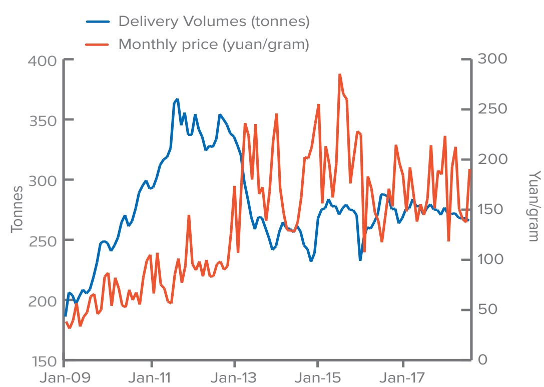
Another possible channel is through unofficial flows to Hong Kong. Anecdotal evidence suggests that some of that gold has been re-exported from the mainland back to Hong Kong through unofficial channels and sold at a discount to the market by people wanting to make profits through arbitrage trading on the rate differential between the onshore and offshore yuan rate. However, this practice is not new and has in fact been around for many years. One possible explanation of the surge in outflow in 2018 (and 2017) may be due to an increased demand for 'capital flight'. High wealth individuals wanting to get their money out of the country can choose to sell physical gold in Hong Kong (often at a discount), and thus keeping dollar assets outside the mainland.

Another interesting observation is that while mainland gold imports increased in 2018, the market share of gold imported through Hong Kong, which has been the most important shipping hub for many years, fell notably last year. The mainland imported a total of 496 tonnes of gold from Hong Kong last year, a 22% decline, or 137 tonnes less gold compared to the volume shipped in 2017. We suspect that the trend of Hong Kong continuing to lose market share as a major gold source for the mainland will continue in 2019, and the importance of its data is becoming less relevant.

SGE ACTIVITIES

Based on the Shanghai Gold Exchange (SGE) most actively trading contract Au (T+D), the Chinese gold premia averaged $6.22/oz above the LBMA gold price throughout 2018. The yearly average, however, was lower compared to $9.83/oz recorded in 2017. Due to the depreciation of the yuan towards the end of December 2016, the Chinese premia jumped to over $30/oz over the international benchmark, and the average premia remained at double-digits (though on a declining trend) for most of the first quarter in 2017. This raised the annual average in 2017. In addition, there was not a single trading day in 2017 that the Chinese gold price was trading at a discount to the LBMA gold price, while in 2018 there were five. While the yuan depreciated 5% against the dollar in 2018, which theoretically should push up the local gold price and widen the domestic premia further, the 15% increase in

SGE WITHDRAWALS



Source: GFMS, Refinitiv

import volumes last year caused the premia to actually fall. On 28th August 2018, the SGE announced that they were going to launch a new spot contract of Panda Gold Coins, which would start trading on the 12th September 2018. While this was a new channel for the China Gold Coin Corporation in order to reduce its high inventory levels, we are keen to see what impact this move may have on the secondary coin market. The specifications of the contract are 30 grammes of standard weighted coin and 99.9% in gold purity. The contract code is PGC30g, quoted in domestic yuan, with a tick size of 0.01 yuan. The procedures for the withdrawal of the PGC30g shall be handled by the China Gold Coin Corporation. The following are some of the features of the PGC30g contract: According to the official announcement, retailers are free to trade the PGC30g contract from the long and short side on the SGE board, while only institutions that satisfy certain criteria can also trade freely on the board. Otherwise institutions that fail to comply with the requirements can only buy the contract and take physical delivery but have no right to sell on the board. In short, institutions that want to trade the PGC30g contract freely on the SGE board must have the consent from both the China Gold Coin Corporation as well as the China Banking Regulatory Commission.

Unlike other gold contracts, no leverage is applied to PGC30g. Buyers have to pay in full, and sellers must have enough liquidity to cover their exposure before entering a short position. The transaction takes place at (T+0), and the buyer can either choose to leave the gold coins in the SGE vault, or demand physical delivery. Banning the use of leverage is presumably aimed at preventing participants from unduly influencing the gold coin market.

In terms of implications, first and foremost this is a move to help the China Gold Coin Corporation to expand into an extra sales channel and clear its excessive inventories. According to our estimates, sales of Chinese gold coins fell 18% in 2017 (sales were slightly over 31 tonnes in 2016, which was the historical peak) and declined another 20% year-on-year in the first half of 2018. The record demand in 2016 was due to the expansion of sales channels, mostly through banks, but that did not have the same impact the following years, demonstrated by the softer market sentiment in 2017 and the first half of 2018.

While the gold coin market is small compared to the entire gold sector (coin demand only made up 3% of China's total gold demand in 2018), the new PGC30g contract, in theory, is just a dime in the bucket in terms of trading volume on the SGE. However, its impact could cause disruptions in the secondary coin market. We believe that price differences between the spot market and the physical market could emerge providing price arbitrage opportunities.

In general, the launch of a new spot contract is a good move for the China Gold Coin Corporation. If they play their cards right, they may possibly create another wave of coin investment and raise investor interest, given that the Chinese investment culture tends to chase an asset when an upward pattern is confirmed. The macroeconomic environment, a slowing economy, as well as the depreciation of the domestic currency, are working in gold's favour. By throwing a stone towards still water the eventual outcome may not always be favourable, but at least we give credit to the official authorities for embracing innovation. At the end of 2018, trading volumes of the PGC30g contract amounted to approximately 2,059 kilogrammes, which is the equivalent of 68,638 gold coins, in slightly more than three-month's trading.

Hong Kong's jewellery consumption rose 10% in 2018 to an estimated 44 tonnes, the second consecutive year of an annual increase. According to data released by the Hong Kong government, jewellery sales value, watches and clocks, and valuable gifts increased by 14% in 2018. Tourists from mainland China, who are the major engine for Hong Kong's jewellery consumption, increased by 15% last year, to 51 million visitors. The rise of mainland visitors has stimulated the city's jewellery consumption, as many tourists attach value to the quality of luxury items sold in Hong Kong. However, the sluggishness of the Chinese economy, particularly in the second half of last year, finally caught up with the jewellery sector, with consumption recording a 5% year-on-year decline in the final quarter of last year.

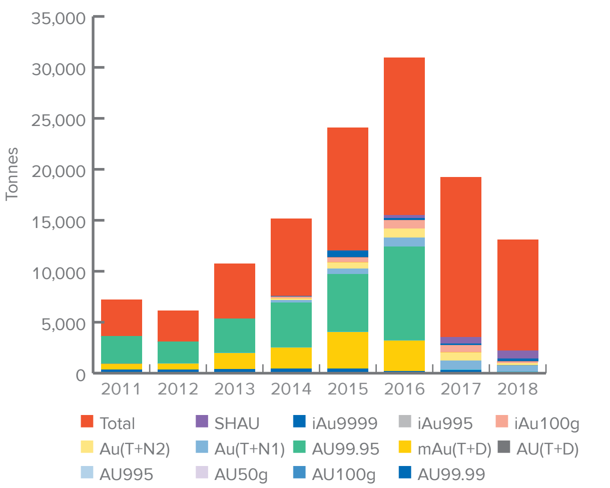
In the **Taiwanese** market, total gold demand increased by 4% to 30 tonnes in 2018. The market continued to benefit from an increase in gold demand from the industrial sector. The city's exports of electronics rose around 3% throughout 2018 to $111 bn. Despite a strong performance in the first half of last year, the momentum faded in the second half, and especially towards the end of the year. Exports of Taiwanese electronic component actually fell 10% year-on-year in December, dragged down by lower than expected shipments of iPhones, and falling flat panel prices.

CHINA MARKET OUTLOOK

While demand for gold from the jewellery sector increased in 2018, we think it could possibly be just an anomaly rather than a turnaround of the downtrend that followed the country's fabrication volume peak in 2013. The capital crunch in the Chinese economy intensified in 2018, with many capital constrained enterprises either filing for bankruptcy or conducting massive layoffs in order to control costs in the latter stages of the year. The problems of the Chinese economy are more than just the trade war with the United States and have deep roots. Therefore, we expect economic data from China could be disappointing, at least in early 2019, which will hinder jewellery consumption. Indeed, consumer sentiment had already fallen considerably towards the end of last year, and this year's sales during the Chinese New Year period remained relatively soft compared to previous years. We expect fabrication volume on the 3D Hard Gold as well as the 5G Gold will continue to grow at a high rate, which in turn will also drag down total fine gold consumption in 2019.

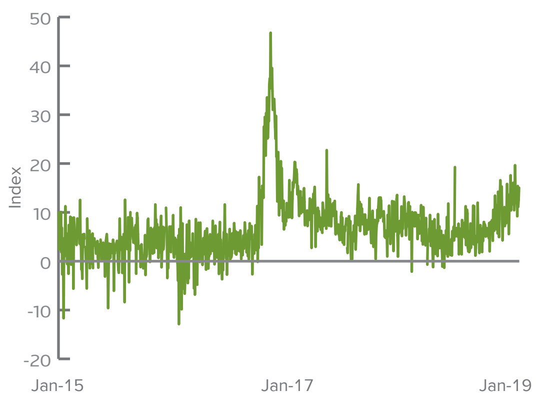
While we initially were more optimistic about China's gold investment demand outlook in 2019, we have downgraded our expectations for this year. Our initial take was that the country's policies on the property market have been too inconsistent and many investors have outright given up any hope for a sharp rebound in the domestic equities market as well. As such, gold has become one of the most logical choices of investment for Chinese investors. The deteriorating domestic economy stimulated a weakening yuan in 2018 which should help the gold price advance in the local currency this year. Indeed, Chinese consumers started to warm up on gold investments from December 2018 as they believed a gold bull rally would reemerge in 2019. However, as market expectation of a workable solution in the trade dispute between the United States and China have increased, the yuan has actually appreciated against the dollar, which has had a negative impact on the domestic gold price. The strength of the yuan will no doubt be an influencing factor on the country's investment demand in 2019. In addition, the surge on the domestic equity markets in the first quarter of the year (the Shanghai Composite Index increased by 24% from the end of 2018) has attracted once again a lot of speculative capital, and steered liquidity away from gold due to low returns.

SGE GOLD CONTRACTS TRADING IN TONNES EQUIVALENT



Source: GFMS, Refinitiv

SGE GOLD PRICE PREMIUM/DISCOUNT



Source: GFMS, Refinitiv

INDIA

- **Indian gold imports decreased by 14% year-on-year to 757 tonnes on muted demand and a credit crunch that prevented the expansion of stores by organised retailers.**
- **Despite the fall in total imports, fine gold doré increased to 281 tonnes, rising 25% year-on-year. This is a new milestone set by India's thriving refining industry.**
- **Total consumption (investment + jewellery + industrial) contracted 12% to 690 tonnes, attributed to weak agricultural income growth and high gold prices (driven by the huge depreciation of the rupee against the U.S. dollar).**
- **Jewellery consumption suffered significantly, with a decrease in demand of 14% year-on-year to 539 tonnes.**
- **Meanwhile, jewellery fabrication fell by 12% year-on-year to 632 tonnes, reversing gains made in 2017 where fabrication jumped to its second highest level on record of 718 tonnes.**

Following a 30% year-on-year rise in retail consumption in 2017, 2018 remained a year of consolidation. Following the introduction of a new tax system, Goods and Services Tax (GST) and other regulatory changes (like bringing the sector under the Prevention of Money Laundering Act, implementation of the amended Insolvency and Bankruptcy Code 2016, cancelling nominated agency licences for Four Star and Five Star Export Houses etc.), the domestic trade contracted. Stricter banking regulations created credit shortness in the market, which prevented the majority of jewellers (under the organised sectors) going ahead with their expansion plans, thus negatively impacting fabrication growth. On the other side, refiners have expanded their share in the bullion market by 25% to become the largest supplier of bullion for the first time, while banks continued to provide bullion bars through gold metal loans (making up 70% of its total supply).

What might be the biggest surprise in the whole trade trail is the exponential rise of direct bullion imports by the exporters. Star Export Houses (following the cancellation of their nominated agency licence), are a key example, as they are involved in a form of trade popularly known as round-tripping. The company would choose this to either inflate their balance sheet to maintain their 'export house status', or alternatively to take advantage of the interest arbitrage. Consumption suffered on lower agricultural growth as the country witnessed a below normal monsoon level for a second year in a row. It has also been observed that India's remittances surged in 2018, however, the proportion of money that is usually spent on gold contracted. This was observed particularly in South India. The reluctance of expatriate workers going back to gulf nations has been identified as the prime reason behind the drop in spending on gold.

BULLION TRADE

In 2018, **gross official gold imports** decreased by 14% year-on-year to 757 tonnes, its second lowest level in a decade after 2016. In value terms, imports contracted by 13% to $31 bn. This value could have been much lower if the Indian rupee had not depreciated by 12% against the U.S. dollar in 2018. Net imports were down by 23% year-on-year to 512 tonnes. For the first time in the history of the Indian gold market, refiners supplied the largest quantity of gold in a year, with doré imports increasing to 281 tonnes (a rise of 25% year-on-year), constituting 55% of total domestic market supply. However, it wasn't until the second and third quarters of the

GROSS INDIAN BULLION IMPORTS*

(tonnes)	2011	2012	2013	2014	2015	2016	2017	2018
Gross Imports*	1,211	969	783	826	904	511	876	757
Local Price (Rs./10g)	24,003	29,730	29,310	28,278	26,488	29,395	29,135	30,689

*Includes duty paid, duty free and fine gold from doré

Source: GFMS, Refinitiv

year that gold imports really increased, with the highest monthly import occurring in August at 86 tonnes, as the tariff rate in rupee terms fell to its lowest level since January 2018, encouraging bullion dealers and jewellers to take advantage of the low price to rebuild their inventories.

