50
YEARS

GFMS GOLD SURVEY 2017

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PUBLISHED MARCH 2017 BY THOMSON REUTERS

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THE GFMS TEAM AT THOMSON REUTERS GRATEFULLY ACKNOWLEDGES THE GENEROUS SUPPORT FROM THE FOLLOWING COMPANIES FOR THIS YEAR'S GFMS GOLD SURVEY AND ITS QUARTERLY UPDATES

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ISSN: 2055-1800 (Online)

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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.

This year we celebrate the 50th anniversary of the Gold Survey. The piece that follows was written by TImothy Green for the 40th anniversary of the Gold Survey. It is a fascinating account of the evolution of the Survey, liberally sprinkled with local colour. Tim was the key continuum for much of the life of the Survey, with an association spanning over 30 years and it was his presence that ensured that some doors opened to us, while others remained open as our analysts changed. He has kindly allowed us to reproduce this piece and we are very grateful to him - not just for the permission, but for his enormous contribution to the world's knowledge and understanding of this fascinating market.

THE GOLD SURVEY - WHENCE IT CAME, WHERE IT WENT

by Timothy Green

"The genesis of this annual study on gold was the turbulent market conditions of 1967. Central Banks sought to contain the gold price at $35 per troy ounce (where President Roosevelt had fixed it in 1934) against growing private buying. The demand was for fabrication in an increasingly prosperous world, coupled with speculation against a weak dollar and the anticipation that the price, capped for so long, must rise. Yet relatively little was known of this new offtake. Such estimates as there were counted only official statistics in the main industrial countries, but took no account of unofficial distribution channels of gold, since many nations still imposed controls on private imports or taxed them highly. Only Samuel Montagu, close to the market, had pointed out in their Annual Bullion Review that most gold was going into private, not central bank, hands. Seeking to fill that gap, David Lloyd-Jacob at Consolidated Gold Fields (CGF), then the second largest South African producer, sought to expand on official figures for fabrication of gold by tracking jewellery, industrial and hoarding demand world wide. "For a mining house this information is relevant to future investment policy," he argued.

By the summer of 1967 he put together an internal report to CGF which revealed that over the previous decade the amount of gold going into jewellery and industry had risen from about 25% of world output to at least 50%. He projected, moreover, that by 1973 this fabrication, at prices then prevailing, could absorb all new production annually. This had serious implications for the international monetary system which, although no longer on the gold standard, had major reserves in the metal. It implied a complete reversal of gold demand which, until then, had primarily been either in coinage (until the First World War), or for central bank stocks. Hard numbers on this new market were imperative. The directors of CGF did not want to publish the report, but Lloyd-Jacob leaked its main findings to The Economist, which featured them prominently in its issue of 23rd December 1967.

Within three months, the escalation of speculative buying against a fading dollar had precipitated the gold market crisis of March 1968, when central banks gave up trying to hold the antique price at $35 and left it free to float. In this new world of gold, an understanding of world-wide demand became essential. Consolidated Gold Fields authorised David Lloyd-Jacob to commission a world-wide investigation to analyse private demand. The key questions, he noted, were "How much is bought, in what form is it bought and for what use? If there is hoarding, who does it, where and why? What are the psychological motivations of gold hoarders and how will they behave in the future?".

A gold survey team of CGF staff undertook fieldwork on jewellery manufacture and hoarding in Europe, Morocco and South America. The Battelle Memorial Institute studied industrial demand (especially in electronics) in the United States, Germany, Japan and other industrial countries. David Lloyd-Jacob also asked me if I would be a consultant covering "east of Venice up to and including Hong Kong", territory I had travelled extensively the previous year for the first edition of my book The World of Gold. That set the pattern of my life for almost three decades, with three or four months a year on the gold trail. The initial summary was published as Gold 1969. This revealed that, in 1968, the fabrication of gold had amounted to 1,206 tonnes, neck and neck with mine output. "The private demand for gold has indeed called the tune for the last two years," concluded David Lloyd-Jacob. The comprehensive report of our lengthy globe-trotting was published as Gold 1971 (there was no Gold 1970) setting out all production and fabrication statistics for the previous three years. It showed a steady rise in fabrication which, by 1970, was exceeding new mine output. Jewellery manufacture accounted for 73% of fabrication, but electronics use grew 25% between 1968 and 1970, confirming the trend that has continued to this day. In short, gold had effectively transformed itself from being used primarily in the monetary sector; its future depended on fabrication or private investment/hoarding. That was what the Gold Survey, which thereafter became an annual, primarily monitored, although the interplay of central banks or governments in the market mix was always closely watched.

The challenge, David Lloyd-Jacob observed in Gold 1971, was "the true consumption of the ultimate purchasers of gold. In some cases, users were no more willing to give accurate information to investigators than the authorities, although in a surprising number of instances they were, once the investigators' bona fides had been established. We are convinced that the 'grass roots' approach offered substantial gains in accuracy". The crux of the Gold Survey's success was building personal contacts with bankers, traders and fabricators who, over time, often became good friends. Soon they came to welcome us as we could give them an overall perspective on gold movements in their country, region or the market as a whole. We were their window on the world. These alliances were aided by the long service of several of the team; notably Irena Podleska covering Italy and Madhusudan Daga in India, who each contributed to the survey for close to thirty years. Constantine Michalopoulos in Washington DC watched the growing United States involvement in gold for twenty years. My own travels, mainly throughout Asia, but also North Africa and South America, continued from 1968 until 1996, often embracing thirty countries annually. We not only grew up with many of our contacts, but eventually met the next generation as fathers introduced their sons, telling them we were personae gratae.

Building such confidence was not easy. In 1970 at least 40% of newly-mined gold was smuggled at some point on the way to its eventual destination. Yet we tracked over 500 tonnes of gold through the entrepot markets of Beirut, Dubai, Vientiane, Singapore and Hong Kong, that filtered on clandestinely to Turkey, Iraq, Iran, India, Indonesia, Thailand, Vietnam and Taiwan. The task was helped because certain markets preferred certain bars. India took ten-tola bars (111 g/3.75 oz), for instance, so we could double-check their arrivals in the entrepot markets (mainly Dubai), with production numbers from the refineries that made them. Similarly, there were often preferences for specific brands of kilo bar, which helped us allocate the right local offtake.

Each country or region was treated as an independent unit. If we knew the original supplies, but then assessed, say, local fabrication too high, or bar-hoarding too low, at least the overall offtake was correct. Similarly, we knew how much gold arrived in Beirut each year. The judgement came in assigning how much was re-exported, unofficially, to Turkey, Syria, Jordan, Iraq or Saudi Arabia. Any margin of error on an individual country was mitigated by the correct regional total. Over the years, local traders often began their own breakdowns, having been prompted by our enquiries. They also received the Gold Survey, showing how they fitted into the overall market, which encouraged them to help us make it accurate.

The desire to help the Gold Survey's accuracy, even prompted central bankers, always close with their statistics, to make sure we did not make mistakes. They might not give figures, but if we bounced a number at them, the tone of their response would usually indicate if it was wildly wrong, or reasonable. Put another way, we did not always get precisely the right figure, but rarely, if ever, wrong guidance.

The real test came in the mid-1970s and 1980, when the volatile gold price turned the market's physical distributions upside down overnight. When the price challenged $200 in 1974 and $800 in 1980, markets like Dubai, Kuwait, Singapore and Hong Kong were not importing gold, but shipping back scrap to European refineries, as hoarders throughout the Middle East and South East Asia traded in their ornaments at a profit. The tables for gold fabrication showed negative numbers for countries such as Egypt, Turkey, India and Indonesia. This puzzled some readers, until we pointed out they had been net contributors to the market, not buyers, and this was the best way to demonstrate such reversals of fortune. Thereafter the Gold Survey took more account of scrap as an essential ingredient of the market equation. Even today a price blip can trigger tonnes of scrap appearing overnight. Jewellery demand, especially in Asia, is fickle; people buy on price lows and profit take on highs. It complicates the job of pinning down the right fabrication figure for the year.

The Gold Survey itself also happily survived the demise of Consolidated Gold Fields, which was taken over in 1989. Three associates of CGF, Gold Fields of South Africa, Newmont Mining Corp, and Renison Goldfields, set up Gold Fields Mineral Services (GFMS) as a private venture limited company, with its principal activity as economic research on gold and the publication of the Gold Survey. Then, in 1998, a management buy-out took place, with GFMS since that date a privately-owned company that has expanded its activities beyond its traditional focus on gold and silver into the PGMs, base metals and steel.

What has not changed over forty years is the travel in pursuit of statistics. Even if the internet these days makes its contribution, there is still no substitute for leg work. Visit the GFMS office in London, and it is frequently almost deserted; everyone is out on the gold trail".

Since then, of course, GFMS has been absorbed into Thomson Reuters, although the GFMS brand has been maintained. As Tim notes, we have a broad suite of metals under our aegis, along with an expansion into the Supply Chain and industrial sectors as well as metals as individual asset classes. It all started with gold, though, and a number of us (including myself, who first worked on the Survey in the 1980s) owe a good part of our careers to the continuity of this research and publication. It could not have been done without Tim, nor without many of the other editors and contributors who have been invaluable over the past half-century.

Rhona O'Connell, March 2017

1. SUMMARY AND OUTLOOK

In many respects 2016 can be viewed as the mirror image of 2013 for the gold market. While in 2013 we saw a headlong rush for the exit by ETF holders and other investors in the western hemisphere, on the view that the financial crisis was abating, the upsurge in geopolitical uncertainty in 2016 saw a widespread return of investors in these regions, evidenced by the 524 tonne build in ETFs, the largest since 2009. Meanwhile China's voracious appetite for gold in 2013 has been more than sated and jewellery demand in 2016 was dismal in the face of a lacklustre economy although bar investment rose on concerns over the yuan. India was sluggish due to the government crackdown on unaccounted wealth and the cash economy and a jewellers' strike. The prospects for these behemoths are largely brighter this year, although India is still facing uncertainty until the nature of the General Sales Tax becomes clear and China still faces economic uncertainty.

We are expecting a reduction in global mine output and a gradual demand recovery globally this year, resulting in a smaller surplus than in 2016 but a large one nonetheless. The gold market and future price moves will remain highly reliant on sentiment, especially given the political backdrop, at least in the short term. Investment demand in the western hemisphere has been very volatile recently and this has been instrumental in gold prices starting, in early 2017, to recoup some of the losses of 2016. The U.S. dollar, however, is likely to remain a headwind to further price rises and indeed the price drop in early March in anticipation of an improving U.S. economy, expectations of "Trumpflation" and the associated lift-off in the Fed's rate cycle are testament to the fact that this market is still bruised.

As the year progresses, however, safe haven flows become increasingly likely, assisted by either U.S. or European politics or a combination thereof. An anti-EU election result in one of the European nations could raise uncertainty over the prognosis for the euro, while an unorthodox approach from President Trump may bolster investment activity. The markets are also jittery as to whether U.S. equities have gone too far and gold is expected to benefit from risk-aversion. We forecast gold to average $1,259/ounce in 2017, laying the foundation for further gains thereafter.

WORLD GOLD SUPPLY AND DEMAND

(tonnes)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Supply										
Mine production	2,538	2,467	2,651	2,775	2,868	2,883	3,077	3,172	3,209	3,222
Scrap	1,029	1,388	1,765	1,743	1,704	1,700	1,303	1,158	1,172	1,268
Net Hedging Supply	-432	-357	-234	-106	18	-40	-39	108	21	21
Total Supply	**3,134**	**3,497**	**4,182**	**4,411**	**4,590**	**4,544**	**4,341**	**4,438**	**4,401**	**4,511**
Demand										
Jewellery	2,474	2,355	1,866	2,083	2,091	2,061	2,610	2,469	2,395	1,891
Industrial Fabrication	492	479	426	480	471	429	421	403	365	354
...of which Electronics	345	334	295	346	343	307	300	290	258	254
...of which Dental & Medical	58	56	53	48	43	39	36	34	32	30
...of which Other Industrial	89	89	79	86	85	83	85	79	76	70
Net Official Sector	-484	-235	-34	77	457	544	409	466	436	257
Retail Investment	448	937	866	1,263	1,616	1,407	1,873	1,163	1,162	1,057
...of which Bars	238	667	562	946	1,247	1,056	1,444	886	876	787
...of which Coins	211	270	304	317	369	351	429	278	286	271
Physical Demand	**2,930**	**3,536**	**3,125**	**3,903**	**4,635**	**4,441**	**5,314**	**4,501**	**4,357**	**3,559**
Physical Surplus/Deficit	**204**	**-38**	**1,057**	**508**	**-45**	**102**	**-973**	**-62**	**44**	**952**
ETF Inventory Build	253	321	623	382	185	279	-880	-155	-125	524
Exchange Inventory Build	-10	34	39	54	-6	-10	-98	1	-48	86
Net Balance	**-39**	**-394**	**394**	**73**	**-224**	**-167**	**5**	**92**	**217**	**342**
Gold Price (LBMA PM, US$/oz)	**695.39**	**871.96**	**972.35**	**1,224.52**	**1,571.69**	**1,668.98**	**1,411.23**	**1,266.40**	**1,160.06**	**1,250.80**

Source: GFMS, Thomson Reuters
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 2016

— ***Mine production just tipped into positive territory registering a 0.4%, or 14 tonne year-on-year increase.***
— ***Total cash costs and all-in sustaining costs both fell by 2% to hit levels of $630/oz and $818/oz respectively.***
— ***Global scrap supply jumped 8% in 2016 to reach 1,268 tonnes as higher dollar gold prices encouraged profit taking.***

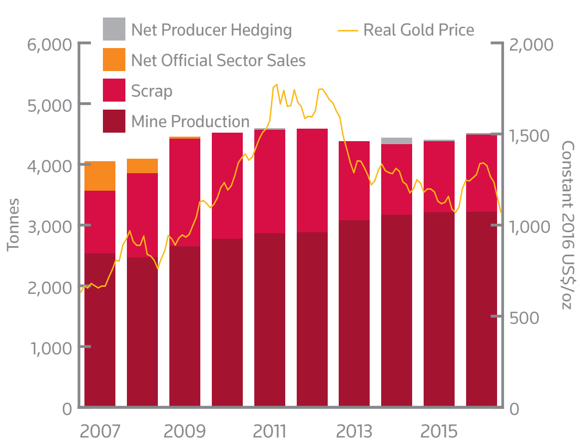
Global **mine production** posted another annual increase and in so doing chalked-up another fresh all-time high to reach 3,222 tonnes. The rise, however, at 14 tonnes or 0.4%, was modest and in our view these record breaking habits are close to an end. The growth rate, for instance, has roughly halved every year for the last three years, partly as output from new mines has slowed and we expect production to contract from 2017 onwards. Highlights last year included an 8% rise in the United States elevating the country to a nine-year high and a 4% increase in Australia taking 'the Lucky Country' to a 16-year high. The biggest losses originated in Mexico (-15.2 tonnes), Peru (-11.4 tonnes) and Mongolia (-10.8 tonnes).

Production costs declined in 2016, but at a slower pace than in previous years. Total cash costs fell by 2%, to $630/oz, and all-in sustaining costs fell by the same to reach $818/oz. Weaker local currencies were a boon for producers, but the effects were less than in 2015. In way of illustration a production weighted currency basket of eight key producers (from Australia to South Africa) depreciated by 15.3% against the U.S. dollar in 2016 (compared to 25.8% in 2015). Lower energy prices also helped with Brent Crude down by 31% year-on-year in 2016. These tailwinds however, could well turn against the sector in 2017. The currency basket (at the time of writing and comparing YTD 2017 average with 2016) has appreciated by 6.2% and Brent Crude is up by 27%.

Producer hedging stayed on the supply side of the market for a third year in a row, with net hedging of 21 tonnes. A total of 77 companies responded to the U.S. dollar rally by opportunistically entering into modest domestic currency denominated gold hedges (most notably A$ based), although some of this was only on an intra-year basis.

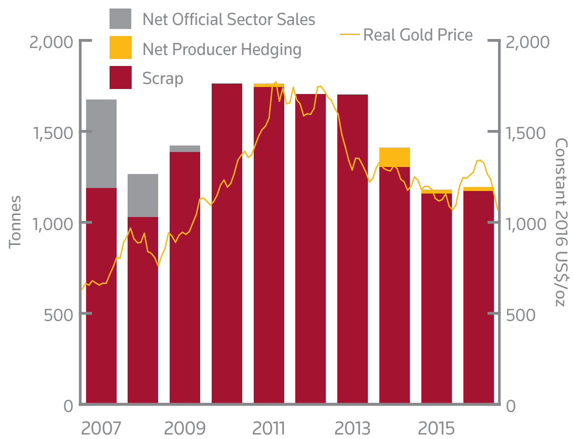
Global **scrap** supply jumped 8% in 2016 to an estimated 1,268 tonnes, broadly in line with a similar rise in the dollar gold price. The annual increase, the second in succession, saw scrap supply account for 28% of world supply though to provide some perspective this compared to 42% at the peak in 2009. The greatest gains were seen in India with a 50% surge on 2015 volumes to levels not seen for more than a decade, aided by higher prices which encouraged destocking from both consumers and the supply chain while expectation of a better monsoon also led to increased sales from agricultural households to fund an increase in acreage. Meanwhile, East Asian scrap flows were in line with the global average, rising 8%, as weaker domestic currencies pushed local prices higher. It was a similar story for Europe which saw scrap receipts 5% higher on an annual basis. North America was the outlier last year, with scrap flows easing 3%, despite the rise in the gold price as the improved economic performance limited distress selling and industry destocking.

WORLD GOLD SUPPLY



Source: GFMS, Thomson Reuters

SUPPLY FROM ABOVE-GROUND STOCKS



Source: GFMS, Thomson Reuters

DEMAND IN 2016

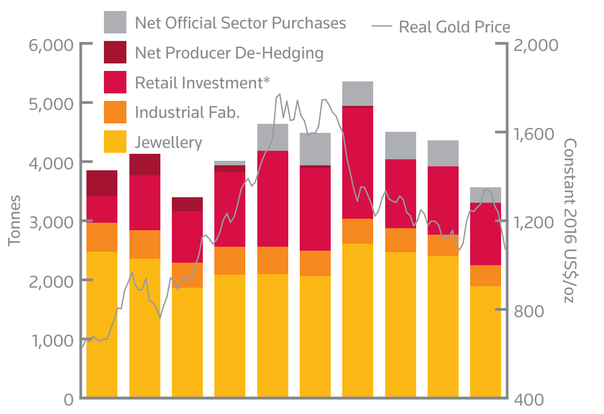
- *Total physical demand declined for the third successive year, falling by 18% in 2016, largely on the back of sharply lower jewellery fabrication, however, all areas of demand were weaker last year.*
- *Jewellery fabrication slumped 21% last year to estimated 1,891.5 tonnes, the lowest level seen since 2009.*
- *Industrial fabrication demand retreated 3.2% in 2016 to an estimated 353.8 tonnes, dragged lower by ongoing substitution to cheaper alternatives in the electronics industry and a price related fall in dental and other industrial & decorative demand.*
- *Total identifiable investment soared to 1,579 tonnes last year, a four-year high, bolstered by a very high level of ETF buying especially in the first half of 2016.*
- *Net official sector buying dropped appreciably last year, to 257 tonnes, chiefly due to less Chinese purchases.*

Total **physical gold demand** slumped by 18% last year, to the lowest level since 2009. The chief driver of last year's fall was the 21% decline in jewellery fabrication which retreated to 1,892 tonnes. This was largely down to a hefty decline in jewellery fabrication demand in India, which suffered a 38% year-on-year fall due to the introduction of excise duty on jewellery manufacturing, destocking by retailers, and demonetisation. Meanwhile, Chinese jewellery demand also recorded a precipitous 17% drop as higher gold prices and an uncertain economic outlook dragged consumption volumes sharply lower. Moreover, jewellery demand in most key markets were weaker in 2016 with the Middle East, East Asian, and European fabrication declining 14%, 16%, and 11% year-on-year. Elsewhere, demand for all other segments was also softer in 2016, with Industrial demand slipping 3%, while for retail investment, bar and coin demand declined by 10% and 5% respectively.

Global **jewellery fabrication** slumped by 21% last year, to the lowest level since 2009, dragged lower by precipitous falls in the two largest markets of India and China. The drop was more pronounced for India, which suffered a 38% year-on-year fall due to the introduction of excise duty on jewellery manufacturing, destocking by retailers in the informal segment, and demonetisation. For China, higher gold prices, weak consumer sentiment, and a shift to lower carat jewellery were to blame for the 17% drop in annual fabrication volumes, the third fall in succession that has now seen Chinese fabrication retreat more than 40% below the 2013 peak. Demand in Europe as a bloc declined 11% in 2016, while South American offtake eased 7% year-on-year. Weaker domestic currencies, which accentuated gold price rises in local terms, coupled with stifled economic growth saw East Asian demand also retreat, falling 16% over 2015 volumes to a four-year low. In the Middle East, demand was impacted by the rise in the gold price but also as a result of geopolitical and economic instability, military conflict, and lack of positive price expectation. These pressures combined drove jewellery fabrication lower by 14% year-on-year.

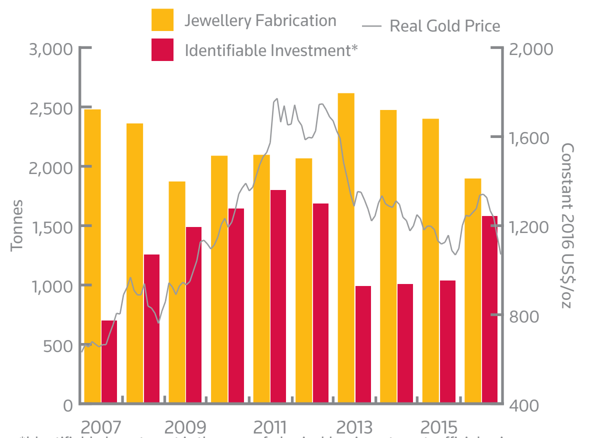
Despite the gloomy picture outlined above it is worth highlighting a couple of outliers where fabrication demand did rise or at least remained stable on an annual basis. Demand in Iran enjoyed double-digit growth as a stronger

WORLD GOLD DEMAND



* Retail Investment refers to physical bar and coin investment.
Source: GFMS, Thomson Reuters

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, Thomson Reuters

economy pushed consumption higher, while In Japan a stronger yen helped drive gold prices lower which encouraged restocking and left the market marginally higher year-on-year. So too in Vietnam, where demand for 24-carat jewellery provided the stimulus for modest growth and while declining only 2% last year, jewellery fabrication in North America was augmented by a stronger economic performance that lifted consumer confidence and boosted retail sales.

Industrial fabrication retreated 3.2% in 2016 to an estimated 353.8 tonnes. Despite the fall, the sixth in succession, there was clear signs of recovery in some market segments. Thrifting and substitution remains a factor and account for the modest 2% fall in gold consumed in electronics though it is worth noting the rate of decline is at a five-year low. Demand for gold used in **dental** and **other industrial & decorative** applications were both impacted by the stronger dollar gold price falling 5% and 7% respectively.

THE OFFICIAL SECTOR

Driven again by strong gold purchases from Russia, 2016 was the seventh successive year of net purchases from the official sector, but the trend is shifting, with purchases falling and sales rising. Net purchases in 2016 were 257 tonnes, of which Russia reported 201 tonnes. We are looking for net purchases of roughly 250 tonnes in 2017 with Russia continuing to absorb metal, and expect to see China reappear as a buyer after a recent hiatus of four months, at the time of writing, in its reported purchases (which we believe to be a function of the desire to manage the weakness of the yuan and reduce foreign exchange outflows). The faltering in the dollar's strength this year and the improvement in the commodities sector overall suggests that there will be reduced pressure for sales from emerging countries this year.

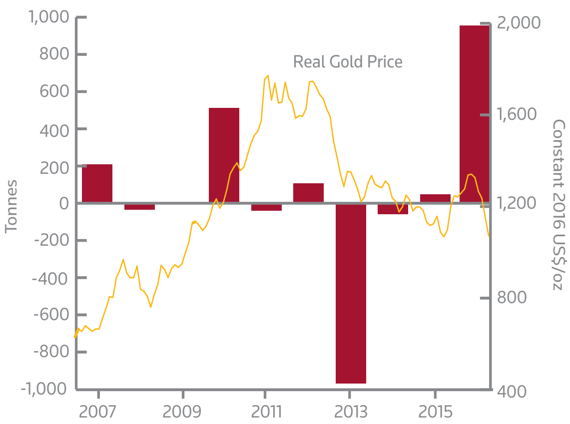
INVESTMENT

Total identifiable investment, which includes physical bar and coin investment plus ETF movements, gained 52% in 2016 to reach 1,579 tonnes, the highest since 2012, at a notional dollar value of $61 Bn, a 65% year-on-year increase. This was driven particularly by escalating political risk-aversion in the western hemisphere. It should be noted also, though, that a lack of price expectation in a number of countries characterised by "small" private investors, meant that both bar and coin global totals were actually lower last year than in 2015. Bar demand contracted by 10% (with the notable exception of China), while coins demand was fractionally lower as medal / imitation coin demand slipped by 29%, reflecting the paltry activity in India.

PRICE AND MARKET OUTLOOK

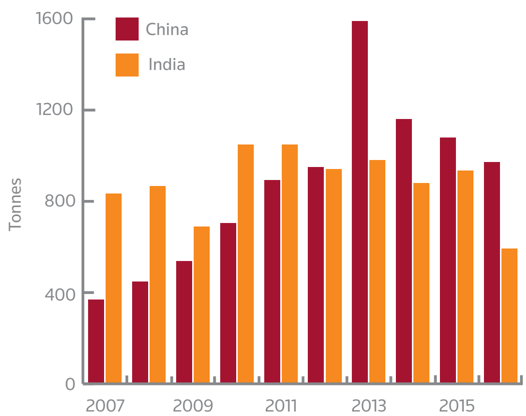
Gold prices are likely to remain volatile in the early part of 2017, but we do expect the market to regain its footing as investors remain averse to risk. Our forecast of $1,259 for this year is partly predicated on this, but also on the expectation that the Indian market will start to find its feet again, helping to contain price weakness and providing a more stable backdrop for the returning investors. The market is not quite yet out of the woods, but the longer term prognosis is for further price gains.

GOLD; PHYSICAL SURPLUS / DEFICIT



Source: GFMS, Thomson Reuters

CHINA LEADS INDIA AS WORLD'S LARGEST GOLD CONSUMER*



Source: GFMS, Thomson Reuters
*Demand consists of jewellery fabrication, industrial fabrication and retail investment

THE GOLD SURVEY'S GOLDEN ANNIVERSARY

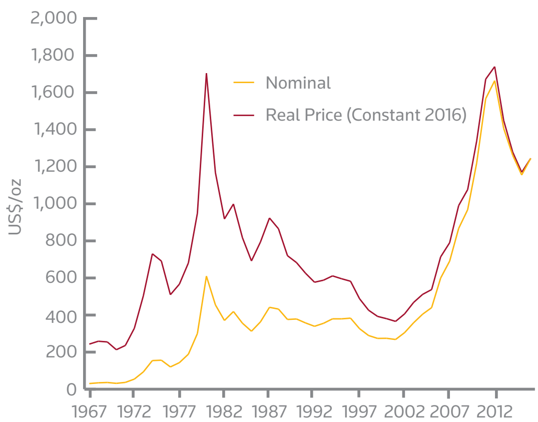
The Gold Survey was born when Consolidated Gold Fields (CGF), then the world's second-largest gold mining company, needed a clear idea of the outlook for gold in order to structure its forward planning. We must bear in mind that CGF, through its major subsidiary Gold Fields of South Africa (GFSA) was operating large-scale underground mines – and the lead time from discovery of a deposit through to coming onstream in an operation of that type is, typically, ten years. The conclusions drawn (below) in that 1967 Survey, after a world monetary system that had spent 34 years on the Gold Standard, caused quite a furore at the time. The author, David Lloyd-Jacob, in the management team at Gold Fields, was fully vindicated, however and his foresight laid the foundations for the Gold Survey's market reputation, which has been bolstered in particular by the invaluable continuity from Tim Green, who was pivotal to the research programme for the Survey for over three decades.

Tim has kindly given us permission to reproduce his piece "The Gold Survey – Whence it Came, Where it Went", which talks not just about the origins of the Survey, but gives a fascinating insight as to how the work was carried out over the globe and over the years. This will be found on page 7, with a brief update from GFMS as it stands in 2017.

In 1967 the dollar was still on the gold standard, pegged at $35/ounce and this price was effectively (but not wholly) maintained by sales of U.S. official sector holdings through the "gold window", via the London Gold Pool. The first Gold Survey argued on the basis of the supply-demand dynamics and a series of politico-economic factors, most notably the U.S. deficits and the growing stresses on the London Gold Pool, that the most likely timeline for a "significant price increase" was in the 1972-73 period. This was predicated on increased industrial requirements, and further hoarding activity having significant effects on the level of gold monetary stock. Annual gold output was forecast to be declining significantly while increasing quantities of dollar liabilities presented for redemption in gold were also forecast, along with the level of U.S. gold stock likely to fall below $5Bn. In 1967 the minimum requirement was just under $10.25 Bn of gold, reflecting the stipulation for 25% backing of every Federal Reserve note in issue, which at that point amounted to $40.9 billion.

The level to which he thought the price could be sustained in the near aftermath of the cessation of U.S. sales was in the region of $60/ounce. In the event, private purchases of gold in the final quarter of 1967 and the first quarter of 1968, partly in anticipation of a substantial price rise, meant that western central banks had to sell 2,500 tonnes of gold, compared with annual world mine production in 1968 of 1,450 tonnes and in the face of price demand that exceeded 3,000t between mid-1967 and the first quarter of 1968, when the free market was opened up (but the official sector continued to work on $35/ounce). In other words, demand in that period outstripped mine production by a factor of roughly 3.5 times. Little wonder, then, that President Nixon suspended the convertibility of the dollar to gold in August 1971. The price worked its way up from $37 at the start of the year to approach $44 in December 1971. By February 1972 it traded close to $50. Demand remained strong as most countries did not devalue their currencies on a page with the U.S. dollar. Since then, of course, gold has approached $2,000 and as we write this in February 2017 it is in the region of $1,250/ounce.

REAL AND NOMINAL GOLD PRICES



Source: GFMS, Thomson Reuters

One of the obvious changes in the market is its overall size. In 1971, mine production was 1,518 tonnes; in 2016 it was 3,222 tonnes, a rate of 1.5% per annum, although we believe that it peaked last year and we are expecting some erosion. Demand is obviously more variable, but grew at an average rate of 2.0% pa from 1,367 tonnes to 3,559 tonnes. Growth in approximate annual dollar value terms is much more dramatic, from $1.7 Bn to $143 Bn respectively in 2016.

Further pieces throughout this Survey will look at the history of the past 50 years in the market and highlight some major changes – and some remarkable elements of stability.

2. INVESTMENT

- ***Total identifiable investment, which includes physical bar investment, all coins and ETF inventory build, posted a whopping 52% increase in 2016, to reach 1,580 tonnes; its highest since 2012.***
- ***Measured in value terms, total identifiable investment rose an even more considerable 64%, reaching $61 bn.***
- ***The main reason for this strong annual performance has been the surge in ETF inventories. Following three consecutive years of net selling, ETF flows switched to a substantial 522 tonnes net buying in 2016.***
- ***Retail investment, on the other hand, posted a 9% decrease year-on-year to 1,057 tonnes. The decline was skewed towards bar demand, which fell 10% last year to 787 tonnes in nominal terms. Coin demand, representing a quarter of retail demand, contracted by a more modest 5% to 271 tonnes.***
- ***Investor activity on COMEX continued to rise, underpinning the upbeat sentiment in gold trading last year. A total of 58 million contracts were traded, representing 179,047 tonnes of gold. Starting the year in a net short position, managed money positions turned to net long, peaking at 892 tonnes in July. They ended the year at a net long of 128 tonnes.***
- ***The general mood across other exchanges in the world supported the upbeat sentiment with only the SGE Spot and Borsa Istanbul (which only trades physical gold) posting a decline in trading volumes last year.***

THE GOLD SURVEY'S GOLDEN ANNIVERSARY; A LOOK BACK AT INVESTMENT PATTERNS

Here we take a look at investment fluctuations since 1968, focusing on bars and official coins to start with, and bringing in ETFs, the first of which came into being in 2003. ETFs appeal both to individual investors in North America and Europe particularly, while investment bars are predominantly, but not exclusively, the domain of Asia.

Based on an approximation using annual demand numbers and annual nominal prices, total investment in physical investment bars and official coins amounted to $580 Bn from 1968 to 2016 inclusive. Obviously this is only a very loose estimate because of fluctuations in price and volume, but it does at least give an order of magnitude. The tonnage, at almost 24,000 tonnes, is just over 7.5 times world mine production in 2016.