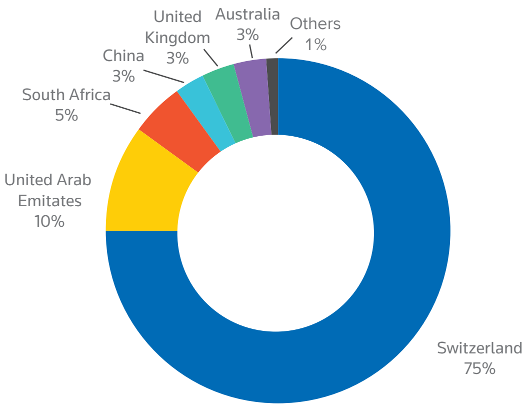
From a bullion suppliers' perspective, the largest suppliers remained the same, with the exception of the United Kingdom that emerged as one of the largest suppliers of bullion, on par with Greater China and Australia in 2018. While Switzerland remained the highest supplier of bullion in percentage terms, its net supplying volume decreased by 17% year-on-year to 384 tonnes. Meanwhile, the UAE and South Africa suffered the greatest losses with demand falling by 47% and 44% respectively. It is quite obvious that the share of countries had been substituted for doré imports (detailed later).

As star export houses (under the nominated agency category eligible to import gold for domestic purpose) lost their licence to import bullion for domestic consumption in October 2017, its full impact wasn't observed until last year. In 2018, nominated agencies imported only 53 tonnes of gold for domestic consumption, against 135 tonnes in 2017, a drop of 61%. Supply from banks contracted 41% year-on-year to 179 tonnes. This means that the total bullion supply from banks and nominated agencies stood at 231 tonnes, from 438 tonnes only a year ago, the lowest level recorded in our history. The reason behind this could be that banks and nominated agencies lost out on business to refiners, based on a price war, with refiners enjoying a better margin on duty differentials of 0.65%. At the same time, refiners also use Merchandise Export and Import Schemes (MEIS) when importing doré, which helps them outperform the banks and nominated agencies on a margin basis.

Although India's total imports contracted by 14%, the share of bullion imports for the purpose of exports increased by 13% to 244 tonnes year-on-year. In this segment, banks imported 40 tonnes, a fall of 13% year-on-year, while nominated agencies imported eight tonnes, a drop of 94%. On the other hand, exporters imported directly 197 tonnes, from 39 tonnes in 2017. Needless to say what was happening earlier continued even after the change in regulation; with maximum exports occurring through the means of roundtripping, taking advantage of the interest arbitrage or indeed to inflate their balance sheets. Jewellery exports to the UAE increased by 63% year-on-year to $7.6 bn, while bullion (24-carat coins) exports out of the country dropped to zero from 75 tonnes in 2017. This result effectively demonstrates that medallion exports above 22-carat stopped completely following the ban, with the volume instead, to a certain extent, being converted into jewellery and exported, thus increasing jewellery export volume and, in turn, increasing bullion imports. We estimate that 50 tonnes of gold were used for genuine exports (up from 41 tonnes in 2017), while 176 tonnes were used for roundtripping, up from 157 tonnes in 2017.

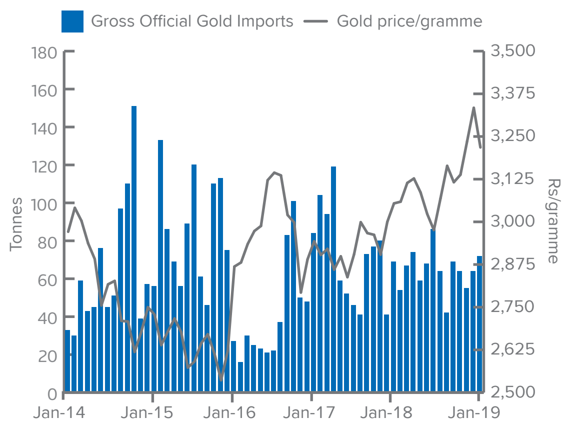
The increase in shipments of doré by 25% over 2017 volumes demonstrates the clear paradigm shift occurring within India's gold market. The premium that Indian refiners are paying to overseas suppliers enables them to

SHARE OF SUPPLYING COUNTRIES



Source: GFMS, Refinitiv; GTIS;Ministry of Commerce

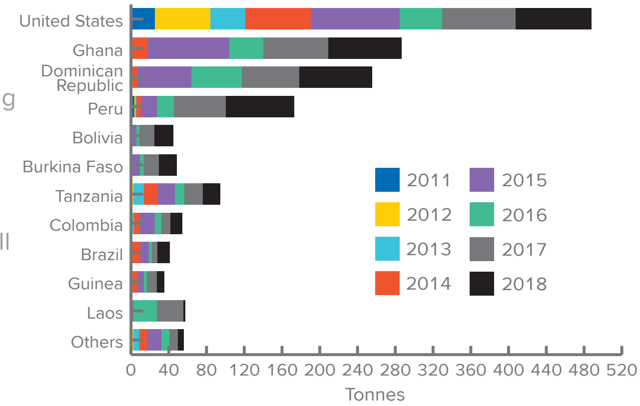
GROSS OFFICIAL GOLD IMPORTS (TONNES)



Source: GFMS, Refinitiv

COUNTRY SECTIONS

DORÉ IMPORTS (TONNES) - COUNTRY OF ORIGIN



Source: GFMS, Refinitiv

establish a strong network to import the raw material as per the required demand in the market. However, while it could be argued that this has become possible because India has one LBMA accredited refinery (having long term contracts with the world's largest miners, guaranteeing a consistent supply). We believe that this form of supply only makes up 50% of what is entering the market, with the other half being sourced from small and artisanal mines. Needless to say this form of gold supply is not without risk, and a reliable strong supply chain needs to be established.

If we look at 2018 flows in more detail, major supplier Peru increased its supply by 32% on a year-on-year basis to 73 tonnes (gross), followed by the Dominican Republic by 27% at 77 tonnes (gross). However, supply growth from the other two major suppliers, Ghana and the United States, recorded a markedly lower level of growth in supply at 14% and 4% respectively. If we look at the production capacity of Ghana and Peru, we feel supply from these two countries may have already reached their saturation points and it is likely that Indian refiners may struggle to increase import volumes from these two countries in the coming months. It is also worth remembering that Ghana has set up a local refinery and could change the export policy anytime to support the domestic refiner. In addition, Peruvian authorities have cracked down on artisanal gold mining in recent months to stop the environment degradation and also to make sure that no gold that is mined through unethical means before entering the supply chain. It is yet to be seen if this will disrupt the supply available to India by a meaningful volume.

Unofficial supply increased in 2018, with gold entering through the eastern, north-eastern and western regions of the country, with small-to-medium sized jewellers selling this form of gold. Anecdotal evidence also showed that some gold entered from Singapore. We came to know that gold having purity of 24-carat lands in Singapore, where it gets melted into rough chains (weighing up to 200 grammes) which is then smuggled back into India. This gold is then converted into small bars which gets sold in the market. We estimate 154 tonnes of gold entered the country through unofficial channels in 2018, up from 134 tonnes in 2017.

The exchange of old jewellery for new was higher in 2018 than in the previous year. As a result of our extensive field research in various cities, we estimate that 70% of old gold was exchanged for new jewellery, while the rest of the old gold was sold directly into the market either to scrap dealers or local refiners. Total scrap supply

IMPORTS CLASSIFICATION

(tonnes)	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Annual
Banks					
- Duty paid	45.3	39.4	50.9	96.1	**178.5**
- Duty free	7.9	11.4	11.5	9.0	**39.8**
Nominated Agencies					
- Duty paid	8.5	14.4	18.5	11.2	**52.6**
- Duty free	2.7	1.1	1.3	2.4	**7.5**
Fine gold from doré	58.1	72.7	83.0	67.5	**281.3**
Direct import by exporters	41.9	60.8	52.3	42.0	**197.0**
Gross Total	**164.4**	**199.8**	**217.5**	**175.4**	**757.1**
Net Total	**111.9**	**126.5**	**152.4**	**121.6**	**512.4**
Average price (Rupee/10 grammes)	30,352	31,081	30,101	31,222	30,689

Source: GFMS, Refinitiv

is estimated to have increased by 17% to 103 tonnes year-on-year. Anecdotal evidence also suggests that gold sold directly to scrap dealers or local refiners often returns to the market as a counterfeit Swiss bar. Local refiners have reportedly been stamping Swiss refinery hallmarks on bars at the request of traders, complete with fake serial numbers. This type of bar is mainly available in the rural markets of northern India and is often sold 0.5% to 1% below the purity compared to the original 995 bar.

The effect of GST on jewellery retailing

2018 was the year of consolidation for jewellery retailers after the country introduced its biggest tax reform, a Goods and Services Tax (GST). This new tax system has enabled organised retailers to stay ahead of those unorganised traders without doing a thing. The technical structure of the new tax system has given them a competitive advantage over the unorganised retailers. We ran a performance analysis (starting when the new system was implemented), with a small sample size of organised retailers (those having listed on the stock exchange). We found positive growth of retailers in the time period when the broader market was contracting negatively. Though it is premature to derive into any definite conclusion, considering the small sample size and relatively shorter time period, we do believe it provides some kind of indication that bigger brands are penetrating deep into the market. Design differentiation and product optimisation are the key factors that are attracting customers across the rank and indeed in big retail stores. Organised retailers have also started accepting credit cards on sales of jewellery in their stores. This kind of trade practice will only encourage consumers to visit these stores more often than medium to small stores that deal only in cash, or charge a fee on the swiping of cards.

Containing unofficial supply was a challenge

During our extensive field research across the country, we found that tracking down the unofficial supply of gold was a significant challenge, with the problem most rife in small to medium cities where the market is relatively minor and competition is high. Those who are engaged in selling jewellery originating from smuggled gold, described weak cash circulation in the market as being a key issue, along with the elevated price in reducing volumes. On the top of that, customers are not ready to pay 3% GST (the mechanism through which these trades are adjusted is described in our Gold Survey 2017 volume).

To remain competitive in the market, retailers are giving up to a 3% discount on total sale values of jewellery before levying the GST. Consumers are not bothered about the 10% duty as it is not reflected in the tax invoice of the item, but they are reluctant to pay 3% GST as it is visible on the invoice.

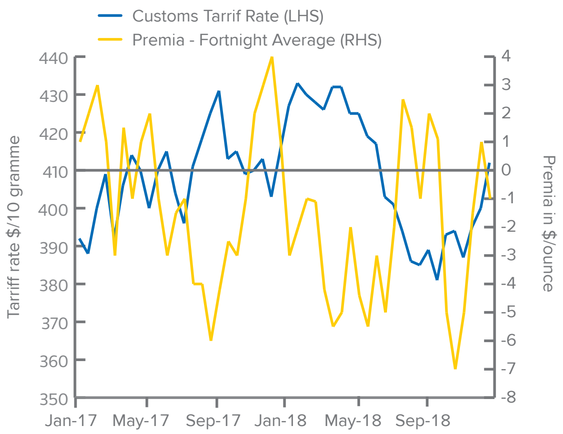
What is the outlook for 2019?

Turning to this year, 2019 may not be an easy year for the sector after overcoming the challenges of 2018, with market reforms time and time again reminding the trade to become more organised. While the process of shifting to organised trade has been visible, more initiatives are needed from trade participants.

Credit crunch in the system

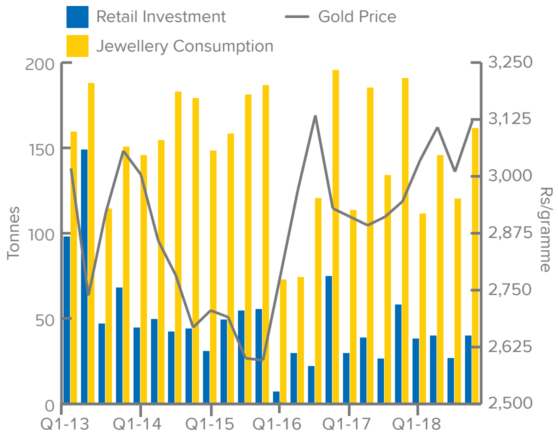
The direct impact of the enactment of the Insolvency and Bankruptcy Code in 2016 towards the end of 2017 has been observed in 2018. This code was enacted to stop traders who were flirting with loan defaults, yet managed to get additional cash credit limits. The direct impact of this code was best witnessed when a public sector bank denied credit to a jeweller, which eventually opened the flood gate to a $40 million fraud. Following this, banks tightened their credit limits to jewellers who were heavily dependent on bank credit for store expansions and other trade requirements. We expect a similar trend to continue, as ideally, very few organised retailers are fully structured.

IMPORT TARIFF VS DISCOUNT/PREMIA



Source: GFMS Refinitiv, CBIC, NCDEX

RETAIL INVESTMENT & JEWELLERY CONSUMPTION



Source: GFMS, Refinitiv

The banning of the unregulated deposit scheme is a big blow to India's jewellery industry.

The President of India promulgated the banning of "Unregulated Deposit Schemes Ordinance, 2019" on the 21st February to protect investors from being duped by so called Ponzi schemes. In recent years, the Central Bureau of Investigation (CBI), registered as many as 165 cases against different individuals, partnerships and firms who lured investors with highly lucrative returns on investment, fleecing them of millions of dollars. With this ordinance in place now, no depositor can "directly or indirectly promote, operate or issue any advertisement soliciting participation or enrolment in or accept deposit in pursuance of an unregulated deposit scheme". While jewellers have not been involved in such Ponzi schemes, they have been running a deposit scheme where they take money from customers on a monthly basis for a fixed period and deliver the jewellery at expiry, and while doing that they waive off either the fabrication charge of the jewellery or the final month instalment payment.

What does the Ordinance stand for in the jewellery sector?

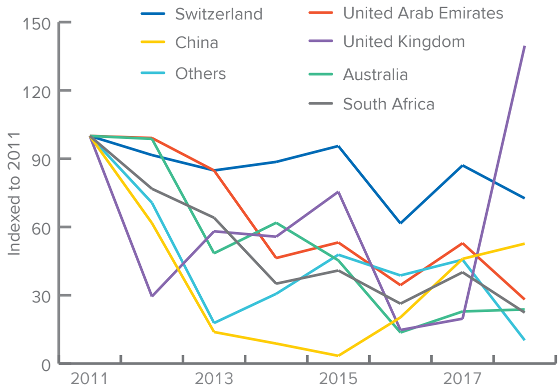
The jewellers would previously show this deposit as an advance against sales, not regulated by any agency. With this ordinance in place, they can't simply do that. As per the ordinance, any entity can still take an advance from a consumer for delivering a product at a later date; however, it should be delivered within a year. At the same time, they can't promise any benefit on the 'advance' that the consumer has paid. Now, for a jeweller, he can still continue to take a deposit as an advance for the sale of jewellery, but it cannot extend beyond one year, and they can no longer promise customers they will waive either the making charges or one instalment. It has been this characteristic of the scheme which attracts the customers and when it is not present, there is possibility that customers will not deposit money to jewellers at all, rather preferring to deposit it in a regulated financial institution where they could earn interest and only go to the jeweller when they really wish to buy jewellery. As per our estimate, about 25 percent of the gold jewellery sales is run through a savings scheme for any jeweller. Now, one can easily assume the amount of money coming into circulation (without paying any interest), can be rotated several times before returning to the customers.

On the other side, the Companies Act 2014 has expanded the scope of public deposits and companies which come under this scope can raise funds from the public as a deposit up to a limit. Any jewellery company that is listed on the stock exchange and covered within the 'Deposit Act' as stipulated by the regulator, can continue to take deposits from the customers, which means, the volume of this business might shift hugely to those jewellery houses.

The National Stock Exchange is planning to allow Good Delivery gold to be delivered to it platforms

The National Stock Exchange, NSE, the country's largest stock exchange, launched its gold derivative contract only recently and is now planning to introduce its own good delivery norms to accommodate domestic refiners to hedge the price risk. The Indian commodity futures exchanges currently only accepts LBMA good delivery bars which prevent domestic refiners without LBMA accreditation, from delivering their refined bars to the exchanges. Technically, it will be a big development in the Indian market if domestic non-LBMA refiners can deliver their bars to the exchange. While doing so, the question of compliance in sourcing doré will be an issue that the exchange has to outline, as sourcing doré responsibly is always a challenge especially from small or artisanal mines. In India if a refiner is barred, you can bet others are also procuring doré from the same artisanal sources.

BULLION IMPORTS INDEXED TO 2011



Source: GFMS, Refinitiv

Overhauling the gold monetisation scheme

This scheme has yet to reach its potential since it was first launched in 2015. The Reserve Bank of India (RBI) tweaked the scheme once again in the beginning of this year to have larger participation by inducting charitable institutions, central and state government entities. With these measures, the government aims to deposit gold that was either confiscated or lying idle with charitable trusts. This may increase the deposit as reportedly a modest volume of gold gets confiscated every year. In our understanding, the scheme is still not lucrative enough to attract retail consumers and hence needs an overhaul.

Introduction of Mandatory Hallmarking

Hallmarking was planned to commence in 2018, however, it was delayed and now, we expect this to be introduced sometime during the course of the year. Jewellers are demanding they be provided six months' notice so that they could clear their stocks which do not comply with the purity specifications that the BIS has mandated to be a pre-condition to be accepted under mandatory hallmarking. We estimate this will create more problems for small jewellers to remain competitive with the organised segment in the medium to large cities, while in smaller towns, the practice may continue, as the regulator does not have the enough manpower to keep vigil on every store in such a large country.

Will there be another year of slow rural demand?

As per the second advance estimates of output of foodgrains released by the Ministry of Agriculture, Cooperation and Farmers Welfare, Government of India, for the crop year 2018-19, the production is estimated to have decreased marginally by 1.2% compared to 2017-18 4th advance estimate. This is also 3% below the target originally set by the Ministry for the year. Realising the lower farm revenue growth in recent years, the current government has increased the allocation by 144% to the agriculture sector in its interim budget for the financial year 2019-20. In it, the government has announced an "income security scheme" for small and marginal farmers. The eligible farmers will get Rs.6,000/year or approx. $87, which, on the other hand, will cost the exchequer Rs.75,000 Cr., or USD 10 bn at the current exchange rate (the jewellery industry is highly excited with this announcement expecting some money will flow into this segment). However, we estimate that might hardly be the case as money will be transferred in three equal instalments, which means Rs.2,000/instalments, which would fail to buy one gramme of gold. What could be beneficial to farmers as well as the jewellery trade, is that the government has approved the implementation of a Interest Subvention Scheme (ISS) for the financial year 2018-19 and 2019-20, in which farmers will get short term loans from banks up to Rs. 300,000 or $4,348 at interest of 7%. Farmers who are paying promptly will get further benefit of interest at 4%.

Refinitiv's Weather Forecast teams expects a failed monsoon season is likely in India during the 2019 June-September monsoon season, with some potential for a near normal season. The team forecasts the all area-weighted total rainfall across India at 832mm, which is ~6% below the average monsoon season. More so, the team expects a sharp downside risk for wheat, the major winter crop of the country. It is extremely important as last crop year, despite the 9% rainfall deficit than normal as recorded by the ministry, wheat production managed to stay at par. Given this would be the third year in a row that the country is expected to receive deficient rainfall, concerns will continue to remain on agricultural output for the year vis-à-vis the growth of consumption of gold for the year.

PAKISTAN, BANGLADESH, SRI LANKA AND NEPAL

Last year was characterised by two major developments in the rest of the South Asian countries. First, in order to curb a sharp rise in imports, Sri Lanka reintroduced its import duty on gold. Second, the Bangladesh cabinet approved the first ever gold policy to streamline the gold trading process.

Pakistan's total gold consumption, including jewellery and investment, contracted 12% year-on-year to 22 tonnes in 2018. Official imports were negligible and as such, the majority of supply came through unofficial channels and hand carried by passengers into the country. The Pakistan rupee depreciated 26% against U.S. dollar in 2018, which made gold in local terms extremely expensive, pricing a lot of consumers out of the market. Some jewellery outlets even had to close up shop due to the lack of buyers. We expect gold jewellery demand will continue to remain low this year, as Pakistan's economy has been going through a tough phase. Illustrative of the current challenging environment is the cash-strapped government, which is negotiating a financial assistance package worth approximately $12 bn with the International Monetary Fund.

In October 2018, the **Bangladesh** cabinet approved the first ever gold policy to streamline the entire trading process. The policy is designed to stimulate gold imports through official channels, while increasing export remittances as well. At present, gold can be imported once the permission from the Bangladesh Bank has been granted, but anecdotal evidence suggests that virtually no gold has been imported through this official channel since independence. Gold enters the country mainly through smuggling and is hand carried by international travellers. Under the new policy, only authorised dealers, appointed by Bangladesh Bank (central bank), are eligible to import gold. During the first phase of the policy implementation, jewellers do not have to pay any import duty. Only VAT will be charged. What is still unclear, however, is whether the VAT will be charged on the total value of gold (raw material costs + making charge) or solely on the jewellers value add (making charge).

Jewellery consumption increased by 4% to 21 tonnes in 2018, while investment demand rose an estimated 1% to 1 tonnes. We expect demand to increase in coming years. The new gold policy will improve the necessary transparency in trade, which will allow us to provide better trade estimates, as opposed to making assessments of gold trade conducted through illegal channels.

Sri Lanka reintroduced an import duty on gold in 2018 after scrapping it in 2016. The government observed that imports did increase rapidly in 2017 and in the first quarter of 2018, but it did not benefit the country's trade and in fact it escalated the trade deficit instead. What the government observed was that the majority of gold imports were going to India through unofficial channels. When a 15% import duty was imposed, imports dropped by 34% year-on-year to 10 tonnes in 2018, while jewellery fabrication fell by 37% year-on-year to 7 tonnes.

Nepal is estimated to have officially imported seven tonnes of gold, a rise of 22% year-on-year in 2018. However, similar to Sri Lanka, the majority of this gold again goes to India through unofficial channels. Very little actually stays in the country. Bringing gold into India from Nepal is perceived to be relatively easy considering the two countries share free border and robust border checks are lacking. Gold fabrication increased 8% year-on-year to three tonnes in 2018. On the other hand, demand for jewellery and investment combined rose by 8% to almost three tonnes last year.

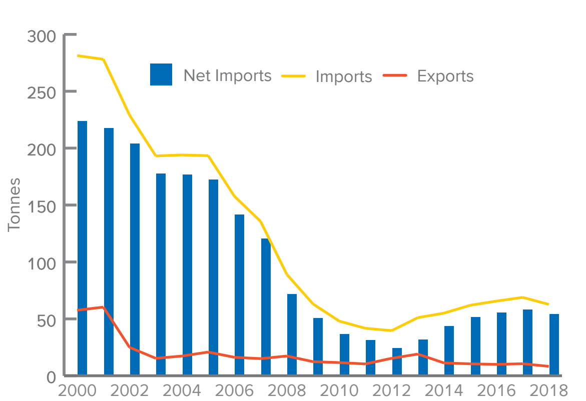
NORTH AMERICA

- **Total North American fabrication demand fell 2% last year to 206 tonnes, the lowest level in more than two decades.**
- **Retail investment, responsible for 23% of the total, continued to decline, falling by 21% to 47 tonnes.**
- **Jewellery fabrication recorded a very solid year, rising 8% to 91 tonnes. With imports slumping less than exports, jewellery retail consumption in North America rose 9% to 157 tonnes last year.**
- **Industrial demand also recorded a modest increase of 3%, driven by robust demand from the electronics sector, while scrap remained tight, contracting for the seventh consecutive year by 4% to 83 tonnes. Scrap served 41% of total gold fabrication in North America last year.**

Jewellery fabrication had a stellar year, driven by a robust underlying sentiment stemming from the United States. Retail sales rose 36 months in a row with only December recording a decline. For the majority of the year, jewellery store sales outperformed general retail sales excluding autos, particularly during H1. In H2 however, sales slowed considerably with the market showing significant signs of fatigue. Holiday sales turned out to be disappointing as well, at $6.3 bn in December, still 3% below the pre-recession peak of 2007. In fact, December turned out to be a bit of an anomaly in more respects. Electronic sales, for example, up approximately 10% year-on-year in 2018, recorded their lowest growth ever in December. Following various years of declines, with closures of many big department stores such as JC Penny and Sears (just to name a few), big box sellers (also known as hypermarkets), actually outperformed the jewellery retailers in 2018. Despite the slow sales towards the end of the year, for the year as a whole, 2018 was positive for most jewellers. As a result, jewellery offtake rose 8% to 91 tonnes in 2018. Jewellery imports, on the rise for five consecutive years, contracted 7% last year, but so did exports (down 9%), while jewellery retail demand in North America rose 9% to 157 tonnes last year. Gold jewellery in the United States only accounted for an approximate 10% of total precious metal jewellery demand in volume terms last year, however, in value terms it makes up the overriding majority at 86%.

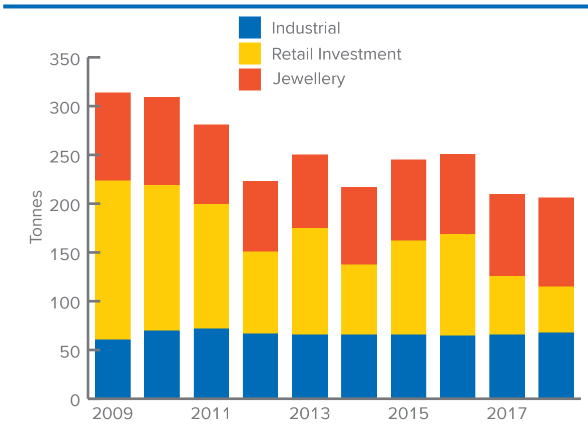
Gold demand for physical investment products had to deal with another challenging year in 2018, contracting 21% in North America to 47 tonnes. The United States makes up the majority of the total accounting for 63%. For the second year in a row, net-bar demand slumped another 32% to 14 tonnes with the lack of consumer interest based on continued investor optimism surrounding other higher yielding asset classes like the U.S. stock market. In spite of a wobbly performance, a large chunk of the investment community was still convinced that allocating capital to the various stock markets in the country was the best way to generate returns. That was supported by the continued Fed interest rate hikes and positive general consumer sentiment throughout the year. Unsurprisingly, the U.S. Mint also saw official gold bullion coin sales decline by 9% to 11 tonnes

UNITED STATES JEWELLERY IMPORTS AND GOLD PRICE



Source: GFMS, Refinitiv

NORTH AMERICAN GOLD FABRICATION



Source: GFMS, Refinitiv

COUNTRY SECTIONS

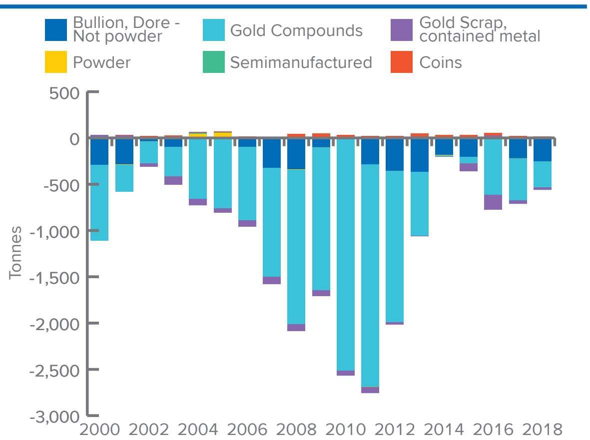
during the year. Other gold bullion coin sales contracted as well by 17% reaching four tonnes; a quarter of total gold coin sales in the United States. The slump in physical gold investment products was not isolated to the United States alone, Canada, particularly in the form of the Royal Canadian Mint, also recorded a decline in its coin fabrication by 21% to 15 tonnes last year. U.S. import data of Maple Leafs confirms that approximately half of Canadian sales end up in the U.S. market, where they find a wider distribution, explaining the lower sales.