This chart on the right of the next page shows a time series of investment tonnage, split out into coins and bars. There are some interesting points to note here. First, the heavy investment in 1968 was driven almost exclusively by France, in a period of extreme political tension in the country. The gold price spikes driven by the first and second oil shocks (1972-74, 1978-80) had an obvious effect on purchasing patterns and there was also substantial quantities of resale. The strong bar demand in 1988 and 1989 was driven particularly by Taiwan and Japan, partly with an eye on political developments in China (Tiananmen Square was 1989), but partly also by changes in Japanese government policy that allowed marine and fire insurance companies to invest up to 3% in gold.

IDENTIFIABLE INVESTMENT*

(tonnes)	2012	2013	2014	2015	2016
Retail Investment	1,407	1,873	1,163	1,162	1,057
of which bars	1,056	1,444	886	876	787
*of which coins***	351	429	278	286	271
ETF Inventory Build	279	-880	-155	-125	524
Total Identifiable Investment	**1,666**	**953**	**1,008**	**1,037**	**1,581**
Indicative Value US$ (bn) ***	**86**	**42**	**40**	**37**	**62**

*Excludes investment 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, Thomson Reuters

The surge in demand in the wake of the financial crisis is self-explanatory, but the interesting pattern of 2013 and 2014 reflects sales from ETFs as western investors viewed the financial crisis as being in retreat, and the massive uptake of that metal in the Far East, especially China. In 2013, 888 tonnes of gold left ETFs, and chiefly flowed through Swiss refineries for remelting from LGD bars into 4 9's small investment bars, and made their way eastwards as Chinese investment ballooned. There has been some reversal since.

ACTIVITY ON COMMODITY EXCHANGES

Total volumes of gold futures traded on **COMEX** rose by 38% in 2016, to 58 million contracts. This is equivalent to a nominal 179,047 tonnes. Open interest, at 1,317 tonnes by end-December, was up by 2% compared to the end of 2015. The increase in turnover clearly demonstrated a positive correlation between activity and the gold price, which reflected the renewed market interest towards gold. Indeed, if we look at CFTC reports on managed money, which can be used as a proxy for investor activity on the exchange, net positions began to increase as of the start of the year, when net managed money positions began the year as a net short. Net positions peaked at nominal a 892 tonnes in early July, then started to decrease again as short positions expanded with the market anticipating a possible rate increase at the Federal Reserve in the year. By year-end net managed money positions were recorded at a nominal 128 tonnes.

GOLD TRADED ON COMMODITY EXCHANGES

(total volume in nominal tonne equivalents)	2014	2015	2016	Change y-o-y
COMEX	126,028	130,135	179,047	38%
SHFE	23,858	25,317	34,760	37%
SGE *[1]	4,931	7,288	11,793	62%
TOCOM	8,745	7,928	8,541	8%
MCX	3,972	3,947	4,094	4%
SGE Spot	2,645	4,756	3,699	-22%
DGCX[1]	426	312	412	32%
ICE Futures US	508	294	354	20%
Borsa Istanbul[2]	239	256	243	-5%

*All SGE contracts excluding SGE Spot.

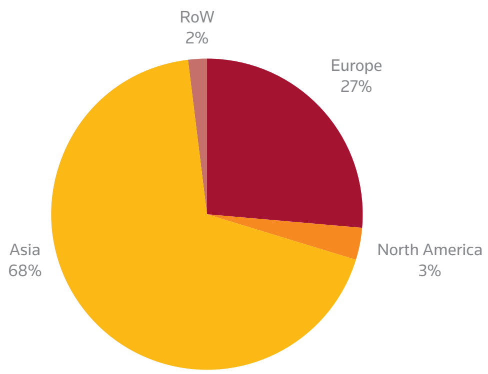
[1] Physically backed. [2] 100% Physical Delivery

Source: Thomson Reuters, relevant exchanges

Trading volumes on the **Shanghai Futures Exchange** saw 37% growth in 2016, to a nominal 34,760 tonnes. Meanwhile, on the **Shanghai Gold Exchange** (SGE), China's only legal source of VAT free gold, trading volume (inclusive of SGE International Board) rose by 28.6% to 15,492 tonnes. During the year, SGE launched a new spot contract, the Shanghai Gold (SHAU), and it recorded trading volume equivalent to 285 tonnes. The surge in trading volumes in China was due to the gold price volatility last year, as well as high frequency trading activities. The average daily premium increased to $6.40/oz last year, up 83% from 2015. However, the annual premium was being skewed heavily towards the end of the year, when the December premia averaged $32.52/oz.

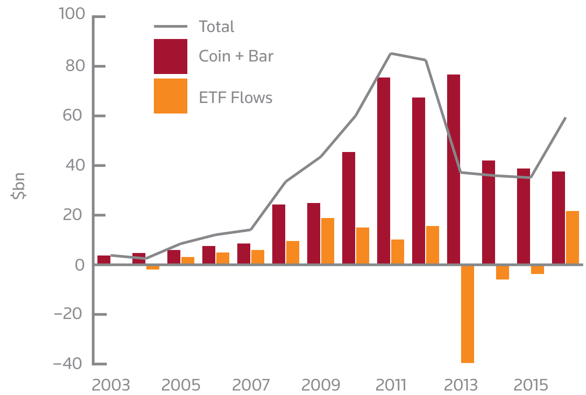
Tokyo Commodity Exchanges reported a 8% increase in trading volumes last year, reversing the declining trend from previous years, reaching 8,541 tonnes. Meanwhile, looking to other exchanges, **Dubai Gold & Commodities Exchange** (DGCX) saw a 32% increase in trading volumes to 412 tonnes. Although smaller in size, **Borsa Istanbul** is one of the largest exchanges globally that trades gold exclusively physical (just like DGCX) as opposed to nominal futures trading, a service the majority of other exchanges tend to offer. Gold trading declined 5% to 243 tonnes last year following a 7% rise the prior year.

DEMAND FOR BARS AND COINS REGIONAL SPLIT (2016)



Source: GFMS, Thomson Reuters

DEMAND FOR PHYSICAL INVESTMENT, BARS + COINS + ETFS



Source: GFMS, Thomson Reuters

THOMSON REUTERS

EXCHANGE TRADED FUNDS

ETF holdings increased by 34% in 2016, with substantial inflows into global ETFs in the first ten months of the year. The strength in the gold price since the beginning of 2016 due to increasing geopolitical uncertainty, exacerbated by the outcome of increased market expectations of another rise in U.S. interest rates, the surprising outcome of the Brexit vote and uncertainties about the outcome of U.S. presidential elections, captured traders attention in gold.

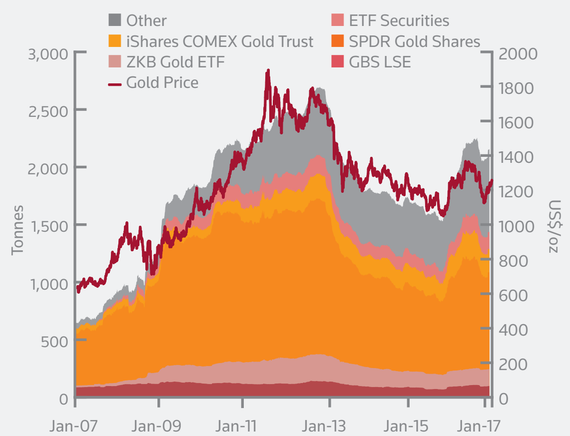
Total ETF holdings started 2016 at 1,532 tonnes and added 524 tonnes (or 34%) over the year reaching 2,056 tonnes by year-end. In value terms, total ETF holdings rose by 47% (or $24 bn) to $77 bn compared to a loss of $12 bn in 2015. On the back of a strong rally in the gold price at the beginning of the year, ETF inflows rose by 336 tonnes in the first quarter of 2016, fully offsetting losses recorded in 2015. As the year progressed, fresh capital continued to be allocated towards ETFs, adding 233 tonnes and 114 tonnes in the second and third quarter respectively. It was not until November before this bullish trend reversed at all with the heaviest outflows of the year recorded in November and December at 90 tonnes and 91 tonnes respectively, pushing total redemptions to 158 tonnes in the final quarter.

When the Federal Reserve raised the Federal Funds rate at the end of 2015, the gold price plummeted and the market expected three more increases in 2016. Looking at the CFTC reports, managed money flows reflected the pessimistic environment with net positions in gold falling to a net-short for the first time since this particular classification was implemented. However, soon thereafter the gold price bottomed by the end of December 2015 and started to crawl upwards during the beginning of 2016. Part of that was attributed to the disappointing fourth quarter U.S. economic data that changed the market's expectation of the Federal Reserve's interest rate timetable. Gold's resilience at the start of 2016 attracted renewed interest of various funds rebalancing their portfolios towards a heavier weighing in gold. This was reflected in both increased ETF uptake as well as managed money positions on COMEX, which climbed back to positive territory after the first week of January.

The surprising Brexit vote on the 23rd June sent shock waves throughout the financial markets and traders scrambled for gold as a safe haven asset. Gold continued to edge higher, and the LBMA London PM price peaked at $1,366/oz on 6th July. According to the CFTC report, net managed money positions peaked on the 10th July, with total net positions equivalent to nominal 892 tonnes. However, capital continued to flow into global gold ETFs. The gold price eventually retreated again driven by market expectations of increased rate hikes by the Federal Reserve. Contrary to the consensus, the surprising win by Donald Trump in the election race did not cause any sustained panic in the market. In fact gold was only in favour until about 30 minutes or so after the results were announced before it reversed sharply. Capital switched towards a risk-on attitude and pushed up the U.S. stock indices, as well as the dollar, anticipating that the United States economy would be heading for a prolonged period of strength under the leadership of President Trump and his administration. Gold and Treasury bonds fell, as capital flowed from safe haven assets into riskier assets. Gold ETF holdings peaked at 2,253 tonnes on the 9-10th of November followed by 197 tonnes of redemptions in the rest of the year.

Among the individual funds, SPDR Gold Shares, the largest gold ETF accounting for approximately 40% of the total ETF holdings, posted inflows of 181 tonnes, or 28%, last year. Total combined gold holdings of the China-based ETFs increased by a whopping 480%, or 30 tonnes, to a total of 36 tonnes at the end of the year. The increased price volatility in gold, along with a lack of investment options presented an attractive case for the Chinese to raise their investment in gold.

GOLD ETFS AND OTHER SIMILAR PRODUCTS



Source: GFMS, Thomson Reuters, collated from respective ETF Issuers' data

Turning to 2017, as of end-February, gold ETF holdings had absorbed an inflow of 99 tonnes, pushing total holdings to 2,155 tonnes. The gain was in tandem with the continual strong performance in the gold price, which rose 8.4% in the first two months of the year. The market building insurance against shocks in the system that could be imposed by either the implementation of one of President Trump's controversial policies or a far right anti-Europe victory in one of the many Eurozone countries that will cast its vote in the ballot box this year.

PHYSICAL BAR INVESTMENT

— *Demand for bullion bars decreased by a considerable 10.2% year-on-year to 787 tonnes in 2016.*

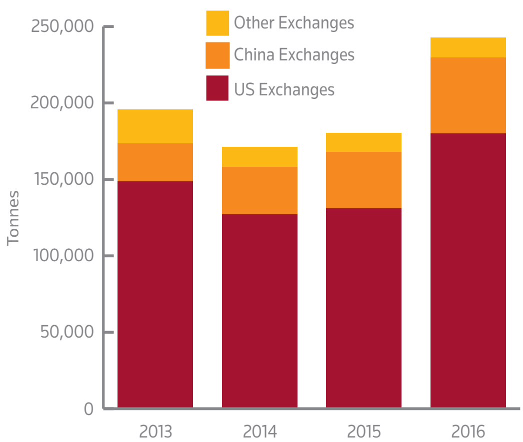
Physical bar investment in **Europe** fell by 4% last year to 213 tonnes. This apparently subdued performance masks considerable intra-year volatility. This pattern was seen across almost all markets and very clearly demonstrated in Germany, which represents over half of the total figure in Europe. There were three distinct phases during 2016; first, up to the EU referendum in the UK on 23rd June demand was generally unspectacular across the regions, but the referendum sparked a significant upward shift in the gold price across the region. Thereafter, demand slumped, especially on a net basis as sales were unusually high. An exception to this was in the UK where field research highlighted demand shooting higher in the aftermath of an even more pronounced price rise in sterling terms, as the currency hit a 31-year low. Third, from September onwards demand started to gradually build and became markedly stronger in the closing six weeks of the year as prices headed remorselessly lower. While the price was clearly the key driver for the precise timing of demand across the region, it was also the case that there is an array of factors that were supporting the European market, which has commanded over 200 tonnes a year since 2008. The factors that came to the fore in 2016 included negative bond yields and geopolitical concerns, both emanating from the United States and referenda in the UK and Italy. Indeed the referendum in Italy encouraged investment there and in the Italian speaking part of Switzerland, while the election of Trump caused a rise in retail demand from Eastern Europe, albeit from very low levels.

In **North America**, physical bar demand rose 3% to 30.2 tonnes in 2016. The rise was driven by a strong start and finish to the year with weakness recorded in both Q2 and Q3. Although investors in the United States tend to be typically more focused on newly minted coins during the start of the year, physical bar demand showed a solid performance. Amid the rally in gold prices throughout June, investors reduced their purchases of bars in order to prioritise their U.S. mint coin purchases. Mint coins are the most liquid of the gold bullion products in the United States and are also favoured over bars for their strong patriotic brand value. During the third quarter premia dropped to a multi-year low following a significant reduction of bar demand on higher gold prices. This sentiment reversed towards the end of the year when sellers reported interest in smaller bars, particularly during the festive season.

Unlike demand from the jewellery sector, **China's** investment demand for gold actually increased last year, the first annual rise since 2013. China's demand for gold bars took a severe hit during the second half of 2013, when the government first started taking additional steps to curb corruption. This resulted in a considerable decline in gold-related gifting, particularly in large bars, which were once one of the more popular choices as gifts. Now, several years later, the government's crackdown on corruption has settled in, and we estimate that demand for physical gold bars bottomed out in the second half of 2015. The depreciating yuan and the lower gold price encouraged China's elderly to purchase gold bars (especially 200 gramme bars) as gifts for their grandchildren as well for wealth preservation.

The depreciation of the yuan resumed after Q1 2016, and it decelerated during the second half of the year. While every Chinese citizen could purchase of up to $50,000 via the banks per year, it has become increasingly difficult and cumbersome to purchase, even if one has not reached the quota limit. In conjunction with a lack of faith in the domestic equities market last year, there were not many viable investment options left for the Chinese to consider, and allocating some yield hungry capital to gold became an easy decision. Indeed our field research shows that, demand for physical gold rose notably after the Brexit vote and Donald Trump becoming the new president of the United States. We estimate demand for gold bars in China increased 7% in 2016 to 236.8 tonnes.

GLOBAL EXCHANGE ACTIVITY



Source: GFMS, Thomson Reuters

Retail Investment in **India** last year declined by 29% year-on-year to 87.6 tonnes, the lowest since 2004. High prices and government policies (which are detailed in the country section in Chapter 7), were a major deterrent and approximately twelve tonnes moved to sovereign gold bonds issued by the Indian government. These are typically not physically backed by gold. Demand for minted bars contracted by an average 60% in each of the first three quarters but gained 42% in the fourth quarter, driven by the demonetisation scheme that resulted in a surge in demand from 8th November until mid-December. In our field research we encountered various instances where old currency has been exchanged for locally minted bars. More interestingly, the fourth quarter saw a notable rise in imports of 3 9's and 4 9's bars of over 50 tonnes, which, according to veterans in the industry, could be the highest ever.

OFFICIAL COINS

— Global official coin minting grew by 3% year-on-year in 2016, as the price decline towards the end of the year triggered buying activity amongst price-sensitive investors.

For the second successive year total gold coin fabrication edged higher in 2016 to 219 tonnes. However, it was not a steady increase. Instead, the overall increase for 2016 was a function of strong demand, and hence minting, in the first half of 2016 and at a stellar tail end of the year which, just, offset a slump in the third quarter. The overall increase last year was arguably more impressive than that achieved in 2015 as prices were up last year in almost all major currencies.