The North American precious metals refining market has actually gone through a considerable consolidation phase in the last two years. During the 2007-2012 period, demand for gold investment products was strong and scrap supplies abundant, which resulted in a significant rise of refining capacity. When gold demand slowed, refining margins came under pressure, which was actually a phenomenon present across the Atlantic Ocean as well. The last two years, however, some consolidation emerged in the United States, which resulted in one refiner reducing the majority of its business and another being sold to an established refiner in the country. As a result, we estimate that precious metals refining capacity utilisation stands at approximately 35% last year; a 5% decline from the level reported the year prior. We believe that Canada might well be the largest refining country in the region, overtaking the United States since 2017.

Industrial fabrication in North America rose 3% to 68 tonnes last year. Gold is used in a wide array of applications, (usually in the form of plating or wires) in the electronics sector. In spite of continued thrifting pressure, rising volumes have held demand in this segment more or less steady throughout the last seven years. Gold demand from the electronics segment makes up the bulk of industrial fabrication, accounting for 87% of the total last year. Shipments of printed circuit boards, personal computers and semi-conductors in North America continued to report solid volumes last year, although growth seems to be slowing. With so many consumers in these markets connected through various electronic devises, generating higher volumes in these markets will become increasingly more challenging. Replacement demand might become the norm. In regards to technological developments, gold will always remain under pressure to thrift or be replaced by other lower valued metals and as such we do not necessarily foresee a strong rise in demand from this segment.

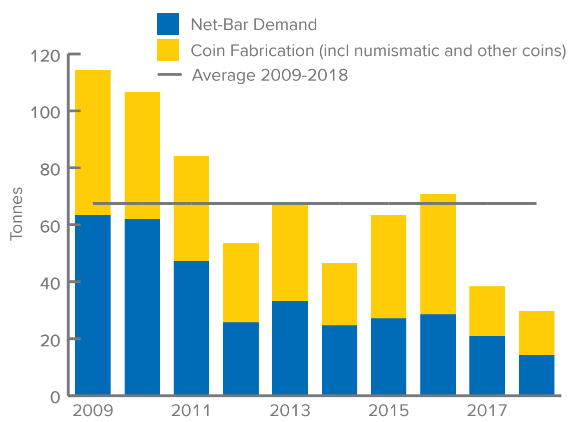
For the seventh consecutive year, annual scrap supply contracted in North America, falling by 4% to 83 tonnes in 2018. As alluded to above, during the years when gold prices rose considerably, scrap supply was high. However, when gold prices fell, so did scrap supply, particularly jewellery scrap. Electronics scrap has actually increased over the years but continues to be a challenge to process. The amount of electronic devices has considerably increased in the last decade, which stands in contrast to the gold content per unit of scrap. Thrifting, substitution and miniaturisation have all played their part in reducing the precious metal content in electronic products. Scrap generated from electronic products is also far more complex to recycle compared to jewellery scrap, given their low metal content per unit. However, compared to mining, a tonne of scrap on average still has three-to-four times as much metal content.

NET IMPORTS, U.S. GOLD PRODUCTS



Source: GFMS, Refinitiv

U.S. RETAIL INVESTMENT



Source: GFMS, Refinitiv

TURKEY

- **Turkish jewellery fabrication slumped 16% year-on-year to an estimated 70 tonnes, while investment demand retreated 23% over 2017 volumes due to a 27% fall in official coin offtake.**

- **Turkish gold imports fell by 42% to 210 tonnes in 2018, reflecting the acute fall in consumer demand.**

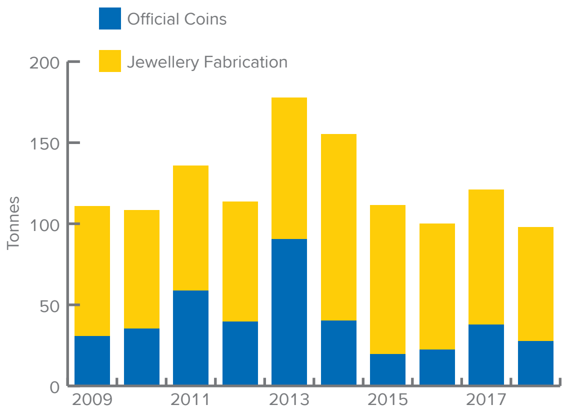
Gold demand in Turkey fell sharply in 2018 due to a slump in the value of the lira and a weakening economy. The domestic currency was already in retreat during the early months of 2018, slipping over 6% against the U.S. dollar in the first four months of the year. The trend continued into May and July, with another 9% and 6% drop respectively. The real damage was done in August, however, when the Turkish lira depreciated 28% against the U.S. dollar in an environment of U.S. sanctions and downgrades of Turkey's debt by various rating agencies. The sudden slump in the currency saw gold in local terms jump 35% in less than two weeks. This explosion in price had an immediate impact at the retail level, with demand coming to a sudden halt as consumers baulked at the record price level. We had anticipated some safe haven buying as a result of the precipitous fall in the value of the currency, but this was short lived with the market dominated by sell-side activity as consumers took advantage of the price level to book profits. The limited demand was mainly for higher carat plain jewellery which could easily be sold back at a later point.

We estimate that jewellery fabrication declined 16% year-on-year to approximately 70 tonnes while investment demand slumped 23% over 2017 volumes due to, primarily, a 27% fall in official coin offtake. According to data published by Borsa Istanbul, Turkish bullion imports for the full year, at 210 tonnes, were 42% below 2017 levels. After a strong start to 2018, with average monthly imports of almost 30 tonnes in the first four months, average monthly imports for the May-July period fell to just below 19 tonnes. This trend continued and worsened following the currency collapse, with average monthly imports in the final quarter sitting at just over six tonnes, reflecting the sharp drop in consumer demand and the significant level of available metal in the market.

It was not all bad news for the Turkish retailers as the higher prices saw consumers rush to sell their gold assets to book a significant profit. While demand for new jewellery was almost non-existent for several weeks in August, shops were full of sellers wishing to offload their old jewellery, coins and bars. Given the significant wave of selling pressure at that time, the domestic price was trading at a near $10 discount to the international price, providing healthy profits across the supply chain to those exporting and able to capitalise on the price differential. Not surprisingly, scrap flows surged in August, after already trading at elevated levels throughout 2018, as the currency continued to capitulate. In the two weeks following the currency collapse, significant volumes of old gold were returned to the market and found their way to the local refineries who were reportedly working overtime to deal with high volumes. We estimate that scrap gold surged over 25% on 2017 volumes last year, to 77 tonnes in 2018; a seven-year high.

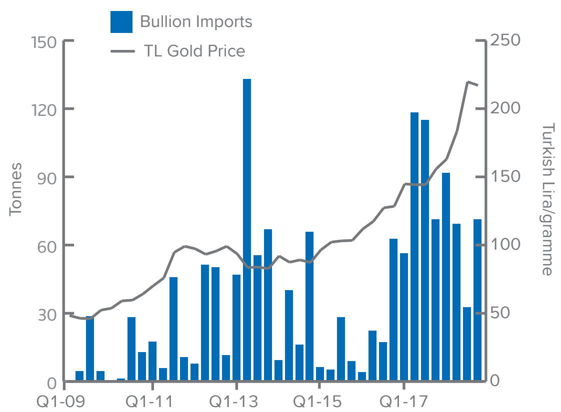
COUNTRY SECTIONS

TURKISH FABRICATION DEMAND



Source: GFMS, Refinitiv

TURKISH LIRA GOLD PRICE/GRAMME



Source: Borsa Istanbul; GFMS, Refinitiv

JAPAN

- **Japanese jewellery consumption retreated by 3% in 2018 reaching an estimated 19 tonnes.**
- **Japanese investment demand swung back into net investment in 2018, mainly as a result of strong buy-side interest in the third quarter when gold prices retreated below 4,200 yen per gramme.**
- **Electronics demand performed strongly in the first half of 2018, before falling sharply in the final quarter as the China-United States trade war tempered demand, limiting the annual rise to just 1%.**

Gold used in jewellery fabrication is understood to have retreated slightly in 2018, dipping 5% to an estimated 12 tonnes. A stronger second half, and particularly the third quarter when gold in local terms dipped briefly below 4,200 yen per gramme, failed to offset a 11% fall in the first six months of the year. Japanese economic growth was particularly volatile in 2018. All in all, it decreased sharply for the full-year to 0.7%, from 1.9% in 2017, dampening consumer sentiment. Aside from the economic impact, there were a number of natural disasters across the country (earthquakes, flooding, heat waves etc.) that also impacted demand. Looking at individual segments reveals that 18-carat yellow gold fashion jewellery saw a modest uptick in offtake, while 18-carat white gold lost market share to platinum.

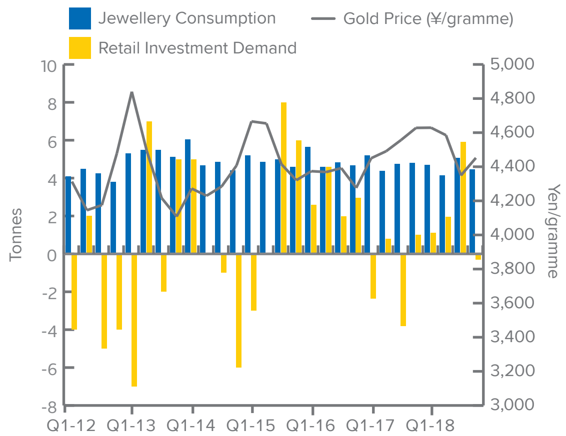
The estimated number of overseas visitors to Japan reached a record high 31 million in 2018, up 9% from the previous year, marking the country's seventh consecutive year of increases. A relaxation of tourist visa requirements which has aided Asian countries such as China in particular, and an expansion in destinations covered by both regular airlines and low-cost carriers have been strong contributors to the surge in foreign visitors, with the additional retail demand helping to offset a weaker domestic appetite.

Japanese retail investment for gold was underwhelming for much of 2018, before picking up briefly in August when gold prices retreated below 4,200 yen per gramme, the first time gold had traded at that level since October 2016. The surge in demand was short lived however, with the market swinging back into disinvestment in the fourth quarter as profit takers re-emerged. Overall, net retail investment shifted from net dis-investment of four tonnes in 2017 to net investment of almost nine tonnes last year.

The largest component of Japanese demand remains the use of gold in industrial applications. Last year industrial demand rose just 1% to an estimated 66 tonnes. However, the modest outcome masks a stronger first half of the year with demand falling away sharply in the final months of 2018 as external trade continued to strain growth amid deteriorating global trade conditions.

Japanese gold scrap flows fell back to earth in 2018 after a government crackdown on smuggled bullion into the country. Total scrap flows in Japan last year look to have fallen almost 35% from the record high in 2017 to an estimated 48 tonnes. What drove the high level of scrap receipts in 2016 and 2017 was the unofficial flows of gold bullion entering Japan illegally. This gold is smuggled into the country and, after avoiding the 8% consumption tax payable on gold transactions, is sold, often at a slight discount, into the supply chain. It was reported that in June the Finance Minister met the heads of several of the country's trading firms requesting that they refrain from purchasing foreign branded bars without full point of origin documentation. This had an immediate impact as those at the top of the pyramid removed themselves from purchasing this material.

JAPANESE GOLD INVESTMENT AND CONSUMPTION



Source: GFMS, Refinitiv

ITALY

- **Italian gold jewellery consumption and fabrication suffered last year, with total demand falling to its lowest level this century, while investors sort out the safety of gold.**

Italy's political situation reaches new lows in 2018

In March 2018, the Italian general elections resulted in a hung parliament, with a coalition party formed on 1st June between the anti-establishment Five Star Movement party (led by Luigi Di Maio) and the right-wing League party (led by Matteo Salvini), under the Prime Minister Giuseppe Conte. Following back and forth politics over the year (including threats to impeach President Mattarella during the period that the country was under no official government party), the sequential lack of cohesion between the newly formed coalition government threw the country into political chaos. While later in the year further anxiety for the country was caused by the coalition announcing a new 2019 budget plan, in which the government decided to increase its deficit spending to 2.4% of Gross Domestic Product (GDP) (trebling the previous government planned budget deficit). This however, was short lived with threats of sanctions and fines being established by the EU, with the government as a result reducing its spending plan down to 2.04% of GDP. All eyes now are looking towards the next European Elections to be held on 26th May, with the future position of Italy remaining in the EU a key foucs point.

Jewellery fabrication and consumption suffers

The Italian economy, which is the third largest nation in the Eurozone, currently holds the second largest level of debt (after Greece) at 2.3 trillion euros, with GDP for 2018 falling to 1.2% from 1.5% in 2017 in addition to unemployment levels recording double-digit figures since 2012. With great uncertainty surrounding the countries future position in the EU aiding to the countries problems, jewellery fabrication in the country declined in 2018, falling by 6% to its lowest level this century of 75 tonnes. The key drivers behind the fall came from weakness in exports, with either domestic economic concerns (in regions such as Asia), tighter fiscal policies (in countries such as the UAE - historically Italy's largest exporting partner), unfavourable payment contracts (USA) or aggressive commercial policies from foreign competitors (Turkey), negatively impacting demand abroad. Meanwhile, domestic demand continued to suffer in the country, with an ongoing shift in consumer preference away from jewellery to either branded items (iPhone, bags) or experiences, while the pace of decline further increased over the year on the back of consumers only spending money on what was absolutely necessary, given the economic backdrop.

Physical investment rises as Italy's economy worsens

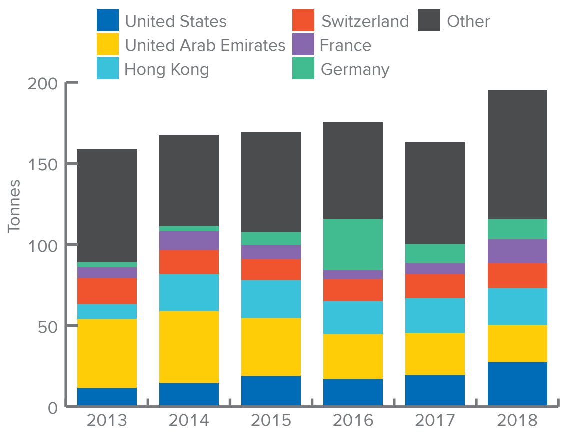
On the other hand however, gold investment in the country befitted over the year, jumping by 11% to three tonnes, its highest level this century. Following the composition of the new government in the beginning of the year and indeed the sequential introduction of new Italian economic reforms, rising tensions between the EU and the Italian government resulted in a sharp rise in purchases from Italian investors, losing risk appetite in preference for the safety of gold.

COUNTRY SECTIONS

ITALIAN JEWELLERY FABRICATION

Source: GFMS, Refinitiv

ITALIAN JEWELLERY EXPORTS BY COUNTRY



Source: GFMS, Refinitiv

SWITZERLAND

- **Gold retail investment in Switzerland fell 5% to 37 tonnes in 2018 driven by a decline in bar demand. Jewellery fabrication rose 15% to 20 tonnes last year.**

After three consecutive years of declines, Swiss gold watch hallmarking data showed a considerable increase again in 2018, rising by 58%. That level was the second highest on record and only 14% below the absolute peak in 1990. It seems that watch hallmarking has recovered from a couple of meagre years following the gifting crackdown initiated by the Chinese government. Swiss luxury branded pens and watches have always stood symbol to high quality and lend themselves well over the years in the corporate gifting culture in the Far East.

Swiss watch exports by units actually fell 2% last year reaching 23,738 units, representing a value of just under $20 bn. That total, however, includes a lot of different materials, such as steel, bi-metallic, precious metals and other. Precious metals accounted for 2% of total units sold and rose 7% compared to 2017. In value terms, however, precious metals accounted for one third of the total, or $6.6 bn last year, which was a 4% year-on-year increase in 2018. Steel watches represented the largest share in value and volume and also witnessed a rise in 2018 of 6% and 4% respectively. Bi-metallic (gold-steel) watch exports also rose by 15% in volume terms to 1.3 ml units last year. These watches are usually gold plated on a steel surface. More expensive watches did well last year with price points between $500-3000 and >$3000 rising considerably. Less expensive watches fell, which meant on balance that unit volumes were down but consumers opted for more expensive watches instead, pushing the value higher last year. Swiss watch exports by country rose 6% to $21 bn in 2018. China, including Hong Kong, was again the largest importer of Swiss manufactured watches, rising 16% to $4,7 bn last year. In fact, both Hong Kong and the mainland accounted for the first and third spot respectively, with the United States taking second position at $2.2 bn. Asia in general has been a strong destination for Swiss made watches in recent years, accounting for 53% of last year's turnover, 12% higher compared to the previous year. Watch sales in the United States rose too which was offset by a considerable decline in Europe.

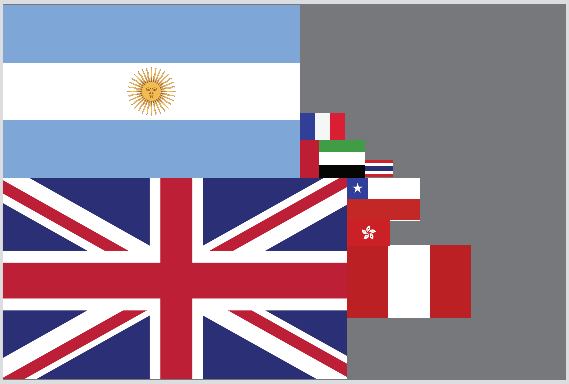
Gold jewellery fabrication fared well last year too, rising by an estimated 15% to 20 tonnes. In line with the sentiment in the watch industry, demand from particularly the high-end segment performed well, driven by robust sales from luxury brands. These volumes also include semi-finished products, such as watch casings or other small gold components. In volume terms, China is by far the largest watch producer these days, but for high quality merchandise, Swiss watches are still the place to go.

That is also the case in regards to investment bars, with the presence of quite a few of the top refiners in the country. While the difference in physical investment bars might not be that large between the various players, some investors do prefer certain textures over others, whereas others attach more value to brands that have been around for a while or find it important that the bars they purchase come from refiners that are still privately owned. That sentiment accounts for both the Swiss and the German investor alike. Both countries are heavily interwoven with refiners and bullion dealers stretching over both countries. However, most output in Switzerland is consumed overseas. Domestically we estimate that bar demand contracted 5% to 37 tonnes last year. The Swiss apparently don't need that much investment gold, given their domestic currency is considered a safe haven. That sentiment is also moderately reflected in the volumes fabricated by the Swiss Mint on an annual basis. Indeed, gold coin fabrication in Switzerland remained stable at 0.05 tonnes in 2018, which is almost negligible compared to gold coin sales of some of the other major mints worldwide. Last year the Swiss mint issued the 50 franc William Tell commemorative coin with a volume amounting to 4,500 pieces.

SWISS FRANC GOLD PRICE (PER KG)

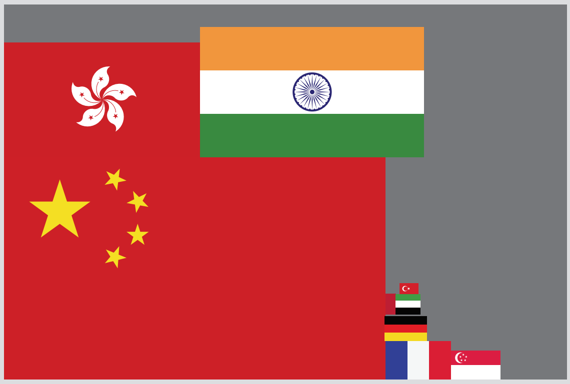
Source: GFMS, Refinitiv

2018 Imports



2,241 tonnes

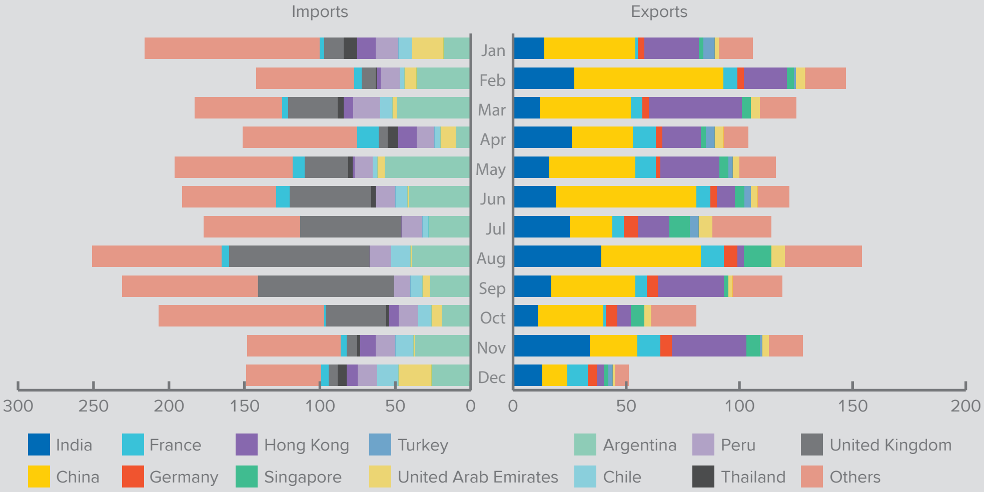
2018 Exports



1,360 tonnes

Source: GFMS, Refinitiv, Swiss Impex*

Each country's flag is proportional to its trade. The whole rectangle for imports and exports is equal to the total trade and the grey area denotes trade with a country not represented by a flag.



Source: GFMS, Refinitiv, Swiss Impex

Last year, Switzerland imported 2,241 tonnes of bullion gold bars, down by 5% compared to 2017; the lowest level in four years. Shipments from Hong Kong contributed mostly to the overall decline, falling by 70% last year. Switzerland also imported a considerable lower amount of gold bars from the United Arab Emirates, which contributed to the decline by shipping 50% less metal to Switzerland last year. Those declines were partially offset by a strong rise in metal from the United Kingdom, which indicates to us that metal might have been withdrawn from the terminal markets in order to satisfy demand overseas, usually from the Far East. Another strong rise in imports came from Argentina, which are not likely finished investment bars but probably gold doré that functions as feed for the Swiss refiners.

Swiss bullion and doré exports also declined by 13% to 1,360 tonnes. The biggest contributor to the drop was India, where demand for Swiss metal fell by 37% to 253 tonnes last year. After China, India is the second largest export destination for Switzerland, accounting for 19% of total exports. China, including Hong Kong, on the other hand, increased imports from Switzerland last year by 17% to 654 tonnes. It represented almost half of Swiss global exports in 2018. France, Thailand and United Arab Emirates also increased their demand for Swiss bullion and doré, which was offset by a drop in exports to Turkey, the United Kingdom and Singapore.

* All tonnages calculated from trade values in Swiss francs.

COUNTRY SECTIONS

RUSSIA

- **Russia's central bank holdings rose at their quickest pace on record last year, marking the country's seventh consecutive year as the largest acquirer of gold.**
- **Russian jewellery fabrication recorded a modest rise in 2018, demonstrating a second year of growth for the sector, while gold scrap levels boomed, jumping by 6% to reach their highest level since 2015.**

Russia's central bank purchases gold at record pace

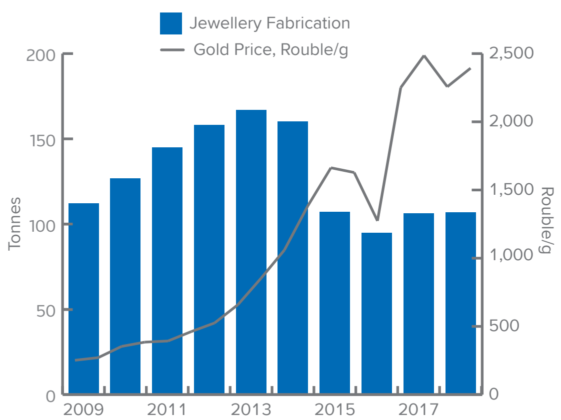
The central bank of Russia bought a record breaking 274 tonnes of gold last year, marking the country's thirteenth consecutive year of purchasing gold and seventh consecutive year as the largest acquirer of gold. By end-2018, Russia's total gold holdings rose to 2,113 tonnes, marking the country as the fifth largest holder of gold, overtaking China last year. This rapid growth in gold holdings by Russia reflects the recent economic hardship faced by the country, which only managed to slip out of recession in 2017 after recording negative growth over the 2015-2016 period. A weakening rouble, falling crude oil prices (which dipped from an annual average of $111/bbl in 2013 to $37/bbl in 2015 only just recovering to $69/bbl last year), in conjunction with a pleather of new or extended sanctions (from the United States and European Union), resulted in the country desperately trying to diversify its assets, particularly away from U.S. dollars. We believe that this pattern of purchasing gold will continue for the next several years, with Russia's percentage of gold (held against total reserves) only at 19%, which is far below most western countries such as the United States, Germany and Italy (who hold around 60-80%). But Russia's booming domestic gold mine production (which rose 4% last year) will also be a contributing factor, as by May this year, the country will start discounting the price of gold bought by the central bank (away from the London Bullion Market Association (LBMA) benchmark price), if the bought gold is domestically produced.

Jewellery market weakens at higher gold prices

The Russian jewellery market recorded a weak performance last year, rising by a mere 1% to 33 tonnes. The increasing price of gold (which in local terms rose on an annual basis by 8%), declining consumer confidence (which reversed gains made in the first three months of the year to end-December at its lowest level since March 2017) and extended sanctions against the country created a negative environment for fabricators. This sentiment additionally was reflected by weak domestic demand which contracted by 2% year-on-year. Having said this however, growth recorded over the last two years for fabricators has demonstrated an overall stabilisation in this sector, following three years of sharp declines over the 2014-2016 periods in which the country fell into recession, alongside the introduction of international sanctions (based on the annexation of Crimea), tumbling oil prices and a deprecating rouble. While it is unlikely that we will see the record level of growth witnessed over the 2000-2007 period in Russia for jewellery fabrication return anytime soon, stabilisation in demand for the moment should be taken as a positive.

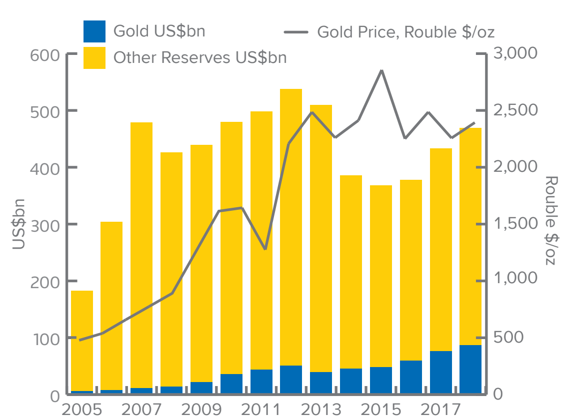
COUNTRY SECTIONS

RUSSIAN JEWELLERY FABRICATION AND SCRAP



Source: GFMS, Refinitiv

RUSSIAN GOLD HOLDINGS AGAINST TOTAL RESERVES



Source: GFMS, Refinitiv; IMF

REFINITIV

GERMANY

- **Gold retail investment in Germany rose 2% to just over 94 tonnes in 2018. Gold coin fabrication was the main driver whilst demand for bars contracted slightly last year.**

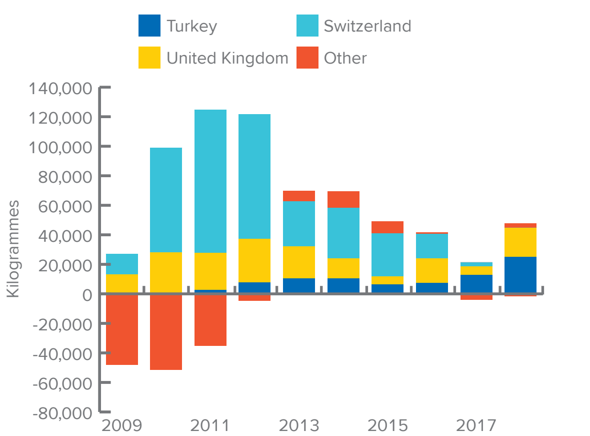
- **Jewellery fabrication saw a rise of 3% with particularly the 18-carat bridal segment reporting continued strong demand.**

Retail investment in Germany rose 2% last year to 94 tonnes. The increase was mainly a reflection of strong coin demand which increased 50% to six tonnes compared to the prior year. The German Mint issued 650,000 Euro gold coins last year spread over 20, 50 and 100 Euro denominations. Volumes were almost equally divided between the three denominations, but due to the difference in weight, the UNESCO 100 Euro gold coin contributed the most, more than half, to the increase. Although considerable in their own right, German official coin and medal fabrication only accounted for 6% of total physical investment demand in the country in 2018. Physical bar demand, accounted for the lion share of 94% and contracted 2% to 88 tonnes last year, which is approximately half of European physical bar demand. Germany has a wide array of refiners and bullion dealers present in the country which all differ from each other.