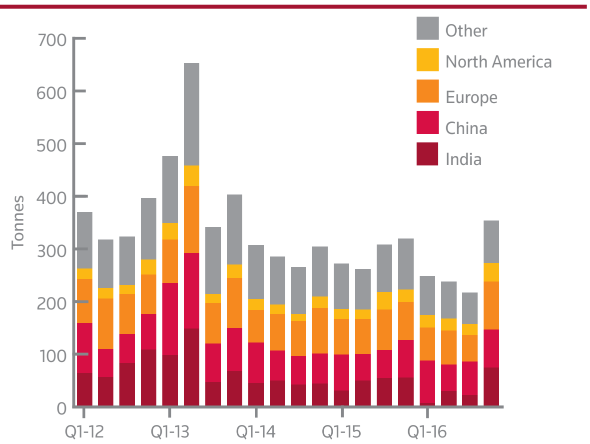
The roller coaster ride for coin demand last year was clearly most heavily influenced by price fluctuations with the peaks in the middle of 2016 acting as a marked drag before the persistent downward price trajectory in the closing months of the year buoyed demand. A secondary factor in our view was the election of President Trump and geopolitical uncertainty. The direct Trump effect was limited in duration and scale, although it did, at the next level, contribute to the impact of the U.S. dollar, bond yields and wider markets which fuelled the gold price decline and encouraged bargain hunting.

Geographically, the pattern across the year was generally very similar. However, the overall change in various markets varied substantially. In fact, while coin minting was markedly lower globally in 2016 than back in 2013, say, many countries experienced strong growth to multi-year or even all-time highs, for example United States, South Africa and China, as shown in the table below. Readers should note that we have upwardly revised our coin data series following research which has indicated significant Iranian gold coin fabrication. While fabrication from this market almost halved in 2016, to be the softest market due to less distress buying on the back of a stronger economy, it was still the seventh biggest.

Demand for medallions and imitation coins in **India** declined by 31% last year due to higher gold prices and liquidity constraints. Although it was the fourth consecutive year of decline, if it were not for the 19% year-on-year increase in Q4, the decline would have been even steeper. Growth in Q4 was due to panic sales following the demonetisation scheme as investors considered it safer to hoard gold rather then transfer cash to their personal accounts.

Fabricators had slowed production in response to the weak demand in the previous three quarters. As a result, some stores were running short on coins and as they were suddenly in high demand sold them at a 20% premium over spot on cash transactions during November and December. Moreover, sales during Akshaya Tritya or Dhanteras was not strong enough to negate the underwhelming appetite for gold during the rest of the year.

RETAIL INVESTMENT



Source: GFMS, Thomson Reuters

INVESTMENT

GOLD COMEX TRADING POPULARITY ON THE RISE COMPARED TO OTC

Based on GFMS calculations, Over the Counter (OTC) transactions nudged up slightly in 2016, but in general remain in a sideways trend when considered over the last decade. Gold trading on COMEX on the other hand has gained considerable traction over the years, jumping last year by 38% to represent almost one third of annual OTC trading activity; its highest on record. The LBMA clearing numbers refer to transfers in the market and not the overall volume. A broad rule of thumb is that LBMA loco London volumes are roughly three times the transfer numbers and that in order to estimate the global OTC volume we need to assume that loco London accounts for approximately 70% of total. Interestingly, until only a few years ago loco London accounted for roughly 90% of the global total, but the shifts in the geographical distribution of the market means that we are now looking at around 70%.

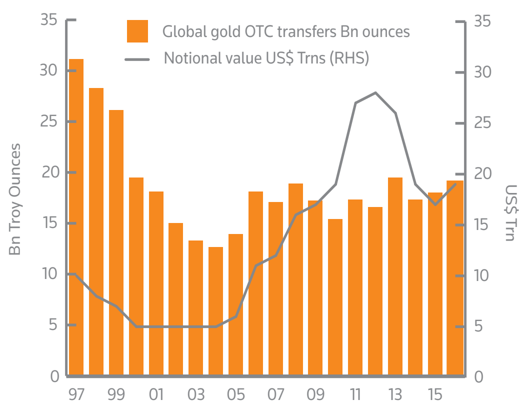
Using this methodology suggests that implied OTC traded annual gold volumes increased 6% last year, reaching 19 billion ounces. Compared to 1997, which is the year in which the LBMA started making its daily transfer volumes publicly available, we estimate that total OTC volumes have contracted by a CAGR of 3%. In 1997 global OTC transactions stood at approximately 31 Bn oz. The value of global gold transfers, however, has followed an opposite trend, driven by a 7% CAGR of the gold price over the 1997-2016 period. The value of annual gold volumes in the OTC market peaked in 2012 at roughly US$ 27.8 Trn. This represented approximately 38% of global GDP in 2012 and about a quarter of the size of the global bond market that year.

OTC VS COMEX

An alternative for OTC trading, where contracts are principals' transactions and therefore are essentially bespoke, gold trading volume on COMEX in the form of standardised futures contracts has gained considerable popularity in recent years. Trading in gold and silver futures is used for various reasons, including hedging, a speculative play or as an alternative investment. The majority (>95%) of trades are cash settled although physical delivery does also occasionally transpire. Theoretical advantages of trading on COMEX as opposed to OTC are central clearing, which implies no direct counter party risk, plus leverage as well as the flexibility of trading long and short – in the case of the latter, without the client having to buy physical to close out the transaction, or being naturally long in the first place.

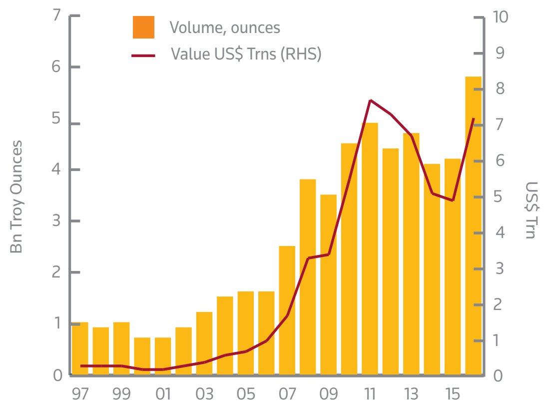
It is important to note though that while the fact that COMEX trades on margin can be seen as an advantage because of the leverage that it provides, equally it brings with it a higher element of risk, especially in a brutal short-covering rally. This is one of the key reasons why futures trading includes stop-loss orders, as well as limit orders to close profitable positions. While OTC volumes have remained rangebound between 18-19 billion ounces in the last decade, volumes traded on COMEX have posted a considerable increase of a 14% CAGR over the 2006-2016 period, accumulating to 5.8 billion ounces last year. As a consequence, COMEX trading volumes saw its share compared to OTC trading triple over that period from 10% in 2006 to 30% in 2016 representing a notional value of approximately US$ 7.2 trillion.

GLOBAL GOLD OTC TRANSFERS



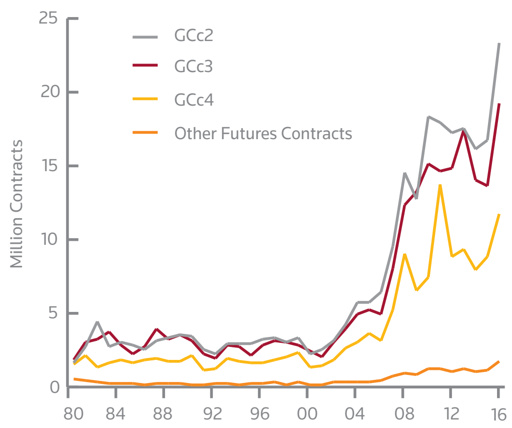
Source: LBMA; GFMS, Thomson Reuters

GOLD VOLUME AND VALUE TRADED ON COMEX



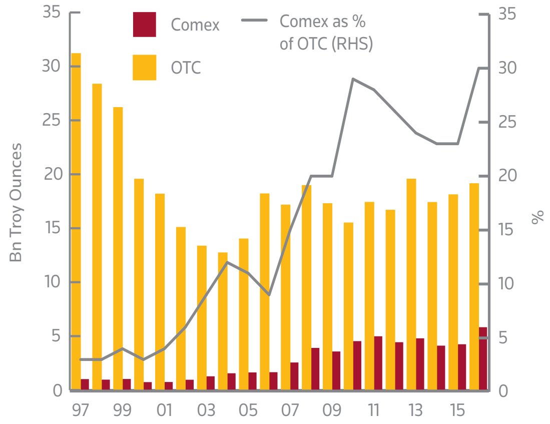
Source: LBMA; GFMS, Thomson Reuters

MOST LIQUID GOLD FUTURE CONTRACT TRADED ON COMEX



Source: CME; GFMS, Thomson Reuters

GLOBAL EXCHANGE ACTIVITY



Source: LBMA; CME; GFMS, Thomson Reuters

The volume of gold futures trading on COMEX has increased by a 14% CAGR since the start of the millennium. The US$ value of those volumes increased a whopping 26% CAGR over the same period. Neither of those instances, though, has the trend been a straight line. In line with the gold price bull run, the trading volumes and value peaked in September 2011 when gold reached an all time high of $1,895 basis the LBMA London PM gold price. As the gold price fell, so did volumes traded on COMEX. However, last year volumes traded on COMEX registered a substantial increase of 38% year-on-year. This increase can be largely attributed to two major events; the UK referendum about the membership of the E.U. and the U.S. Presidential election. Events like these, where the outcome can typically trigger significant volatility in the markets, tend to attract a lot of speculative activity.

The OTC market and the futures markets serve different constituencies in the global market and each has its own merits. The continuing growth in futures trading means that spot prices in the international banking loco London market are often nowadays determined by interpolating from the futures and using Exchange for Physical to back-calculate an indication for spot. Meanwhile the growth in the number of Exchanges around the world, especially in the Asian region, has been a cause of much debate in the market, with some market members arguing that there is an associated fracturing in liquidity. This is a matter of debate and an area that we are planning to re-visit in future.

In terms of the various future contracts, the three nearest contracts are those that have traditionally been most liquid and have been largely responsible for the general rise in volumes traded on COMEX since 2000. General interest in offsetting trades in the futures market gained traction since 2000 and the front three contracts are perceived by many traders to be the best instrument tenor to hedge any outstanding (physical) position elsewhere. When comparing both the volumes traded OTC and on COMEX, OTC is still the largest market by a considerable margin.

OFFICIAL COINS (INCLUDING THE USE OF SCRAP)

(tonnes)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
United States	19.0	31.8	50.9	44.5	36.5	29.2	37.3	23.8	33.9	41.9
South Africa	6.8	8.7	23.2	20.0	23.8	23.7	27.5	21.5	27.7	35.2
Canada	9.0	27.6	38.2	34.1	35.8	23.9	35.5	22.1	29.7	30.6
China	7.2	5.5	6.7	8.5	23.9	21.4	21.8	14.8	22.9	29.7
Turkey	56.7	53.1	30.9	35.6	58.9	39.9	90.6	40.5	19.8	22.4
Austria	5.3	24.9	33.4	17.9	21.1	12.4	20.3	15.0	23.5	17.4
Iran	15.4	18.4	29.2	39.6	52.3	55.0	58.0	33.6	27.0	14.6
Australia	5.6	9.6	11.0	8.4	10.6	10.0	16.2	11.6	9.9	10.9
United Kingdom	3.4	4.3	4.7	4.4	5.8	6.8	4.9	4.5	9.5	8.4
Russian Federation	4.3	5.7	6.5	5.4	4.6	6.4	5.7	4.5	4.1	4.2
Germany	5.5	5.5	5.0	5.0	4.7	5.0	4.2	4.2	0.8	1.0
Mexico	1.2	2.5	0.3	2.3	0.2	1.4	1.4	1.2	1.3	0.9
France	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.8	0.8	0.4
Other	2.5	2.9	5.2	2.9	2.9	2.6	1.9	2.0	1.3	1.1
World Total	**142.2**	**200.5**	**245.4**	**228.7**	**281.4**	**237.8**	**325.6**	**200.1**	**212.1**	**218.7**

Source: GFMS, Thomson Reuters

INVESTMENT

PHYSICAL BAR INVESTMENT

(tonnes)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Europe										
Germany	30.3	109.1	128.7	121.7	154.5	104.1	112.5	97.0	109.2	103.2
Switzerland	12.5	88.9	97.1	92.4	115.9	80.5	65.1	44.6	44.5	43.4
Belgium	-2.0	-0.1	12.2	18.7	23.8	19.2	21.0	20.4	20.3	17.2
United Kingdom	-2.6	0.0	4.7	9.3	10.4	15.1	13.4	7.6	6.9	9.6
Other Countries	-32.8	18.2	11.1	-4.0	46.4	37.4	41.4	41.4	40.5	39.3
Total Europe	**5.3**	**216.0**	**253.7**	**238.1**	**350.8**	**256.2**	**253.4**	**211.0**	**221.4**	**212.6**
North America										
United States	-2.5	51.4	63.5	62.0	47.5	25.9	33.4	24.8	27.3	28.7
Canada	1.4	5.2	7.4	3.4	5.1	2.6	5.0	1.5	2.0	1.5
Mexico	1.8	5.3	3.3	2.8	2.9	2.8	0.1	0.1	0.1	0.1
Total North America	**0.8**	**61.9**	**74.3**	**68.3**	**55.5**	**31.3**	**38.4**	**26.4**	**29.3**	**30.2**
South America										
Venezuela	0.0	0.0	2.0	2.0	2.0	2.0	2.6	2.0	2.0	2.0
Other Countries	0.0	0.0	2.0	2.0	2.0	2.0	2.6	2.0	2.0	2.0
Total South America	**-2.0**	**-0.6**	**2.6**	**2.3**	**2.5**	**2.5**	**3.8**	**2.3**	**2.3**	**2.3**
Asia										
China	21.0	60.8	102.3	178.6	237.8	249.3	412.1	231.5	220.9	236.8
India	148.6	159.9	117.5	266.3	288.0	205.9	265.8	109.8	124.2	87.6
Thailand	4.6	42.6	-10.1	63.0	103.6	101.9	148.9	84.4	68.6	58.0
Vietnam	56.1	96.2	58.2	67.0	87.8	71.4	81.8	53.3	42.0	42.3
Iran	20.2	30.6	15.8	33.8	40.4	44.2	46.4	31.5	27.6	0.0
South Korea	2.8	-0.6	-16.2	1.2	6.0	5.5	14.2	16.0	20.6	15.6
Pakistan	2.6	-4.4	-19.4	7.0	14.6	12.3	23.9	13.4	15.6	10.5
Saudi Arabia	9.0	13.5	10.9	14.5	17.4	16.3	17.8	14.6	14.5	11.2
Japan	-56.4	-39.4	-30.8	-41.0	-47.2	-10.5	2.7	-1.9	11.8	11.8
Indonesia	0.3	2.9	-6.0	15.3	24.8	22.1	43.1	18.1	11.3	12.0
Other Countries	23.1	24.3	3.9	19.9	48.8	32.1	58.8	49.3	44.0	42.1
Total Asia	**231.9**	**386.5**	**226.0**	**625.6**	**822.0**	**750.5**	**1,115.5**	**620.0**	**600.6**	**527.9**
Oceania & Other										
Australia	1.0	2.9	4.4	10.2	15.5	14.8	17.6	16.2	15.1	15.0
Egypt	0.7	0.4	0.7	1.2	0.7	0.8	15.2	9.9	7.4	-1.4
Total Oceania & Other	**1.7**	**3.3**	**5.1**	**11.3**	**16.2**	**15.6**	**32.8**	**26.1**	**22.5**	**13.6**
World Total	**237.7**	**667.1**	**561.7**	**945.6**	**1,246.9**	**1,056.2**	**1,443.9**	**885.8**	**876.0**	**786.6**
...of which:-										
*Middle East**	45.0	61.4	34.9	65.8	93.1	74.4	113.1	87.8	72.2	28.8
*East Asia**	38.5	171.4	92.7	291.1	438.4	464.1	735.5	425.5	396.9	399.6
*CIS**	4.2	4.4	4.9	3.1	2.8	2.7	2.7	2.8	2.6	2.4
*Indian Sub-Continent**	152.3	156.6	98.5	273.6	304.4	220.8	293.0	126.0	142.6	101.6

Source: GFMS, Thomson Reuters; *The key regional bullion markets

MEDALS AND IMITATION COINS (INCLUDING THE USE OF SCRAP)

(tonnes)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
India	64.7	63.5	53.5	82.6	80.0	106.3	96.3	70.8	66.6	45.8
Other Countries	3.7	6.2	5.4	5.7	7.8	7.1	7.5	6.6	6.8	6.3
World Total	**68.4**	**69.7**	**58.9**	**88.3**	**87.8**	**113.4**	**103.8**	**77.4**	**73.4**	**52.1**

Source: GFMS, Thomson Reuters

A NEW SHARIAH STANDARD FOR GOLD - WILL IT INFLUENCE DEMAND ANY TIME SOON?