A portion of the bars also find their way into some of the ETPs the country offers. But the majority of demand is still conducted by retail and institutional buyers sourcing gold bars physically. Online web shops have popped up in recent years, with refiners and bullion dealers alike trying to accommodate the changing buying patterns consumers seem to prefer. Despite trust still being a big part of purchasing physical gold, online purchases have witnessed a considerable rise in popularity in recent years, particularly among the established brands, representing in some cases up to 25% of total sales. No other market in Europe has such a strong consumer base continuously keen to absorb newly refined and minted metal in bar and coin form as Germany. Other countries in Europe also have world class refiners but none of them as strong a home base as Germany.

According to the trade statistics, Germany exported 119 tonnes of what is classified as bullion last year, which was 20% higher compared to the prior year and imported 72 tonnes, 11% lower than 2018. Switzerland remains the largest trading partner, which is not surprising given the cross country ownership and the presence of world class refiners in the country. Metal in finished bullion and doré form will frequently flow back and forth between the two countries. However, on a net-basis, Germany's net-exports more than doubled last year to 46 tonnes, with not Switzerland but Turkey, accounting for more than half of the total, followed by the United Kingdom. Flows to the United Kingdom are not necessarily a reflection of strong demand given the presence of the terminal markets which are often used as a destination of last resort when metal can not be sold elsewhere.

GERMAN GOLD BULLION NET EXPORT



Source: GFMS, Refinitiv

Jewellery fabrication is believed to have had a decent year in 2018, rising 3% to a total of 14 tonnes. Of the various segments, the 18-carat sector continued to perform well, which is particularly reflected in the bridal segment. The lower caratage gold sectors, of 14 and 8-carat, witnessed a challenging environment. Low caratage gold stands in competition with sterling silver jewellery which are reasonably, give or take, in the same price range. Gold jewellery in general is struggling, with competition from alternative sectors, such as electronic gadgets and travel, particularly among the younger generation. Smart watches too have risen tremendously in the last couple of years, which come to the detriment of plain gold jewellery. It is mainly the bridal segment in Germany where gold jewellery still has a strong irreplaceable presence.

COUNTRY SECTIONS

UNITED KINGDOM

- **UK jewellery fabrication rebounded last year, rising by 1% to its highest level since 2016.**
- **Physical investment demand rose to its highest level this century (26 tonnes) on the back of Brexit uncertainty and falling economic growth in the country.**

Brexit – to be or not to be?

Following an agreement with EU leaders, the deadline for a Brexit decision was extended past the original Article 50 date of 29th March 2018, to 12th April 2018, given MPs once again declined the Prime Ministers', Theresa May, withdrawal agreement. Currently, Mrs. May is in talks with Labour leader Jeremy Corbyn, however, all three options for Brexit remain on the table, with the chance of no-deal Brexit, cancelled Brexit or a new-deal Brexit all to play for. In our view, if a further extension to Brexit is agreed, uncertainty for the UK and European market will continue to grow, while a decision to crash out of the EU with no deal is likely to create an economic shock. A softer Brexit is likely to unleash pent-up investment in the country boosting consumer spending.

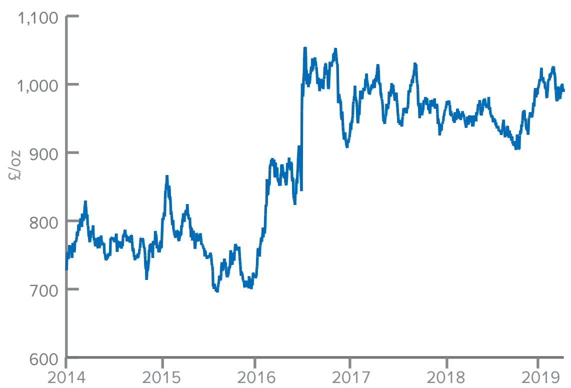
UK uncertainty drives investors to the safety of gold

Physical investment in gold bars in the UK jumped by 168% or 17 tonnes last year, to 26 tonnes, the highest level of demand recorded in the country this century. This rush into gold was also reflected by official coin fabrication, which similarly rose to its highest level this century of 13 tonnes, a rise in fabrication of 64%. With current GDP growth for the UK declining for a fourth consecutive year, down to 1% in 2018 (its lowest level of growth since 2009 when the country was in recession), along-side weaker economic growth recorded on a global scale (highly impacted by protectionism ideology leading to a global trade war), investors have turned away from risk-on assets in favour of diversifying their wealth into gold during these uncertain times. With the outcome for Brexit (as mentioned above) likely to result any one of the final conclusions (at present), physical investment for this year will remain largely dependent on the outcome, while the International Monetary Fund (IMF), has forecasted higher GDP growth this year at 2%.

Jewellery fabrication recovers from weak 2017 levels

UK jewellery fabrication rebounded last year, rising 1% to reach its highest level in two years of 7 tonnes. Positive hallmarking data in the second half of the year offset the weak performance in the first half, with total hallmarking recording a rise of 2%. While the high end of the jewellery market (24 carat) retained its stable presence in the market (with 99.9% gold jewellery making a comeback), 18, 14 and 9 carat jewellery rebounded in 2018. Trends in the market have changed recently, with consumers now preferring to hold yellow gold over white gold, and often with a lower percentage of metal given the preference for precious stones, such as emeralds or amethysts. This has somewhat tightened margins for fabricators, however, given the lower gold price last year, this helped to ease the situation. Domestically, jewellery demand contracted by 5% last year, with a change in trend from consumers preferring to spend their money on experiences or modern gadgets, such as iPhones. Indeed, on a wider level, the UK's consumer confidence index fell to its lowest level since November 2013 by end-2018. Turning to the scrap market, lower gold prices resulted in scrap levels falling by 3%, or approximately 1 tonne down to 41 tonnes; their lowest level since 2016. This result is not surprising with the scrap market, (particularly the jewellery sector) being a mature market, meaning that most stockists traded in jewellery scrap during the significant jump in gold prices in 2016 (on the back of the outcome of the Brexit vote), in which the pound sterling dropped by 16% intra-year, falling to its lowest value since 1985 in January 2017.

STERLING GOLD PRICE (£ PER OZ)



Source: LBMA, GFMS, Refinitiv

REFINITIV

COUNTRY SECTIONS

SOUTH KOREA

- **Gold demand from South Korea increased by 2% to 99 tonnes in 2018, buoyed by an increase in investment demand in the second half of the year.**

- **Industrial gold demand increased by 4% last year due to a strong performance in the semi-conductor sector, however we fear that the soft global economy will inevitably drag down industrial activities this year, resulting in declines of gold consumption in both the domestic jewellery and industrial sectors.**

The country's investment in gold increased by 7% year-on-year to 99 tonnes in 2018, as a weakening domestic economy and a lack of investor confidence spurred demand for gold bars, particularly in the third quarter last year when the gold price softened. The country's investment demand for gold increased by 23% year-on-year in the second half, after falling 8% in the first half.

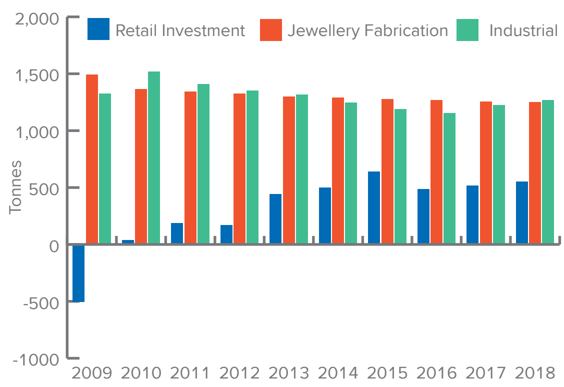
Economic growth in South Korea continued to lose steam last year and the local consumer sentiment deteriorated. Fortunately, the semi-conductor sector picked up the slack in 2018, as the country's export of industrial parts hit a record high, driven by strong demand from the global semi-conductor industry, which sales increased 14% to $469 billion last year, a record high. As a result, industrial demand for gold continued to increase in 2018, rising by 4% to 35 tonnes, but lost momentum towards the end of the year due to a slowdown in the global economy.

Meanwhile, jewellery gold demand in 2018 stayed flat at 40 tonnes, with a bias towards the downside due to a waning consumer sentiment. Consumers have become very price sensitive, and started to buy smaller pieces, with the average price tag continuing to decrease, although sales from overseas luxury brands continued to do well, indicating the consumption is getting more polarised.

Total gold demand in South Korea rose modestly in 2018, driven by a rise from the industrial sector as well as investment purposes, more than offsetting the loss from the jewellery sector. However, we are not optimistic about the country's outlook for gold consumption in 2019, fearing that the consumer sentiment will continue to deteriorate this year. After supporting South Korea's economy in 2018, even the domestic semi-conductor industry looks set for a slowdown. Samsung Electronics earnings plunged more than 60% in the first quarter this year, driven by falling semi-conductors prices and soft demand. The country's exports also contracted for the fourth consecutive month in March.

The Korea Development Institute (KDI) said the domestic economy continued to show regression, mostly due to slumping domestic consumption. The Hyundai Research Institute has recently predicted that the South Korean economy will grow by 2.5% in 2019, slightly lower than the central bank's prediction of 2.8%, in addition to forecasting that the domestic economy will reach its lowest point sometime in the second half of 2019. Under President Moon Jae-in, South Korea has raised both taxes and the minimum wage, hoping to kick start the economy. However the newly implemented measures did not have the desired effect, as the increased costs for corporations reduced their already razor-thin margins, and stimulated them to reduce new hires. As a result, we expect gold consumption from the industrial and the jewellery sectors to decline in 2019, although gold investment demand could surprise to the upside this year.

SOUTH KOREA GOLD DEMAND



Source: GFMS, Refinitiv

COUNTRY SECTIONS

INDONESIA

- **Indonesian jewellery consumption was 12% stronger in 2018 despite higher domestic gold prices.**

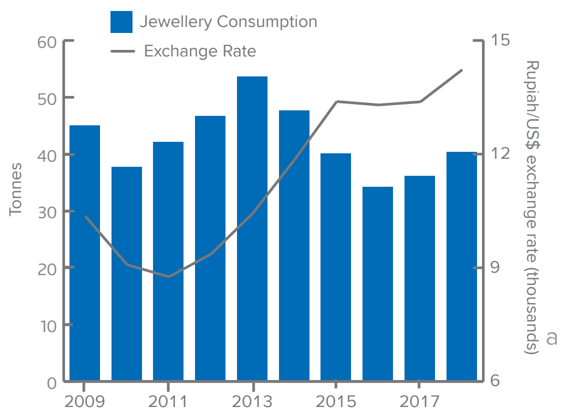
Indonesian gold demand enjoyed a healthy rise in 2018 despite the average gold price in local terms rising by over 7% on a year-on-year basis. A weaker currency last year saw consumers shift to gold as a means of protecting assets, not just through the increase in investment products (bars and coins), but also by purchasing gold jewellery and ornaments. Like many economies in the region Indonesia's currency has continued to weaken as it struggles with capital outflows and weaker exports. The Indonesian rupiah was one of the worst performing emerging currencies last year, weakening 7% against the U.S. dollar and falling to its weakest level in more than 20 years at one point.

Indonesia's gross domestic product (GDP) grew 5.2% in full year 2018, the highest level since 2013, rising from the 5.1% year-on-year increase in the previous year. Growth in Southeast Asia's biggest economy has been hovering around 5% since 2016, with consumer spending struggling to pick up and investment remaining subdued. As a result of the currency weakness the average local gold price last year, at 579,570 rupiah per gramme, was 7% higher than in 2017, hitting an all time high. Despite gold prices trading at these elevated levels, both jewellery and retail investment demand remained robust, delivering solid gains in 2018. For the full year, retail investment, which includes small bars and coins, was stronger overall, rising 3% year-on-year to 13 tonnes helped by a surge in demand in the third quarter as gold prices retreated. Meanwhile, jewellery consumption for the full year, at 40 tonnes, was 12% stronger than 2017 volumes for the same period. The combined total at 54 tonnes was 10% stronger on a year-on-year basis.