In November 2016 the Accounting and Auditing Organisation For Islamic Financial Institutions (AAOIFI) and World Gold Council introduced a Shariah standard for gold-based products. This is viewed as an important development that could potentially add more physical gold to allocated accounts and boost global investment demand. To start with, let us look at what made gold non-compliant for Muslims and why it could not be considered as an acceptable investment class. Gold has been considered as a Ribawi item. That is it was non-permissible to trade; the list also includes silver, dates, wheat, salt and barley. Since the introduction of modern currency gold theoretically did in fact classify as a non-ribawi item due to the specifications and standards with which gold has been defined in this age, or in other words since it became fungible.

HOW WILL THE SHARIAH STANDARD ON GOLD INFLUENCE GOLD DEMAND?

The inclusion of gold defined by the parameters set out by the Shariah standard is argued that it will encourage portfolio managers in Islamic Financial Institutions to re-balance portfolio allocations and make room for gold ETFs in their portfolio. Islamic banking assets ($1.5 trillion), Sukuk ($291 billion), Islamic funds ($71 billion) and Takaful ($23 billion) are estimated at a combined $1.88 tn according to the Islamic Financial Services Board and the WGC. Some believe that these funds may feel encouraged to diversify their portfolios by investing in gold ETFs and hold gold in allocated accounts to diversify risk. Thus even a one percent allocation at the current price level could potentially create demand of over 400 tonnes at current prices according to those promoting the scheme. Allocation of that magnitude might be a surprise given the simple fact that total demand for physical investment bars was approximately only 90 tonnes in 2015, when combining demand from UAE, Kuwait, Indonesia, Malaysia, Saudi, Bahrain, Iran, Jordan, Oman, Pakistan, and Qatar. Our view is rather more cautious, as explained below.

Professionally managed funds operate in a different way from retail investors or physical traders. They would rather see the introduction of this asset class as an opportunity to efficiently manage portfolio risk given their exposure to risks associated with their own sovereign bonds. To put this in perspective a look at publicly listed companies that are Shariah compliant revealed that there are just 58 out of the 2,018 companies listed in Thomson Reuters Zawya and most of these companies are located in Gulf Cooperation Council (GCC) countries, thereby increasing the concentration risk during times of political turmoil.

CONCLUSION

The introduction of the Shariah standard on gold is very timely given the price cycle. It may well kindle interest amongst investors and will certainly become easier to encourage investor participation. However, in our view, 400 tonnes of fresh demand looks optimistic as there is always a need for someone in the market to lead with such a product offering, and to have success, before others will follow.

This topic was discussed at length with our industry participants during our field research in Middle East. The consensus at this point is that the banks and institutions are very interested and hope that in time it will lead to a rise in investment demand. It will of course provide another service they can promote to their client base, but they are also realistic in that such a new product offering will take some time to be widely accepted. Trading in gold (and silver) has not been permitted previously so these institutions will need time to educate the wider populous on the merits and acceptance, according to religious authorities, of such an investment option. Many of these organisations are already reviewing what they must do in order to facilitate such a product offering. The view among the physical bullion traders and gold souk retailers is not as optimistic. Their view is that consumers in these Islamic markets still prefer to hold their gold and to have ready access to it. The common view was that such a product offering by financial institutions would eventually erode their physical business, but this would take many years to have a material impact. We are of a similar view in that it will be some time before we see the impact on global demand trends of such a new product.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3. MINE SUPPLY

- ***Global mine production increased by 14 tonnes or by 0.4%, a robust performance considering our expectations at the start of the year, for one of modest decline.***
- ***The top 20 gold producers registered a net year-on-year gain of close to eight tonnes with strong increases in the United States and Australia offsetting losses in Peru and Mexico.***
- ***Outside the top 20 relatively 'new' gold producing countries including Dominican Republic (+22%), Guyana (+34%) and Suriname (+19%) made major contributions to a close to six tonne y-o-y increase measured in the group.***
- ***Producer cash costs and all-in sustaining costs, in U.S. dollar terms, fell year-on-year by a respective $13/oz to $630/oz and by $17/oz to $818/oz.***
- ***The global hedge book expanded by 21 tonnes to a delta-adjusted balance of 241 tonnes.***

TOP 20 GOLD MINING COUNTRIES

Rank			Production (t)	
2016	**2015**		**2015**	**2016**
1	1	China	450.1	453.5
2	2	Australia	279.2	290.5
3	3	Russia	249.5	253.5
4	4	United States	218.2	236.0
5	5	Indonesia	176.3	168.2
6	7	Canada	159.0	165.0
7	6	Peru	175.9	164.5
8	8	South Africa	151.0	150.0
9	9	Mexico	135.8	120.5
10	10	Ghana	95.1	95.0
11	12	Brazil	81.8	83.3
12	11	Uzbekistan	83.2	82.9
13	14	PNG	57.2	59.9
14	13	Argentina	63.8	57.4
15	15	Mali	49.0	49.8
16	18	Tanzania	46.8	48.7
17	19	Philippines	46.7	48.5
18	17	Colombia	47.6	48.3
19	16	Kazakhstan	48.2	48.0
20	20	Dem. Rep of Congo	45.7	44.4
		Rest of the World	548.5	554.3
		World Total	**3,208.6**	**3,222.3**

Source: GFMS, Thomson Reuters

MINE PRODUCTION & COSTS

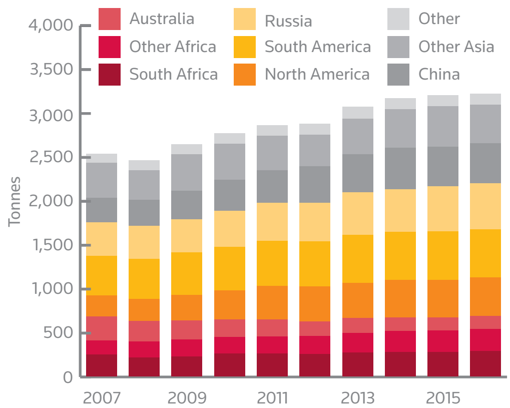
INTRODUCTION

Global mine production posted a modest 14 tonne or 0.4% gain in 2016 to reach an all-time high of 3,222 tonnes. The increase was contrary to our expectations of 2016 marking the first fall in world output since 2008. Nevertheless, the slow-down in the annual growth rate confirms our view that supply is reaching a turning point, albeit in a 'turning circle' that is somewhat larger than we had anticipated.

That the supply response is not particularly sensitive to underlying fundamentals should come as no surprise. The long lead time in the development of new gold mines and the high cost of mine closure are two key factors in the respective lead and lag in determining levels of gold supply.

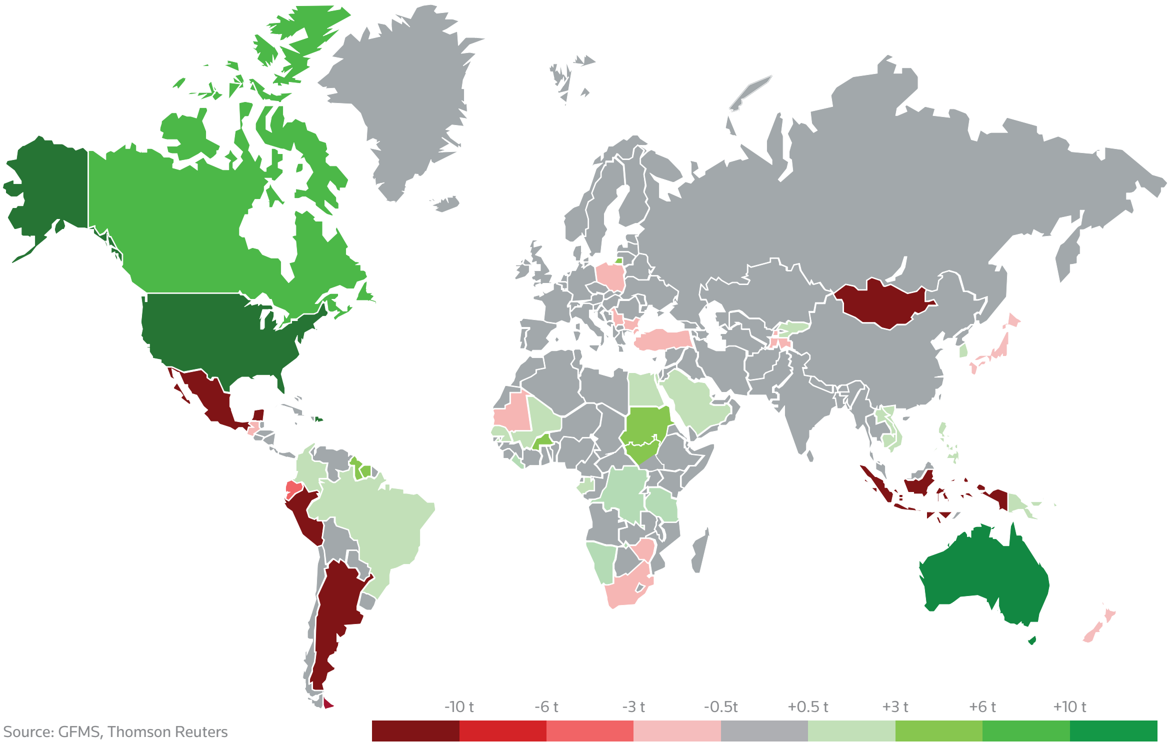
For instance, examining recent production trends, 1997 to 2007 saw mine production essentially 'flat-line' with a compound annual growth rate (CAGR) of 0.04% compared to the gold price which returned a CAGR of 6.5%. Growth finally 'kicked-in' and from 2008 to 2016 mine production posted a CAGR of 3.4% compared to a CAGR of 8.7% for the gold price. As noted above, however, we think the latest stage of growth has now run its course. 2016 marks the third consecutive year of falling year-on-year growth rates and we maintain our near term forecast for mine supply to decline in both 2017 and 2018.

GLOBAL GOLD PRODUCTION



Source: GFMS, Thomson Reuters

MINE PRODUCTION WINNERS AND LOSERS, 2016 VERSUS 2015



Source: GFMS, Thomson Reuters

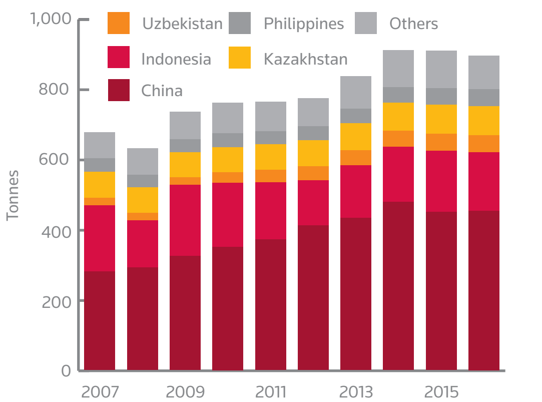
REGIONAL AND COUNTRY OVERVIEW

Asia, the largest gold producing region in 2016 and accounting for 28% of world gold output registered a 1.5% decline. Losses in South America were more modest falling by 0.7% year-on-year. Europe was essentially unchanged and there were increases in North America (+1.7%), Africa (+2%) and Oceania & other (+3.1%).

At the country level, 'winners' and 'losers' were well balanced. At one end of the table the ten best performing countries posted a combined year-on-year increase of 68 tonnes of gold, versus the ten largest losses, which amounted to a 62 tonne drop. Among the top ten winners, the United States, Australia, and the Dominican Republic accounted for over half of the gains. Meanwhile, Mexico, Peru and Mongolia, contributed around 60% of the combined losses among the bottom ten performers.

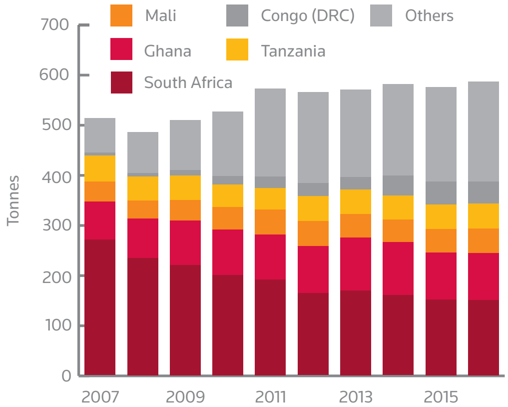
Excluding the name checks above, 2016 was 'business as usual' for some of the world's largest gold producers. China, the world's number one, posted a modest 3.4 tonne, or 0.8% year-on-year gain. Russia, unchanged from fourth position in the global league table, added a similar figure in tonnage terms, but a greater 1.6% gain in percentage terms.

ASIAN MINE PRODUCTION



Source: GFMS, Thomson Reuters

AFRICAN MINE PRODUCTION



Source: GFMS, Thomson Reuters

MINE SUPPLY

THOMSON REUTERS

Lastly, Canada, South Africa and Ghana deserve a mention. Canada jumped above Peru in the global rankings, moving from seventh to sixth position, but as noted above this was more to do with Peru's decline rather than a stellar performance from Canada. That said, Canada posted a close to six tonne increase year-on-year, or a 3.7% gain, building on the solid 4.6% increase posted in 2015. South Africa had a relatively good year with output only slightly lower at just over 150 tonnes, a one tonne, or 0.7% fall year-on-year. To put this modest drop into context, production in South Africa, formerly the world's largest gold producer, regularly posts declines of around ten tonnes per year. Like South Africa, output in Ghana, Africa's second largest producer, was only a fraction lower, with a drop of 0.1% and as a result the country maintained its rank as tenth largest in 2016.

COST OF PRODUCTION

(US$/oz)		2015	2016
North America	Total cash costs	646	638
	All-in Sustaining costs	812	784
South America	Total cash costs	576	573
	All-in Sustaining costs	804	776
Australia	Total cash costs	601	580
	All-in Sustaining costs	765	782
South Africa	Total cash costs	890	865
	All-in Sustaining costs	1080	1035
Other	Total cash costs	632	614
	All-in Sustaining costs	828	820
World	Total cash costs	643	630
	All-in Sustaining costs	835	818

Source: GFMS, Thomson Reuters

World total cash costs and all-in sustaining costs (AISC) respectively stood at an estimated $630/oz and $818/oz, representing a 2% improvement in both operating measures from the previous year. Combined with a close to 8% increase in the average gold price, cost margins improved by 5%, and all-in margins by 6.5%.

To clarify the definitions above, 'total cash costs' and 'all-in sustaining costs' are non-GAAP measures, 'total cash costs' per ounce are based on cost of sales but excludes, among other items, the impact of depreciation. ''All-in sustaining costs' (AISC) per ounce begins with 'cash costs' and adds sustaining capital expenditures, general & administrative costs and mine site exploration and evaluation costs. Although the World Gold Council (WGC) established a standardised definition for the reporting of these metrics, not all producers report in the same way, and some do not report the metrics at all.

MINE PERFORMANCE AND COSTS

Some of the biggest swing producers in 2016, with reference to moves in production volumes, and (more often than not) an opposing move in unit costs are reviewed below in two separate groups. The first group of 'growth assets' added a combined 32.5 tonnes of gold year-on-year, a 12% decline in average cash costs and a 13% fall in AISC. The second group of 'declining assets' posted a combined loss of 37.9 tonnes of gold year-on-year, a 23% increase in total cash costs and a 17% increase in AISC.

SWING STATES: MINES POSTING YEAR-ON-YEAR GROWTH

In **the United States**, production at Newmont's Nevada operations increased by 2.1 tonnes, or 4% to 50.6 tonnes, chiefly thanks to higher throughput and grade at Carlin and the start of commercial production at Long Canyon, achieved in November 2016 with over 0.62 tonnes of gold produced. Total cash costs and AISC for the Nevada assets declined year-on-year thanks to higher ounces sold and lower sustaining capital spend. Increased mining productivity at Barrick's Turquoise Ridge (which completed 100% mechanisation in 2015) was led by improved equipment availability and improved mine engineering. Output at the mine was up by 23% from the previous year with cash costs and AISC respectively 14% and 16% lower year-on-year. Elsewhere in the country, higher grades mined at the company's Cortez Hills open pit ('CHOP') contributed to a 6% rise in gold output at Cortez. Cash costs were down by 12% year-on-year, while the 14% fall in AISC partly reflected lower sustaining capital which was due to the completion of leach and tailings expansion in 2015.