Stronger gold demand during a period of record gold prices may appear slightly counterintuitive but there are two main reasons for this. Firstly, consumers are buying gold as a means of protecting against further currency weakness. They are buying gold or U.S. dollars as they can easily be sold back when the need arises or should the currency begin to strengthen. Those in the urban centres are doing this by purchasing small investment bars (5-100 grammes, for example), while rural residents are predominately purchasing gold jewellery as a means of protecting their cash assets. This is occurring even in the low carat segment (7-10 carat) which now dominates the Indonesian market. The second reason behind this strong gold demand is the ongoing crackdown by the Indonesian government on tax evasion. Indonesia completed one of the world's most successful tax amnesties in 2017 and while many took the opportunity to disclose prior revenues at a reduced penalty rate, many still continue to hide their wealth from the government. The majority of Indonesia's more than 250 million people do not pay tax and many are not even familiar with the concept of paying. Only 38 million are registered taxpayers, including corporations, and less than a third submit tax returns. Rather than companies or individuals holding cash in bank accounts, which may come under scrutiny by tax authorities, they are choosing instead to purchase gold and hide their assets from prying eyes.

Jewellery exports were mainly weaker in 2018 with flows to the Middle East, and predominately Dubai, falling sharply due to the weakness in the wholesale supply chain. Flows to Hong Kong (a conduit to China) were also weaker for a number of segments but niche products were still well supported. While exports were down, local fabricators were content to focus on the more robust domestic demand where higher premiums prevailed. Looking to this year, demand trends will be heavily influenced by movements in the local currency. At this stage it looks likely the Indonesian economy will remain under pressure and the rupiah is likely to suffer as result. We expect under this scenario gold offtake to be well supported.

INDONESIAN JEWELLERY CONSUMPTION



Source: GFMS, Refinitiv

REFINITIV

COUNTRY SECTIONS

MALAYSIA

- **The removal of a GST helped to boost Malaysian demand, but a weak H1 drags full year gold demand lower.**

The Malaysian gold market has had a challenging few years. The export focused sector has struggled as demand in the Middle East and China has declined quite sharply from the peak in 2013. In addition, the introduction of a 6% GST on 1 April 2015 had an immediate impact on domestic consumption, dragging demand lower. The Malaysian Government led by Prime Minister Mahathir Mohamad announced on 30th May last year that the country's Goods and Services Tax (GST) would be abolished. This produced a "tax holiday" from the 1st June until the reintroduction of the Sales and Services Tax (SST) on the 1st September. Mahathir repealed the unpopular GST that was introduced on 1st April 2015 and applied it to 60% of the Consumer Price Index bracket of goods. Abolishing the six percent GST fulfilled a key election promise made by the incoming government. While many retailers had hoped for a stronger recovery after a disappointing first half of 2018, gold demand did pick up following the removal of the GST, with consumption in the third quarter jumping 14% year-on-year.

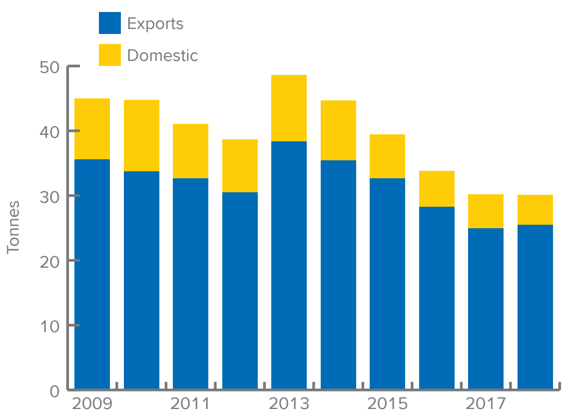
While the new tax regime, known as Sales and Service Tax (SST) has been introduced across a myriad of industries, the precious metals markets remained tax free after being given an exemption. There is no longer a tax applied to gold bars or jewellery sold in Malaysia, providing a boom to the local industry after the market struggled following the introduction of the GST back in 2015. Jewellery consumption in the first half of 2018 remained weak as consumers waited for the government to honour their election promise of removing the tax, but once the GST was lifted, demand rebounded. Retailers reported an increase in turnover in early June but there was no surge in offtake as many had hoped, with higher gold prices (at the time) dampening consumers' appetite. As gold tracked lower in the third quarter however, demand did pick up, especially for investment bars and higher purity jewellery when gold in local terms fell below 155 ringgit per gramme in August, the first time since April 2016. Demand for 22-carat, and to a lesser extent 24-carat items, boosted overall demand with gift purchasing and bargain hunters emerging ahead of Hari Raya Aidilfitri, resulting in stronger demand than in previous years. While higher purity plain jewellery sold well, diamond and gemset designs were slow moving, a reflection perhaps of the more cautious approach on discretionary spending by the middle class.

Malaysian gold jewellery fabrication is heavily focused on the export trade, with domestic consumption accounting for less than 15% of total production volumes. Most exports are plain gold chains and are destined for the Middle East (chiefly Dubai) and to a lesser extent Singapore and Hong Kong. Last year was difficult for many of the larger exporters as demand in the UAE had fallen sharply following the introduction of a Value Added Tax (VAT) at the start of the year. Weaker consumption in India and broadly across the GCC has meant orders from the Dubai based wholesalers have been smaller and less frequent. A number of fabricators reported that their exports to Dubai were down 30-40% when compared to the previous year. Shipments to Singapore also retreated as these goods are mainly re-exported to India on arrival, while flows to Hong Kong remained broadly stable last year.

Given that the export sector is reeling, many fabricators are redirecting their efforts back to the domestic market in an attempt to maintain production levels, but it is a competitive space and local tastes are quite different from the products they typically export.

While demand in the second half of 2018 picked up, the gains were not enough to offset losses experienced earlier in the year. As a result, Malaysian jewellery consumption declined 12% year-on-year, while the GST removal and a period of lower prices in the third quarter delivered a 6% annual rise in retail investment.

MALAYSIAN JEWELLERY FABRICATION



Source: GFMS, Refinitiv

COUNTRY SECTIONS

THAILAND

- **Thai gold jewellery demand edged 3% higher in 2018 while the investment market surged to a four-year high.**

Thailand gold consumption retreated in the final quarter of 2018 as higher gold prices dampened investor interest in the yellow metal. Having surged in the third quarter, demand wavered as prices again tracked higher. In what would traditionally be a strong seasonal period, the final few months of last year were disappointing for many retailers and tempered what had been a solid year. Local gold jewellery consumption saw a modest uptick last year, rising 2% to 15 tonnes, as a stronger economy and a rising number of visiting tourists helped to boost retail activity. Thailand saw a record 38 million tourists in 2018, up 8% from 2017. Chinese visitors are the top source of foreign receipts in an industry that makes up about a fifth of the economy. Foreign tourist receipts directly account for about 12% of Thailand's gross domestic product. The domestic economy expanded 4.1% for the whole of 2018, compared with a revised 4% for the previous year. While local demand has remained resilient, Thailand is facing heightened political risks ahead of general elections this year, which could hurt sentiment and domestic investment.

While the health of the economy certainly played a role, the greatest influence on consumption last year were movements in the gold price with the average domestic price falling 4% in 2018. In August the gold price in baht terms fell below 19,000 baht per baht bar. This was the first time gold in domestic terms had been below this level since January 2016. While investment demand and bullion imports had been tracking higher as gold prices were easing during the previous month, the sudden correction in the dollar gold price below $1,180/oz in mid-August fuelled a run on both investment bars and to a lesser extent 965 purity jewellery and ornaments.

Such a strong surge in demand saw bullion stocks quickly depleted as bargain hunters rushed to retailers to take advantage of the perceived discounted price. This demand not surprisingly necessitated a wave of fresh imports to meet the raging investor appetite. Gold bullion imports into Thailand surged to 118 tonnes in the third quarter of last year, a jump of more than 75% over 2017 volumes for the same period. The weaker gold price fuelled investment demand as bargain hunters re-emerged and traders across the supply chain replenished stocks at the lower price level. Both retail investment and jewellery consumption benefitted from the lower price environment in the third quarter, rising 17% and 13% respectively on a year-on-year comparison. The former, at 25 tonnes, was the highest total since the fourth quarter of 2014.

However, imports in the final quarter fell sharply, declining 48% over 2017 levels, as higher prices kept many potential investors on the sidelines. Retail investment demand fell sharply for the period, while losses for jewellery consumption were limited to a single digit decline. Based on our analysis, retail investment demand in Q4 fell 23% year-on-year to 18 tonnes, but registered a 4% rise for the full year, to the highest level since 2014. Meanwhile, jewellery consumption also fell below expectations in the fourth quarter. Seasonally Q4 is traditionally a strong retail period but last year demand was below par. Higher prices and a lack expectations of further gains saw consumers willing to hold off purchasing 965 purity jewellery and ornaments, instead, preparing to wait for a lower price before re-entering the market. We believe jewellery consumption slipped 6% year-on-year in Q4, but in 2018 as a whole, jewellery offtake was 2% stronger than 2017 volumes. We anticipate that 2019 will deliver greater volatility as global equity markets come under pressure, providing the platform for gold investment in Thailand to flourish. Jewellery demand is likely to be weighed down by higher prices and as a result any growth will likely be limited.

THAILAND JEWELLERY FABRICATION

Source: GFMS, Refinitiv

REFINITIV

VIETNAM

- **Vietnam's jewellery market continues to expand while investment demand is supported by unofficial flows.**

The Vietnam gold market remains closed to official gold bullion imports with the State Bank of Vietnam (SBV) introducing Decree No.24 in 2012 which delivered the Government a monopoly on gold bullion production, import and export of the metal. Since then, domestic demand has been largely serviced by unofficial or smuggled bullion flows with the volumes of this parallel trade often a good proxy for local consumption trends.

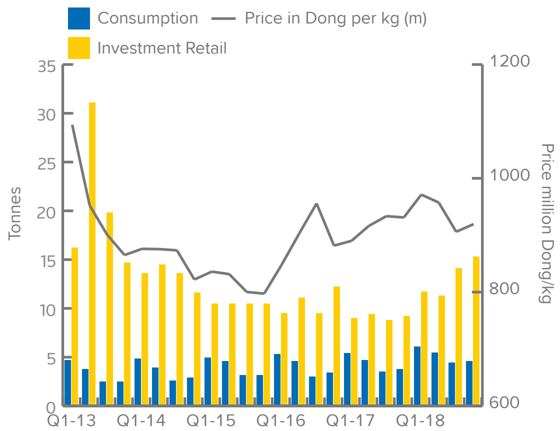
The most common route for metal flowing into Vietnam is via Cambodia which in recent years has become a significant gold market in its own right as it is now the major conduit for its neighbour. Singapore is the major source of supply for shipments to Cambodia while Thailand also emerged as a significant source in 2018. Last year bullion flows from Singapore to Cambodia topped 95 tonnes, an 80% jump over 2017 volumes. In addition, a further 43 tonnes were delivered via Thailand according to customs data, more than doubling the previous year. Cambodian gold consumption, while rising as the economy has strengthened, is still a relative minnow in a very large pond. The vast bulk of these metal flows are destined for its larger neighbour.

Having just returned from research visit to the region and after spending time in Vietnam, the expected increase in demand as a result of higher imports was not clearly apparent. Jewellery demand was certainly strong in 2018 recording an impressive annual increase, helped higher by a rapid expansion of several prominent local retailers, but mainly as a result of strong demand for 24-carat rings and medallions, which are purchased as a quasi investment option. With limited access to locally produced gold bars (Saigon Jewellery Company (SJC)) consumers wishing to buy gold as a hedge against a weaker currency or higher inflation have been turning to this higher purity jewellery. This gold jewellery is often sold encapsulated in hard plastic like a small gold bar and attracts a third of the premium of the locally traded SJC bar. Our analysis suggests jewellery consumption in 2018 increased by 21% year-on-year to 21 tonnes.

Retail investment on the other hand is harder to quantify. Gold bar sales through official channels such as jewellery retailers and domestic banks slowed considerably in 2018 as a lack of access, due to the tight government control, and higher premiums limited consumption. If this was how we measured overall demand then consumption in Vietnam would have fallen sharply last year. However, the high level of unofficial flows into Vietnam last year suggests investment demand actually remained elevated. While offtake of the tightly governed SJC bars had been tempered by this lack of availability, demand for foreign branded kilo bars, or parts thereof, (kilo bars are often cut and sold in portions) rose dramatically. Domestic SJC bars are sold at a hefty premium as this smuggled material is much cheaper to purchase. Anecdotal evidence suggests consumers are still purchasing gold (in large volumes) as a means of protecting themselves against further currency devaluation and inflation. We estimate that investment demand in Vietnam jumped 44% in 2018 to a four year high of 52 tonnes.

We expect jewellery consumption to continue to expand into 2019 as investment driven purchases help to augment the rapidly expanding retail sector. The tight government control of the gold market will place a cap on retail investment, but with strong underlying demand present, the unofficial sector is expected to flourish. With this in mind we expect to see significant gold bullion flow to Cambodia once again.

VIETNAM JEWELLERY CONSUMPTION & RETAIL INVESTMENT



Source: GFMS, Refinitiv

COUNTRY SECTIONS

MIDDLE EAST

- **Jewellery fabrication across the Middle East slumped 10% in 2018 to 249 tonnes, a new record low, after big falls were recorded from the UAE and Iran.**
- **Jewellery consumption in the UAE decreased by 21% year-on-year to 41 tonnes following the introduction of a 5% Value Added Tax (VAT) on gold at the beginning of the year.**
- **The introduction of the VAT in the UAE helped boost jewellery fabrication across the GCC, with annual gains recorded in Saudi Arabia, Kuwait, and Jordan, while Egyptian demand picked up on a stronger economy and a rise in tourism.**
- **Iranian jewellery consumption fell 25% in 2018 due to sanctions and a rapidly weakening economy.**

Egyptian gold consumption recovered 2% in 2018 to 25 tonnes after experiencing a calamitous fall the previous year as the domestic currency collapsed. A stronger economic footing (albeit far from a sustained recovery), coupled with a rise in tourist visitors last year, help support higher offtake. Initial figures show that nearly nine million tourists visited Egypt in 2018, up from 5.4 million in 2016. While inflation has eased and the value of the local currency has strengthened, consumer spending for discretionary items remains muted.