Swing producers in South America included Barrick's Pueblo Viejo in the **Dominican Republic**, and in **Mexico**, Torex Gold's El Limon-Guajes (ELG) start-up mine. Gold production at Pueblo Viejo was 22% higher than the previous year. The strong result is explained by higher ore grade and recoveries and the fact that volumes in 2015 were impacted by a

MINE SUPPLY

WORLD GOLD MINE PRODUCTION

(tonnes)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Europe										
Russia	169.0	186.4	200.9	195.0	204.4	214.9	232.7	247.5	249.5	253.5
Turkey	10.1	11.4	14.5	16.6	24.1	29.6	33.5	31.0	27.5	26.2
Others	13.9	13.5	16.3	17.5	18.6	23.0	25.4	26.2	26.4	23.9
Total Europe	**193.1**	**211.2**	**231.7**	**229.1**	**247.1**	**267.6**	**291.6**	**304.7**	**303.4**	**303.6**
North America										
United States	238.0	233.6	221.4	229.7	233.5	232.4	229.6	208.7	218.2	236.0
Canada	102.2	95.0	96.0	103.5	107.8	107.8	133.6	152.1	159.0	165.0
Mexico	43.7	50.8	62.4	79.4	88.6	102.8	119.8	118.1	135.8	120.5
Total North America	**383.9**	**379.4**	**379.9**	**412.5**	**429.9**	**443.1**	**483.0**	**478.9**	**513.0**	**521.5**
South America										
Peru	183.6	195.5	201.4	184.8	189.6	184.4	187.7	173.0	175.9	164.5
Brazil	58.1	58.7	64.7	67.5	67.3	67.3	80.1	83.0	81.8	83.3
Argentina	42.5	40.3	48.8	63.5	59.1	54.6	50.1	59.7	63.8	57.4
Colombia	26.0	26.0	27.0	33.5	37.5	39.1	41.2	43.1	47.6	48.3
Chile	41.5	39.2	40.8	38.4	44.5	48.6	48.6	44.1	40.8	40.6
Dominican Republic	0.0	0.0	0.3	0.5	0.5	4.1	26.5	35.6	31.1	38.0
Suriname	16.1	17.9	20.8	22.9	24.6	26.5	27.0	26.6	25.4	30.2
Venezuela	24.3	24.3	24.8	24.9	25.5	21.8	22.9	23.2	27.2	27.2
Guyana	9.7	10.5	11.9	12.8	14.4	14.4	14.4	14.4	15.7	21.1
Ecuador	14.0	14.0	14.0	17.2	17.6	17.6	17.4	17.8	17.6	15.2
Others	31.0	27.7	28.4	30.5	34.6	30.0	30.7	30.5	28.6	25.9
Total South America	**446.9**	**454.2**	**483.0**	**496.6**	**515.2**	**508.4**	**546.7**	**551.0**	**555.5**	**551.7**
Asia										
China	280.5	292.0	324.0	350.9	371.0	411.1	432.2	478.2	450.1	453.5
Indonesia	189.5	135.9	204.5	184.1	165.1	131.0	152.7	158.4	176.3	168.2
Uzbekistan	72.9	72.2	70.5	71.0	71.4	73.3	77.4	81.0	83.2	82.9
Philippines	38.8	35.6	37.0	40.8	37.1	41.0	40.3	42.8	46.7	48.5
Kazakhstan	22.6	22.0	22.5	29.9	36.7	40.0	42.6	46.1	48.2	48.0
Mongolia	18.4	16.5	14.1	13.9	12.4	12.8	17.8	30.5	31.3	20.5
Kyrgyzstan	10.5	18.4	17.0	18.5	19.7	11.3	20.2	19.2	18.4	19.6
Other	45.6	41.1	47.8	54.4	52.2	55.3	54.8	56.2	56.6	55.8
Total Asia	**678.9**	**633.7**	**737.5**	**763.5**	**765.4**	**775.7**	**837.9**	**912.4**	**910.8**	**897.0**
Africa										
South Africa	269.9	233.8	219.5	199.9	190.8	163.5	168.9	159.2	151.0	150.0
Ghana	77.3	80.4	90.3	92.4	91.0	95.7	107.4	107.4	95.1	95.0
Mali	51.9	47.0	49.1	43.9	43.5	50.3	48.2	47.4	49.0	49.8
Tanzania	40.1	35.6	40.9	44.6	49.6	49.1	46.6	45.8	46.8	48.7
Congo (DRC)	6.5	7.2	10.0	17.0	22.0	26.1	25.3	40.0	45.7	44.4
Burkina Faso	2.9	6.9	13.8	25.3	34.1	31.3	35.0	38.5	38.0	40.4
Ivory Coast	3.0	5.3	8.6	7.3	13.4	14.0	13.6	18.0	22.2	22.6
Sudan	3.1	2.7	4.0	10.1	22.5	27.9	20.1	21.5	16.5	21.5
Zimbabwe	13.5	8.9	9.8	16.3	19.0	19.5	19.6	18.8	22.0	21.5
Guinea	18.0	23.9	22.5	20.4	19.7	18.4	19.0	21.0	20.0	20.0
Egypt	0.0	0.0	0.0	4.7	6.3	8.2	11.1	11.8	13.7	17.1
Other	27.4	34.5	41.2	44.8	61.1	61.8	56.4	52.3	55.6	56.3
Total Africa	**513.6**	**486.2**	**509.7**	**526.8**	**572.9**	**565.9**	**571.3**	**581.6**	**575.6**	**587.2**
Oceania & Other										
Australia	247.4	215.2	223.5	260.8	258.6	251.7	268.1	274.0	279.2	290.5
PNG	61.7	70.3	70.6	69.7	63.5	57.2	62.4	56.3	57.2	59.9
New Zealand	10.6	13.4	13.4	13.7	11.6	10.2	12.4	11.3	12.2	9.3
Other	2.0	2.9	2.1	2.2	3.4	3.7	3.3	2.1	1.7	1.4
Total Oceania & Other	**321.8**	**301.8**	**309.7**	**346.4**	**337.1**	**322.8**	**346.3**	**343.8**	**350.3**	**361.2**
World Total	**2,538.2**	**2,466.6**	**2,651.3**	**2,775.0**	**2,867.6**	**2,883.4**	**3,076.7**	**3,172.4**	**3,208.6**	**3,222.3**

Source: GFMS, Thomson Reuters

MINE SUPPLY

mechanical failure at the oxygen plant in Q4 2015. Unit costs benefited from lower maintenance charges, lower energy and fuel prices and higher production with cash costs falling by $72/oz or 15% and AISC down by $107/oz or 18%. Torex's ELG mine started production in December 2015 and reached commercial production on 30th March 2016, and produced 8.7 tonnes of gold in 2016 (2.5 tonnes in the fourth quarter).

Polyus Gold's Olimpiada mine in **Russia** reported a 19% increase in gold sales while cash costs declined by 3%. The modest decline in costs was the result of a weaker rouble offsetting the inflationary impact of higher consumer prices, greater repair expenses and salary hikes. An additional factor explaining the relatively muted reduction in costs was the relatively low cost base in 2015, a year that benefited from the processing of low-cost stockpiled ore.

The Sukari gold mine in **Egypt**, the country's first large scale modern gold mine, operated by Centamin, posted a 26% increase in production to 17.1 tonnes, while cash costs wound down by $200/oz or by 28% and AISC by 22%. The main positive impact on costs was from reductions in the fuel price set by the government (in line with lower international oil prices) and the devaluation of the Egyptian pound. Fuel represents approximately 20% of the mine's total operating costs. Newmont's Kalgoorlie mine in **Australia** benefited from higher milling and utilisation rates as well as higher ore grade milled. As a result output registered a 21% increase, while both total costs and AISC decreased by 20%.

SWING STATES: MINES POSTING YEAR-ON-YEAR DECLINES

The Yanacocha mine in **Peru**, operated by Newmont, registered a 29% drop in output from 28.6 tonnes to 20.4 tonnes, a 36% increase in total cash costs and a 20% rise in AISC. Lower output and higher unit costs are explained by a combination of lower throughput, recovery and grade. Staying in Peru, output at Barrick's maturing Lagunas Norte mine registered a decline of 22% year-on-year, a result of fewer ounces on the leach pad due to lower equipment availability. Unit cash costs increased by 16% with AISC up by a more moderate 4%, the latter reflecting a decrease in mine site sustaining capital expenditures.

Barrick's Veladero mine in **Argentina** was impacted by a temporary suspension of activity in the third quarter 2016 and by harsh weather in the second quarter 2016, with production for the full year falling by 10% and cash costs up by 5% year-on-year. AISC in contrast declined by 19% due to a reduction in capitalised stripping as compared to 2015 and to expenditure in 2015 related to improvements of the leach pad facilities as a result of a cyanide incident that occurred in the third quarter 2015.

Elsewhere in the country Goldcorp's Cerro Negro reported a 28% drop in gold and a 49% decline in silver production, partly due to 2015 figures including the processing of stockpiled ore. Operations were additional impacted by labour disputes as management downsized the workforce. Despite the lower volumes unit costs fell by 16%, the positive outcome a combination of the elimination of Argentina's tax on doré exports and devaluation of the Argentine peso. AISC dropped by 8% as management reduced investment rates in the mine related to the new cost management programme.

Mine sequencing at Goldcorp's Peñasquito mine in **Mexico**, saw production moving into lower grade and harder ore types. This chiefly explained the 46% drop in gold production to 14.5 tonnes and the rise in unit cash costs and AISC up by 51% and 72% respectively.

Production at Newcrest's Gosowong mine in **Indonesia** was impacted by the temporary suspension of mining activity following a geotechnical event on 8th February 2016. The Toguraci mine resumed on 12 April 2016 and at Kencana on 10 June 2016. The revised mining sequence and disruption resulted in a roughly 5.0 tonne, or 47% drop in gold output year-on-year. Total cash costs and AISC were respectively (and unsurprisingly) 38% and 62% higher than the previous year. Lastly, Alacer Gold's Çöpler mine in **Turkey** reported output of 3.7 tonnes, a 42% decline from 2015. The decrease was due to less (-25%) mined oxide ore and lower (-8%) grade. Mine plans were also impacted by pit wall instability in the Marble Pit, moving this production into 2017. The lower recoverable ounces resulted in a 53% increase in total cash costs. AISC were 40% higher than in 2015, the higher unit cash costs noted above, partly offset by lower sustaining capital expenditure.

CORPORATE ACTIVITY

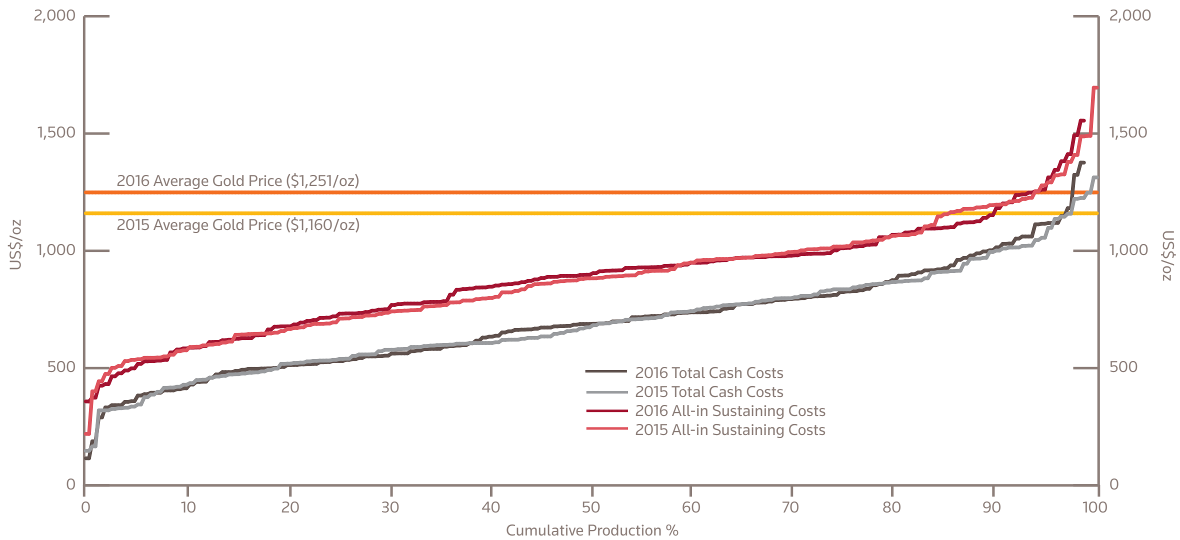
M&A transactions in the metals and mining sector* amounted to $36.8 billion in 2016. The top six target commodity groups in 2016 ranked (from 1 to 6) were as follows: copper, copper-gold, gold, potash/phosphate, oil & gas and PGMs. Gold deals accounted for around 14% of the total deal value, although including copper-gold transactions takes the share to approaching 30%. Deal rationale across the wider metals and mining space was dominated by three themes: debt reduction (c.40% of total deal value), streamlining portfolios (c.26%) and merger/growth opportunities (c.17%). The top ten largest deals featured, among others, Freeport-McMoRan (copper, oil & gas), Vale (potash/phosphate), Anglo American (potash/phosphate), Rio Tinto (iron ore) and Glencore (haulage). Deals in the gold sector, in contrast, were smaller and dominated by merger/growth opportunities and streamlining portfolios.

Two deals in 2016 ended long term relationships in Asia: Newmont/Indonesia and Eldorado Gold/China. For Newmont the sale of Batu Hijau was part of the group's wider portfolio optimisation, "divesting higher cost, and shorter life assets with higher technical and social risk". Eldorado's CEO, Paul Wright (to retire in April 2017), cited "less and less interest in China generally from North American investors", which has resulted in investors pricing in steeper discounts on Chinese gold assets. In short, and quoting Mr. Wright once again, "North American investors see lowest risk in the Americas and in Australia investors are more comfortable with projects in Southeast Asia". This geographic shake-up is sector-wide. Barrick, the world's largest gold miner is "focusing on core mines in the Americas".

Regarding deal size, Newmont's disposal of its interest in the Batu Hijau copper-gold mine was the only deal in the gold/copper-gold category above a billion dollars with the majority of transactions between $250 million and $800 million. At the top end of the range, Kirkland Lake Gold and Newmarket Gold entered into an agreement to merge the two companies in a deal valued at around $715 million. Earlier in the year, Tahoe Resources and Lake Shore Gold announced a merger with a deal value of $578 million. Eldorado Gold, as noted above, disposed of its Chinese gold mines Jinfeng ($300 million) and White Mountain and Tanjianshan ($600 million) in 2016, bringing to an end the company's 11-year history in China. Goldcorp acquired Kaminak Gold and its flagship Coffee Gold Project, a high-grade open pit in Canada for $395 million, while Metals X agreed to spin out its gold assets into WestGold Resources in a $389 million transaction.

*Metals and Mining sector – sourced from Deal Analytics on Eikon we include deals for which the major mining houses and companies classified in the Thomson Reuters business classification (TRBC) industry group Metals / Mining have any involvement (i.e as target or acquirer). We exclude deals related to manufacturing, processors, recycling, support services, merchants/metal wholesalers and steel mill/foundry operators.

WORLD TOTAL CASH AND ALL-IN SUSTAINING COST CURVES

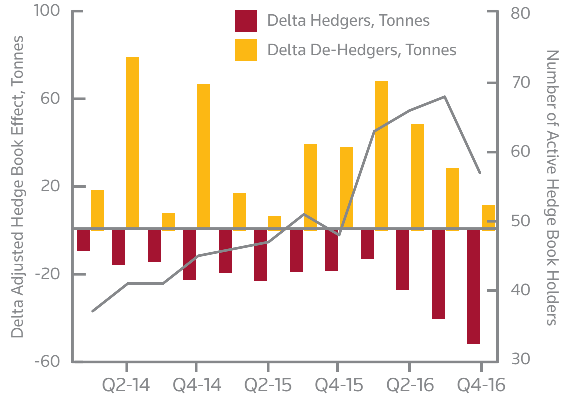


Source: GFMS, Thomson Reuters

PRODUCER HEDGING

GFMS estimates that the global producer hedge book stood at a delta-adjusted total of 241 tonnes at the end of 2016, which represents a 10% increase on the prior year, or net hedging of 21 tonnes. Following modest hedging in the first half of 2016 led by Australian producers, the third quarter saw a contraction in the hedge book despite a subtle increase in forward sales as miners delivered into their option contracts. The disconnect, first witnessed in the second quarter, spoke clearly to a jump in intra-year hedging activity favoured by gold producers who seeked cash flow stability during the ramp-up period of their operations. With the weighted time to maturity of vanilla options trending lower since end-2014, further gains were capped as the broader trend of a run-down in the option book resumed despite favourable risk reversals. Altogether, the second half of 2016 saw a cooling-off period amongst producers in the hedging 'club' as noted by the 5% to 10% drop in the H2 2016 hedge ratio of Australian producers.

ACTIVE HEDGE BOOK HOLDERS



Source: GFMS, Thomson Reuters

COMPOSITION OF THE DELTA-ADJUSTED HEDGE BOOK

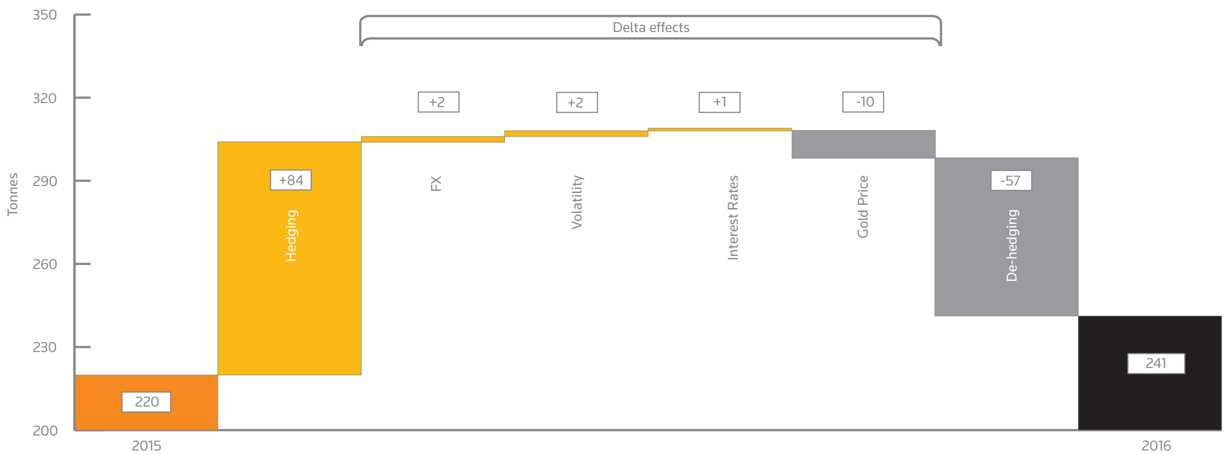
(tonnes, end-period)	15.Q4	16.Q1	16.Q2	16.Q3	16.Q4	2016 yoy
Forward Sales	117	157	178	179	159	+35%
Options	102	118	117	104	82	-20%
Total	220	275	295	283	241	+10%

Source: GFMS, Thomson Reuters

In addition to Northern Star Resources, Newcrest Mining and Harmony Gold, GFMS recorded increases to the delta-hedge positions of a further 27 companies over the year. A majority of these companies placed their hedge positions in H1 2016, and appeared to have experienced 'hedging fatigue' as gold prices failed to break above $1,400/oz in Q3 2016. As a result, the distribution of forward contracts due over H2 2016 revealed the preference amongst producers to hedge at $1,250/oz and $1,320/oz over Q2 2016 and Q3 2016, respectively. The companies that de-hedged by the greatest volume last year included PJSC Polyus (-14 t), Fresnillo (-10 t), Zijin Mining (-6 t), Evolution Mining (-5 t) and Hochschild Mining (-3 t). The latter is amongst a group of eight other producers which include New Gold, Detour Gold and Teranga Gold to have finished the year with an unhedged gold position. Similarly, four companies closed out gold hedges ahead of schedule.

As in 2016, de-hedging by Polyus and Fresnillo will most probably emerge as the largest contributor to the hedge book contraction we expect to see in 2017, followed by Newcrest Mining, Evolution Mining, and Northern Star Resources. These five companies account for 54% of the 2017 delivery profile and are scheduled to reduce their hedge position by 65 tonnes through deliveries into options and forward sales.

WATERFALL CHART: DELTA-ADJUSTED HEDGE BOOK SENSITIVITY



Source: GFMS, Thomson Reuters

MINE SUPPLY

THE GOLD SURVEY'S GOLDEN ANNIVERSARY; A LOOK BACK AT MINING HISTORY

The older Consolidated Gold Fields Gold Surveys contain a long-term mine production series of "free world" mine production, dating back to 1948, when output was recorded as just 702 tonnes. We do in fact have data going right back to 1493, derived from a number of sources including the United States Gold Commission. There are even estimates for the period running back to 4,000 BC when by far the largest area of production was Egypt and Nubia (now northern Sudan and southern Egypt)! Europe expanded enormously in the first millennium BC and in the 500 years thereafter, which is all tied in with the westward forays of the Romans in a virtuous circle of cause and effect.

Much later.... South African recorded production started in the 1880s, expanding from negligible levels in 1885 to reach 126 tonnes in 1898. Production grew gradually through to the mid-1950s, by which stage it had reached 436 tonnes, before a massive expansion that took output to 1,000 tonnes by 1965. The decline in South African production from its historically dominant position is a function in part of aging mines and lack of grade flexibility, although in the 1970s and the early 1980s the mines had to comply with the Government Mining Engineer's requirements to work to the lowest viable grade in order to enhance life-of-mine. Consequently, a strong rise in price would result in reduced output. This policy is no longer in operation, but domestic production has also been in decline as a result of the age of the mines. Global distribution is now much broader as illustrated below, with China the world's largest producer (and consumer).

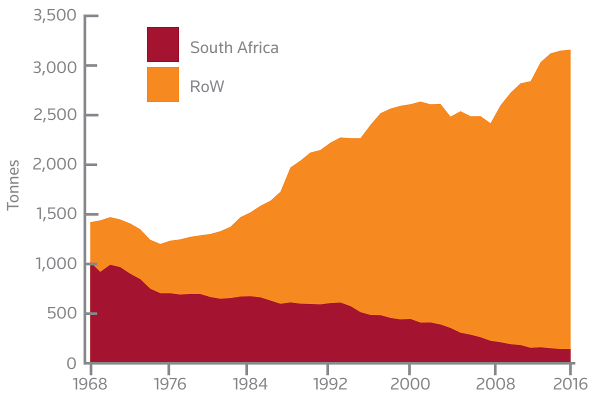
North America and Australia, meanwhile, have been consistently in the top few producers, while Papua New Guinea was briefly in the top order, by virtue of gold as by-product of copper mining operations.

Until 1989 the Surveys concentrated on the "non-communist" world and on recording net trade with the non-communist sector, rather than mine production. which was a state secret in the Soviet Union. In the late 1970s the Surveys did record estimates for USSR production, which were put at anything between 365 and 465 tonnes annually. In the late 1970s and early 1980s, however, the company was engaged in an in-depth study of Soviet production and suspended publishing estimates of output while that process was undertaken. We do not, therefore, have a continuous series of production estimates for the region.

In 1990, after CGF had been taken over by Hanson plc following a protracted and bruising defence against the take-over attempt from Minorco (the overseas investment arm of Anglo American, the world's largest gold producer at the time), Gold Fields Minerals Services was created as a separate entity. The methodology was changed and, starting with the Gold Survey 1991, tabulated estimates are now made for production in the former eastern blocs.

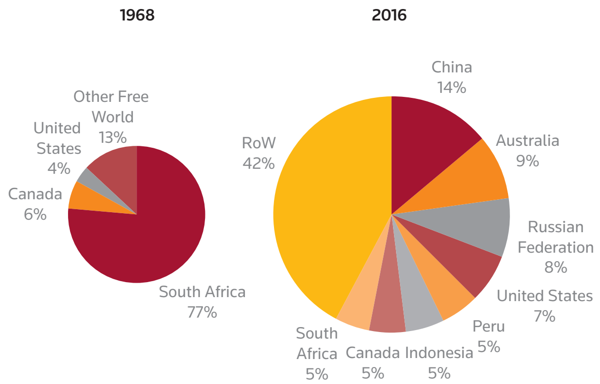
We currently estimate that total world mined production of gold amounts to approximately 187,200 tonnes, or 5.8 Bn ounces, or $7.7 trillion at $1,320/ounce.

LONG TERM MINE PRODUCTION HISTORY



Source: GFMS, Thomson Reuters

SNAPSHOT OF MINING MARKET SHARE



Source: GFMS, Thomson Reuters

4. SUPPLY FROM ABOVE-GROUND STOCKS

- ***In 2016, the total above-ground stock, or much of cumulative historical mine production, rose 2% to 187,200 tonnes.***
- ***The stock of fabricated products (excluding coins) reached 112,100 tonnes by the end of 2016, a net gain of 1,000 tonnes. This was equivalent to 59% of total above-ground stock.***
- ***The largest component of fabricated products, i.e. jewellery, increased by 600 tonnes to reach 89,200 tonnes by year-end. At 48%, jewellery also represents the largest part of total above-ground stocks.***
- ***The second largest component of total above-ground stocks, private and official bullion holdings at 38%, reached 71,500 tonnes last year. Just under half of that amount was held by the official sector.***
- ***Net official sector purchases accounted for 257 tonnes last year and combined with net producer de-hedging of 21 tonnes resulted in a rise of 235 tonnes in net official stocks.***

SCRAP SUPPLY

— ***Global scrap supply rose by 8%, the fastest increase since 2009, reaching 1,268 tonnes last year. Higher gold prices, particularly in some local currency terms, generated increased selling.***

For the second successive year scrap supply rose to register a three-year high, and the pace of increase accelerated appreciably compared to the anaemic rate in 2015. However, scrap flows were appreciably below the levels achieved in the 2009-2012 days, partly because prices in most currencies were still far below peaks but also because distress sales were much rarer than in the earlier period. Three-quarters of the increase stemmed from Asia with by far the largest increase in tonnage terms globally occurring in India, partly aided by the demonetisation at the end of the year. Other particularly large increases came about in countries whose currencies weakened sharply, with Egypt, the United Kingdom, Turkey and Mexico being notable examples.

A surge in **Indian** supply and the rise in the dollar gold price last year were the primary drivers for the 11% increase in **Asian** scrap. Weaker domestic currencies exacerbated the price rise teasing out tightly held stocks. In some countries gold priced in local terms reached an all time high in 2016, which not surprisingly drove scrap flows higher in those markets. Indian scrap return increased by 50% in 2016 to 131 tonnes, the highest level since 2003. While higher prices played a part, so too did the lack of available credit via the banking system, which led to liquidation among agricultural and small business operators.

In **Indonesia**, price was certainly the main catalyst for the 20% year-on-year jump in scrap receipts in 2016, reaching a five-year high, as a weaker rupiah pushed gold in local terms to an historical high in July. The notable change last year was that consumers were less willing to upgrade to a new design, as is often the case, preferring instead to cash in their jewellery items to book a profit. The higher gold price in **China** failed to elicit a substantial increase in scrap flows last year rising only 3% over 2015 volumes but in doing so reached a new high. The market was boosted by a significant supply from industry remelt as retailers recycled slow moving designs.

Japan recorded a somewhat surprising 10% rise in scrap supply last year as gold in yen terms declined in 2016. This counter intuitive outcome was the result of a sharp rise in smuggling last year to capitalise on the 8% consumption tax applied to all transactions in Japan. Gold bullion was imported unofficially and sold at a discount to the local price as the tax was not paid. The majority of this material was then re-exported as bars, while a portion was melted and sold to pawn shops as scrap.

Elsewhere in Asia, a double-digit rise in the domestic gold price helped **Thailand** post a 12% year-on-year rise in scrap collections. Despite the sizeable increase, the volume of scrap returned to market last year remained almost 60% below the peak back in 2009. **Vietnam** also recorded a healthy gain, jumping 21% to a three-year high as consumers took advantage of any spike in the domestic price (most notably following the Brexit vote and the U.S. presidential election) to liquidate gold assets. Smuggling also played a role as the domestic price often trades at a significant premium to the international price (regularly above $150/ oz) so those that purchase gold abroad, or have access to smuggled gold, profit handsomely by selling when there is a shortage in the local supply and the premia is soaring.

VISIBLE SUPPLY OF GOLD TO THE MARKET

	2014		2015		2016	
	tonnes	share	tonnes	share	tonnes	share
Mine Production	3,172	69%	3,209	71%	3,222	71%
Above-Ground Stocks	1,421	31%	1,317	29%	1,289	29%
- Scrap	1,158	-	1,172	-	1,268	-
- Hedging Supply	108	-	21	-	21	-
- ETF Inventory Drawdown	155	-	125	-	-	-
Total	**4,593**	**-**	**4,526**	**-**	**4,511**	**-**

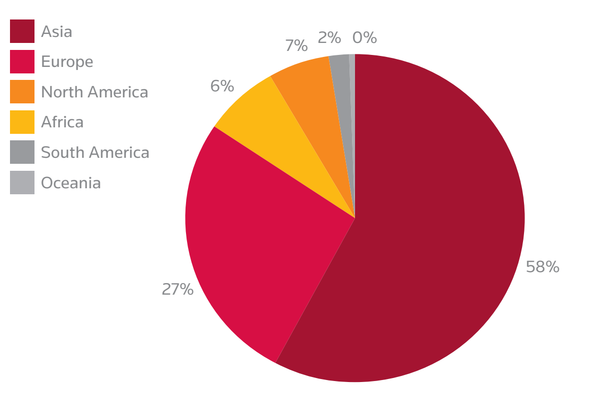
Source: GFMS, Thomson Reuters

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

With **Turkey** and **Russia** part of **Europe**, the continent which is the second biggest region for scrap supply recorded a 5% increase in gold jewellery scrap generation last year reaching 339 tonnes. Turkey's position as the largest source of supply in the region was reinforced as the weak Turkish lira ensured that receipts rose three times faster than the other major European market, Italy. This gentle increase in Italy was typical of the countries within the single euro currency bloc where consumers were aided by marginally stronger euro prices, particularly in the immediate aftermath of the Brexit vote. Indeed, if it were not for the weakness of flows in November and December the increase would be been much more marked across the region. Perhaps the two most interesting changes in the region though were outside the Eurozone, with the sharpest increase occurring in the United Kingdom. The dramatic increase in sterling gold prices, aided by 31-year lows for the currency against the U.S. dollar was undoubtedly the key factor driving the 26% rise, as unemployment actually dropped to a decade low and hence distress sales fell. The increase was at its most dramatic in July and August and while volumes were far from the peaks early in this decade, the more recent reduction in the number of players meant that increases for individual players where bigger than that of the overall market. Meanwhile in Russia, despite an all time high annual average rouble price, recent field research indicated that scrap eased a touch from the record flows in the previous year. Crucially this was due to a relative lack of near-market stocks and to a lesser extent the fact that the pace of economic decline slowed.

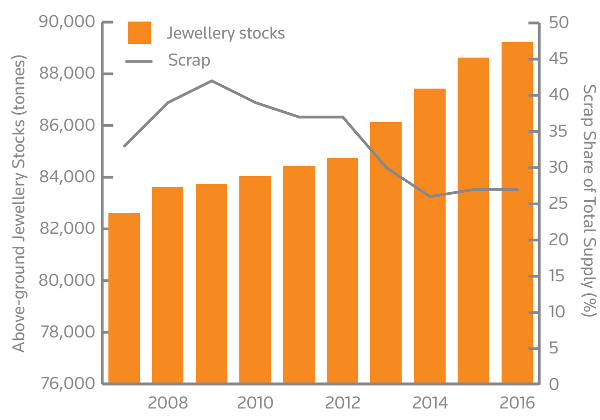
North America generated 90 tonnes of gold scrap in 2016, down 3% from the previous year. This was the slowest rate of decline since 2012 and marks the fifth consecutive contraction in scrap sales in the region. This rate of decline was an improvement over the previous two years, as scrap flows contracted 22% in 2014 and 20% in 2015. At 90 tonnes, however, scrap flows represent only 41% of the peak recorded in 2012. This development has made scrap sourcing competitive in a region that holds quite a considerable number of accredited LBMA refiners. A decline in distress sales over the years as well as lower gold prices have restrained consumers from returning their old jewellery. As a result the region saw scrap supply drop to its lowest level since 2005. This was despite an increase in flows in Mexico aided by the weakness in the peso, particularly in the closing weeks of the year.