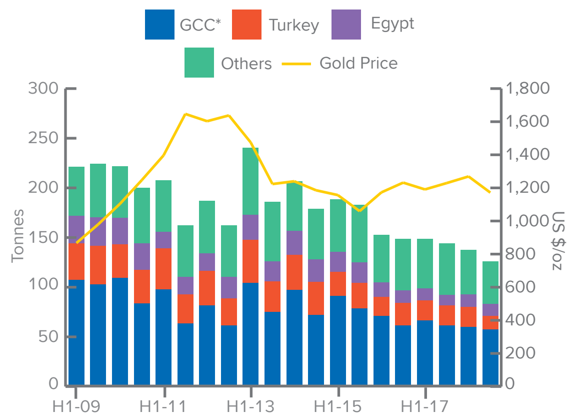
Following a strong performance in 2017, jewellery consumption in **Iran** fell sharply, slumping 25% to a record low 34 tonnes as continued sanctions and a rapidly weakening economy ravaged demand. Meanwhile, investment demand surged last year following the central bank's decision to increase the number of coins it released into the market coupled with the desire of locals to seek out safe haven assets. Our retail investment estimates point to a 61% increase last year to 28 tonnes.

Kuwait's jewellery consumption rose for the second year in succession, edging 4% higher to 23 tonnes. Meanwhile, domestic fabrication recorded an impressive 12% rise last year as the higher costs of purchasing gold jewellery from Dubai (due to the Goods and Services Tax (GST) and import tariff) saw many retailers seeking out local fabricators to fill the gap. Demand for higher purity items (21 and 22-carat) was the mainstay of demand growth, while 18-carat and particularly diamond-set jewellery remained weak. Investment demand also recorded a solid rise in 2018, jumping 19% over 2017 volumes, with a surge in demand in August when the dollar price dipped below $1,180/oz accounting for the bulk of the rise.

In **Jordan**, jewellery consumption fell sharply in 2018, declining 16% year-on-year as the government introduced changes to tax policies in a move to push ahead with crucial fiscal reforms to lower record public debt needed to get the economy back on track. The government introduced a brutal regime of stamping charges across the supply chain that had an immediate impact when they were first introduced in February 2018. Not surprisingly, the impact of the new stamping fee was substantial with imported jewellery and gold bullion imports stopping virtually overnight as the higher cost made it impossible to make money in an already competitive market. A silver lining of the higher fee structure was the expansion of the local fabrication market which we estimate enjoyed a 14% rise last year. Instead of paying the high fees for imported jewellery, many fabricators increased the volume of locally produced jewellery.

Elsewhere, **Bahrain** and **Qatar** both enjoyed a rise in jewellery consumption last year, increasing 10% and 4% respectively. In the case of the latter, a more stable geopolitical environment helped boost consumer sentiment, while the strong growth for the former was mainly driven by bargain hunting (predominately for higher purity items) in the third quarter.

MIDDLE EAST JEWELLERY CONSUMPTION



*GCC: Saudi Arabia, UAE, Oman, Bahrain, Kuwait, Qatar
Source: GFMS, Refinitiv

COUNTRY SECTIONS

SAUDI ARABIA

- **Saudi Arabian gold jewellery consumption declined 6% in 2018 due to new taxes and economic pressures.**

Saudi Arabian gold jewellery consumption fell for the third year in succession in 2018, slipping 6% to an estimated 35 tonnes. The introduction of a 5% Goods and Services Tax (GST) at the start of the year had an immediate impact on consumer sentiment and retail sales, dragging demand for non-essential items sharply lower. The new tax and more expensive fuel (part of a government drive to cut a big budget deficit caused by low oil prices), had a large impact on Saudi consumer spending power in some areas. Saudi Arabia's economy grew at a modest pace of 2.2% in 2018, with the modest recovery following the first contraction in economic growth since the global financial crisis in the previous year when the economy was hurt by weak oil prices and austerity measures.

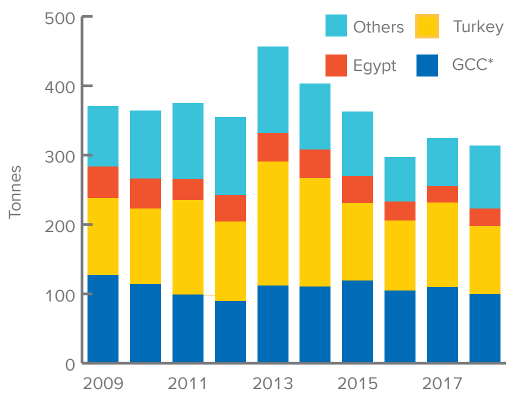
While jewellery consumption may have declined last year, we estimate that jewellery fabrication, on the other hand, recorded a modest 3% rise to 34 tonnes. This was the first increase since 2015 and was largely driven by higher import costs and uncertainty surrounding the GST and import tariffs in Dubai (which serves as the distribution hub for the region). The higher import costs and a crack down on smuggling routes saw the domestic wholesalers seeking more locally produced items, boosting fabrication volumes. This was mainly for 21-carat items (still the mainstay of demand in the country) and for simple designs.

The second half of the year was much stronger for local consumption as the shock of the new taxation system had dissipated and consumers were more willing to spend. Lower gold prices in the third quarter in particular encouraged buyers back to the gold souks and retail outlets to replenish and upgrade jewellery items. We estimate that the demand in the third quarter was 7% stronger on year-on-year basis and despite a decline in the final quarter still managed a 2% rise in the second half of the year. Demand for lighter designs, in order to reduce the sticker price of the item, has been a feature of the Saudi market for many years now as consumer tastes have changed. Wedding sets that were typically more than 200 grammes are now quite often below 70 grammes, with some even lower. Retailers have been forced to adapt to the changing market by introducing smaller light weight items that carry a higher premium to offset the drop in sales volumes. One way they have achieved this is through increased promotion and sales of 18-carat fashion jewellery which appeals to the younger more fashion conscious generations.

The Saudisation policy, which essentially is a scheme to replace foreign workers with Saudi nationals through a quota policy, continued to have an impact on the gold market in 2018. With nearly half of the native population under the age of 25 and a national unemployment rate of more than 12%, jobs for Saudis are a priority. However, in the gold sector where most of the salesmen are foreign (mainly Yemeni), it has come at a cost with many retailers closing due to a lack of available staff. Nearly two-thirds of all Saudis are employed by the government, and the public sector wage bill and allowances account for roughly half of all government expenditure. Authorities are seeking to change that and rein in its ballooning budgetary deficit by expanding Saudisation across multiple sectors.

Investment demand for much of 2018 was somewhat underwhelming with our estimates pointing to 5% annual fall to nine tonnes. Demand rebounded in August when the dollar gold price was trading below $1,200/oz but it was relatively short lived as buy-side interest evaporated as gold prices trended higher and profit takers emerged.

MIDDLE EAST FABRICATION



*GCC: Saudi Arabia, UAE, Oman, Bahrain, Kuwait, Qatar
Source: GFMS, Refinitiv

COUNTRY SECTIONS

UNITED ARAB EMIRATES

- **Retail gold demand in the UAE fell by 17% year-on-year to 50 tonnes. This was largely due to the introduction of a 5% VAT on gold with a purity <995 at the beginning of the year.**
- **Jewellery consumption decreased by 20% year-on-year to 41 tonnes, a level not seen since the late 1990s.**
- **Retail Investment demand increased marginally, rising by 2% year-on-year to 9 tonnes.**

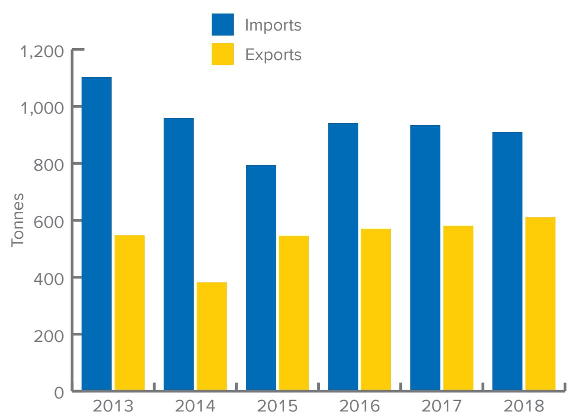
The introduction of a Value Added Tax (VAT) in January 2018 weighed heavily on UAE's full year gold demand. The new tax system stipulates gold in any purity less than 995 attracts a 5% VAT. The increase in the local gold price was the main factor occupying investors and consumers in the UAE, especially for the Dubai gold jewellery market. When jewellery becomes more expensive due to a change in taxation, consumers become more hesitant to purchase. However, the implementation of the VAT was not the only change in the market in recent years, Dubai also imposed a customs duty of 5% on jewellery imports in 2017. These policy changes combined made the sticker price of jewellery rise significantly, making Dubai as a jewellery hub slightly more expensive than Hong Kong and Singapore. The new taxation system shed tourists away from the Dubai gold jewellery market, like expats from the Indian sub-continent, who refrained from buying jewellery at the higher prices. This was exacerbated by a rise of the gold price in U.S. dollar terms, which combined resulted in a 20% year-on-year fall in demand in 2018 to 41 tonnes.

The year started off poorly with a 35% year-on-year decline in jewellery demand to 10 tonnes in the first quarter of 2018. Due to the incoming VAT implementation in 2018, consumers and investors alike pulled purchases forward to Q4 2017, which caused a disruption in the market. Indeed, jewellery demand rose 58% year-on-year and in a similar vein investment demand increased by 13% in Q4 2017. In Q2 2018, demand was more stable with jewellery consumption for the period only marginally lower compared to the corresponding period in 2017. Jewellery consumption is estimated to have reached 11 tonnes for the period, a decline of only 1% year-on-year. Meanwhile, investment demand jumped 24% year-on-year to 2 tonnes in Q2, as bargain hunters emerged on the back of gold prices touching a multi-month low. The third quarter is traditionally weak with relatively low volumes and therefore failed to recover the losses accumulated in Q1, despite demand (jewellery + investment) increasing by 4% year-on-year.

Having witnessed the decrease in gold demand following the implementation of the VAT policy, the government reversed an earlier decision to allow tourists to obtain a VAT refund from November 18, 2018 onwards. This ignited optimism amongst traders that Dubai would return to its good old days. As a result, demand revived, pushing the total for the quarter to 13 tonnes for gold jewellery and four tonnes for investment. Compared to Q4 2017, gold jewellery demand fell 30% in Q4 2018, mainly due to reasons already explained above. Over the 2011-2016 period, the average fourth quarter demand for gold jewellery stood at 11 tonnes, which was 10% below the volumes recorded in the final quarter of last year.

We estimate more money will be spent on jewellery by tourists and demand to increase in 2019 by at least 10% year-on-year to 45 tonnes. On the other hand, we expect the unofficial market in bullion trade will continue, with Nepal the primary destination of choice for smugglers to sneak metal into the Indian market

UAE GOLD IMPORTS AND EXPORTS



Source: Dubai Customs, DMCC; GFMS, Refinitiv

APPENDIX - GOLD PRICES IN 2018

	LBMA AM US$/oz	LBMA PM US$/oz	High PM US$/oz	Low PM US$/oz	euro/kg	CHF/kg	yen/g	A$/oz	rand/kg	£/oz	rupees/ 10g
Annual Average	1,268.93	1,268.49			34,528	39,876	4,502.82	1,696.05	538,141	949.82	30,841
Maximum	1,360.25	1,354.95			36,210	42,596	4,798.82	1,816.50	593,666	1,006.69	32,235
Minimum	1,176.70	1,178.40			32,711	36,936	4,186.07	1,612.04	492,695	900.86	29,350
Range:Average	14.5%	13.9%			10.1%	14.2%	13.6%	12.1%	18.8%	11.1%	9.4%
Monthly Average											
Jan	1,332.81	1,331.67	1,354.95	1,311.00	35,100	41,115	4,746.83	1,673.99	521,188	963.28	30,166
Feb	1,333.78	1,331.53	1,352.45	1,314.10	34,687	40,002	4,616.84	1,692.67	505,723	953.71	30,619
Mar	1,325.56	1,324.66	1,352.40	1,307.75	34,526	40,362	4,517.41	1,706.80	503,630	948.09	30,619
Apr	1,334.38	1,334.74	1,351.45	1,313.20	34,972	41,587	4,621.27	1,737.44	519,457	948.73	31,282
May	1,303.61	1,303.03	1,324.35	1,288.30	35,460	41,765	4,597.17	1,731.36	525,045	967.98	31,277
Jun	1,282.13	1,281.57	1,302.75	1,250.45	35,305	40,787	4,537.29	1,711.27	548,916	964.74	30,907
Jul	1,238.06	1,238.53	1,262.05	1,217.55	34,079	39,592	4,438.22	1,672.91	532,672	940.55	30,445
Aug	1,201.86	1,201.25	1,219.00	1,178.40	33,469	38,164	4,287.89	1,640.43	544,189	932.96	29,825
Sep	1,199.20	1,198.47	1,209.80	1,185.40	33,048	37,306	4,317.00	1,663.91	568,600	918.02	30,754
Oct	1,214.73	1,215.39	1,235.95	1,185.55	34,043	38,842	4,406.84	1,711.52	567,602	934.57	31,693
Nov	1,221.28	1,220.95	1,232.25	1,202.10	34,552	39,278	4,449.46	1,684.34	552,227	946.72	31,188
Dec	1,249.89	1,247.92	1,279.00	1,230.30	35,294	39,833	4,515.67	1,738.18	571,025	986.32	31,447
Quarterly Average											
Q1	1,330.70	1,329.32			34,778	40,511	4,629.09	1,690.86	510,426	955.18	30,460
Q2	1,306.26	1,308.48			35,250	41,376	4,584.66	1,726.52	531,328	960.67	31,153
Q3	1,213.47	1,215.21			33,547	38,387	4,348.67	1,658.93	547,859	930.90	30,308
Q4	1,227.42	1,225.03			34,567	39,268	4,451.81	1,709.19	563,085	953.07	31,475

Source: LBMA; GFMS, Refinitiv

APPENDIX