ABOVE-GROUND SCRAP STOCKS BY REGION 2016



Source: GFMS, Thomson Reuters

ABOVE-GROUND JEWELLERY STOCKS & RETURN OF SCRAP



Source: GFMS, Thomson Reuters

SUPPLY OF GOLD FROM FABRICATED OLD GOLD SCRAP

(tonnes)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Europe										
Turkey	71.5	199.0	217.2	122.0	78.0	72.3	56.3	41.4	72.4	77.3
Italy	57.1	61.0	78.0	98.0	116.5	122.6	85.5	75.4	68.9	70.4
United Kingdom	11.7	38.7	59.4	69.8	76.0	69.0	41.0	31.2	30.4	38.2
Russian Federation	20.7	21.4	28.7	26.4	23.5	24.2	18.6	29.8	37.9	34.1
Germany	18.8	24.4	32.7	44.1	45.5	40.3	31.1	23.8	23.1	24.7
France	16.8	21.2	24.9	29.2	40.3	33.5	26.7	21.5	22.0	23.0
Spain	5.8	10.6	20.1	31.9	32.7	35.9	23.5	18.7	15.7	17.3
Portugal	0.9	1.1	1.5	8.6	15.5	16.0	11.2	9.1	9.4	9.7
Other Countries	34.8	39.3	55.3	66.6	76.1	73.3	53.3	45.1	43.7	44.8
Total Europe	**238.0**	**416.7**	**517.8**	**496.6**	**504.1**	**487.1**	**347.1**	**296.1**	**323.4**	**339.5**
North America										
United States	84.5	93.5	124.0	143.0	159.9	149.4	105.8	83.5	63.8	58.7
Mexico	17.6	28.1	40.8	45.6	47.6	54.1	37.2	27.2	24.4	27.0
Canada	6.3	6.9	9.2	11.1	10.8	9.8	6.7	5.7	5.1	4.6
Total North America	**108.4**	**128.5**	**174.0**	**199.7**	**218.3**	**213.3**	**149.7**	**116.3**	**93.2**	**90.3**
South America										
Brazil	6.4	7.5	11.4	16.1	22.2	24.6	16.0	9.8	6.8	7.4
Other	26.5	29.0	39.8	48.9	49.8	50.2	15.9	15.1	15.1	16.1
Total South America	**32.9**	**36.5**	**51.2**	**65.0**	**72.0**	**74.8**	**31.9**	**24.9**	**21.9**	**23.5**
Asia										
China	41.6	70.3	116.3	133.2	143.6	165.6	176.3	197.7	225.0	232.5
India	73.0	89.5	115.5	81.0	58.5	113.0	100.8	74.2	87.5	131.4
Indonesia	68.0	72.5	79.9	64.9	58.3	49.0	36.2	36.3	46.1	55.1
UAE	43.8	59.4	70.6	110.0	71.4	73.4	57.0	51.4	43.5	42.2
Japan	25.9	53.6	35.3	43.9	55.1	42.2	36.2	26.1	28.8	31.6
S. Korea	36.1	56.3	57.1	48.8	47.2	37.8	26.1	27.7	29.4	31.0
Thailand	37.4	51.7	66.0	44.7	52.4	43.6	30.6	25.7	24.6	27.6
Vietnam	9.0	12.2	51.5	49.8	41.1	36.4	28.2	26.2	22.8	27.5
Pakistan	31.7	35.5	53.9	50.4	42.7	47.2	37.2	28.8	22.5	24.0
Iran	23.1	26.0	32.2	32.7	32.4	32.9	24.3	22.1	17.7	17.3
Saudi Arabia	56.4	69.4	57.3	44.1	37.1	33.5	23.6	20.8	16.8	16.0
Kazakhstan	2.2	2.5	3.1	3.0	3.1	3.2	2.9	7.9	11.5	14.1
Taiwan	18.5	33.6	34.9	27.5	19.5	15.4	12.0	11.1	10.7	12.7
Malaysia	16.4	18.4	19.3	22.2	19.2	16.7	13.3	12.4	10.9	10.4
Iraq	5.4	7.4	20.3	19.1	17.1	15.3	10.8	10.4	8.4	8.0
Other	75.4	80.7	99.5	107.6	100.2	89.0	71.5	60.3	51.6	51.4
Total Asia	**563.8**	**738.8**	**912.4**	**882.8**	**798.8**	**814.0**	**686.9**	**639.1**	**657.6**	**732.7**
Africa										
Egypt	56.5	35.8	65.0	48.0	47.6	53.6	43.2	39.9	35.1	38.9
Morocco	6.3	6.4	9.7	9.3	12.0	11.3	9.4	9.0	8.8	9.3
Libya	9.5	10.4	13.4	15.8	16.6	14.4	8.8	8.2	7.7	8.3
Other	11.9	12.5	18.0	18.8	22.6	21.7	19.0	18.2	18.5	20.0
Total Africa	**84.1**	**65.0**	**106.1**	**91.8**	**98.8**	**101.0**	**80.4**	**75.2**	**70.1**	**76.5**
Oceania										
Australia	1.5	2.0	3.1	6.8	12.0	10.2	7.3	6.6	5.5	5.4
Total Oceania	**1.5**	**2.0**	**3.1**	**6.8**	**12.0**	**10.2**	**7.3**	**6.6**	**5.5**	**5.4**
World Total	**1,028.7**	**1,387.5**	**1,764.6**	**1,742.7**	**1,703.9**	**1,700.4**	**1,303.2**	**1,158.3**	**1,171.8**	**1,267.9**
...of which:-										
*Middle East**	306.3	449.8	531.1	453.8	352.3	341.4	263.6	224.7	226.3	230.0
*East Asia**	269.1	386.0	479.9	454.2	457.7	425.0	373.1	377.2	411.4	442.8
*CIS**	25.4	26.7	35.3	32.8	30.1	31.2	25.0	41.0	52.9	52.3
*Indian Sub Continent**	111.7	132.5	176.9	138.3	107.7	166.5	143.3	107.4	112.4	157.9

Source: GFMS, Thomson Reuters * The key regional bullion markets

SUPPLY FROM ABOVE-GROUND STOCKS

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For over a century, The Perth Mint has been trusted to produce the highest purity gold and silver bullion, and create some of the finest coins and bars ever minted.

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5. OFFICIAL SECTOR

- ***For the seventh consecutive year central banks were a significant source of net demand in the gold market in 2016. However, gross sales rose by 15% year-on-year and gross purchases dropped by 31% year-on-year, leading to a 42% decrease in net official sector activity, to a seven-year low of 257 tonnes.***

- ***Falling foreign exchange reserves in a number of emerging markets led to the upturn in sales and were arguably even a headwind for Chinese central bank purchases.***

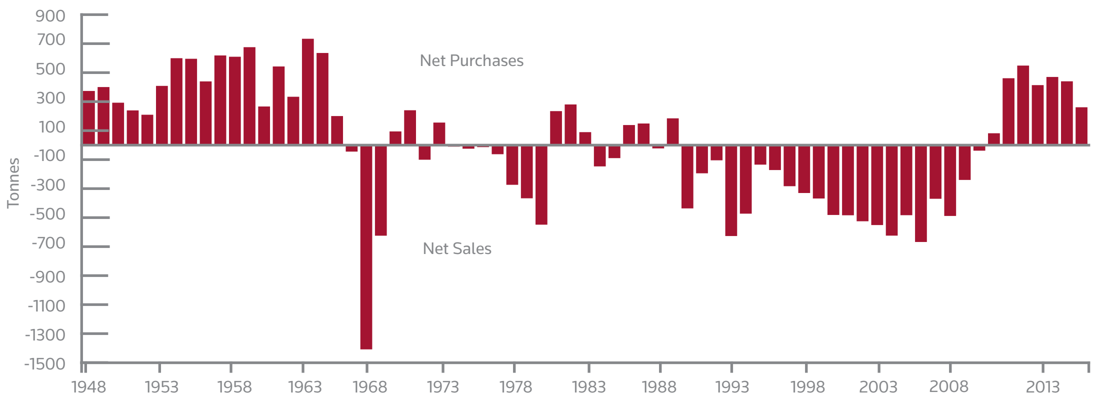
PURCHASES

Central to the continued net buying from the official sector globally was 201 tonnes of acquisitions from the Central Bank of **Russia**. This ensured that for the fifth year in a row Russia posted the largest increase in reported gold holdings. While the pace of purchases varied month-to-month, there were acquisitions in each of the first eleven months of the year, with the fastest pace occurring as prices slipped in October and November to average 36 tonnes in those months. In December, purchases halted with the net acquisitions for the year already approximately matching the 2015 level. There has also been signs that this was merely a pause, as 30 tonnes were bought in January, taking their total gold holdings to 1,645 tonnes. We continue to believe that this very strong pace of acquisitions is being driven by a number of factors including western sanctions making more metal available in the Russian market as well as encouraging a desire to diversify reserves away from US Treasuries, plus a positive view of the prospects for gold.

The other major acquirer was **China**, who for the first full calendar year reported regular monthly changes to holdings. The pace of purchases gradually slowed over the course of 2016. In the second half of 2015 China had bought just over 50 tonnes in each quarter, but in 2016 this slipped to 35 t and 26 t in the first two quarters respectively and thereafter 15 tonnes in Q3. Indeed, since the Chinese yuan was added to the reserve currency basket of the International Monetary Fund (IMF) on 1st October 2016, known as the Special Drawing Rights (SDR), China bought a mere four tonnes in the final quarter of 2016, all in October. Moreover, there have been no purchases for four successive months since. This slowing pace is probably due to the combination of higher gold prices in local currency in the first half and then falling foreign exchange reserves and attempts to support the yuan.

Meanwhile, substantial buy-side interest was recorded from other CIS countries, with **Kazakhstan** being the third largest purchaser globally as it acquired 36 tonnes in the fifth successive year of purchases of 25-50 tonnes per annum from this country. Elsewhere in the CIS, **Belarus** and **Tajikistan** bought 4.2 tonnes and 1.8 tonnes respectively in 2016. The fourth largest purchaser, of 7.5 tonnes, was **Qatar**. Other acquirers included **Mauritius** and **Colombia** who bought 3.5 tonnes and 2.3 tonnes respectively.

HISTORICAL NET OFFICIAL SECTOR PURCHASES & SALES



Source: BIS; IMF; GFMS, Thomson Reuters

SALES

In 2016, **gross official sector sales** rose by 15% to 130 tonnes, reaching the highest level since 2010. Back then, sales were dominated by the IMF which had been motivated by an attempt to put the Fund on a sound long-term footing, and to boost its capacity to provide concessional loans to what it referred to as low income countries. This past year sales were also dominated by the largest seller, Venezuela, accounting for 63% rather than the 79% of gross sales that the IMF made in 2010.

The 85 tonnes of sales from **Venezuela** were predominantly in the first half of 2016 and came as the continued sharp economic crisis in this South American country led to dwindling foreign exchange reserves, precipitating a need to utilise their gold holdings. All other sellers were much smaller, with **Azerbaijan** being comfortably in second place having sold 10.2 tonnes over the course of the final four months of the year, an exact reversal of its acquisitions in 2014 (holdings were unchanged in 2015 there). The next largest seller came from an emerging market who had not sold gold since 2005 and made the sale in just one month, as **Argentina** disposed of 5.0 tonnes in October.

Meanwhile **Germany** and the **Czech Republic** continued their regular pattern of small scale sales as part of their official coin programmes, selling three tonnes and just 0.3 tonnes respectively, with the main transaction in June. Smaller sales were made by a whole string of countries, the largest being **Jordan** (3.1 t), **Guinea** (2.2 t), **Ukraine** (1.9 t) and **Canada** (1.7 t). The latter sold all the remaining official sector holdings by the end of February 2016.

OUTLOOK

In recent years there has been significant repatriation of gold by central banks, most importantly by the second largest gold holder, Germany. Indeed, the Bundesbank has announced that it had brought home 583 tonnes of its Central Bank reserves by the end of 2016. This included repatriating all 300 tonnes that had previously been warehoused in New York. This leaves the central bank ahead of schedule to complete the entire 674 tonne repatriation programme that it announced in 2013 by its 2020 deadline, the details of which are shown in the table and chart below.

In terms of central bank transactions, we expect substantial purchases of gold by Russia to continue this year at around 200 tonnes largely regardless of gold or oil price fluctuations or even changes in the exchange rate. Indeed, we think the most likely cause of a change to this pace could be if sanctions are lifted. This underpins our expectation that global net official sector purchases will still be around 250 tonnes again this year. We also foresee continued purchases from China as the percentage of foreign exchange reserves held in gold remains at a very low level, just over 2%, compared to between 60-80% for many European countries and the United States (although to be fair, these nations' holdings are legacies from their days on the gold standard). More broadly we would not be surprised if the pace of gross sales slowed somewhat, as many commodities have recovered from recent lows and the strengthening US dollar has hit headwinds so far in 2017.

GERMAN OFFICIAL SECTOR GOLD TRANSFERS

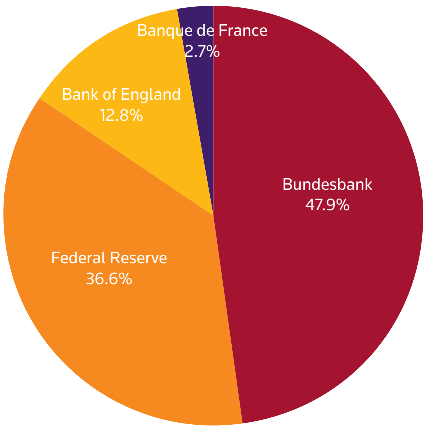
(volume in tonnes)

	from New York	from Paris	Total	Share
to be transferred by 2020	300 t	374 t	674 t	10%
transferred in 2013	5 t	32 t	37 t	5%
transferred in 2014	85 t	35 t	120 t	18%
transferred in 2015	99 t	111 t	210 t	31%
transferred in 2016	111 t	105 t	216 t	32%
transferred to date	300 t	283 t	583 t	86%
still to be transferred	0 t	91 t	91 t	14%

Rounded figures

Source: Bundesbank

GERMAN CENTRAL BANK HOLDINGS BY LOCATION



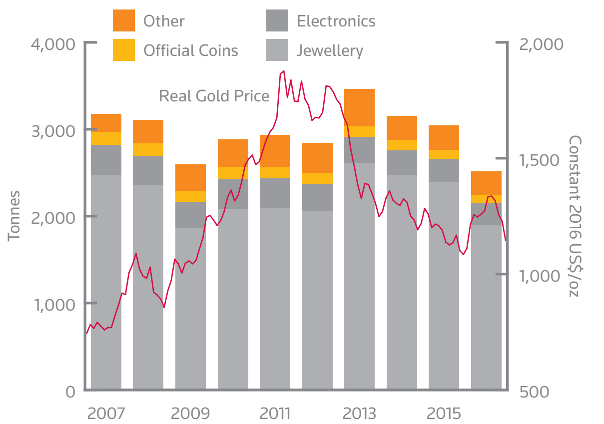
Source: Bundesbank


IGR
100g
FINE GOLD
999.9

6. FABRICATION DEMAND

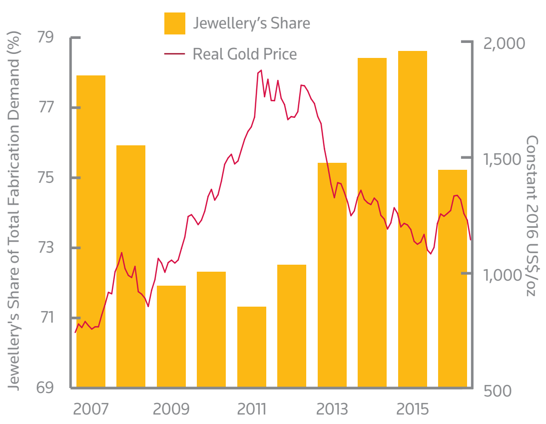
- ***Global fabrication demand declined 17% in 2016, the third fall in succession, slipping to an estimated 2,516 tonnes.***
- ***The bulk of the drop was due to a 21% slump in jewellery fabrication, dragged lower by higher US dollar gold prices and weak global economic growth.***
- ***Jewellery fabrication, excluding the use of scrap, saw an acutely higher decline, retreating 31%, equivalent to a loss of 565 tonnes of new gold demand.***
- ***Jewellery fabrication in East Asia declined for the third year in succession, retreating 16% year-on-year to a four-year low. A 17% drop in Chinese fabrication last year accounted for the bulk of the drop in volumes terms although nearly all markets in the region were weaker on an annual basis.***
- ***Indian jewellery fabrication also recorded an extraordinary decline in 2016, slumping 38% to a record low 454.4 tonnes as the introduction of an excise duty, destocking from the informal segment, and demonetisation all combined to drive fabrication sharply lower.***
- ***Jewellery fabrication across the Middle East as a bloc was down heavily in 2016, falling an estimated 14% year-on-year to a level not seen since 2012, dragged lower by higher gold prices but also as a result of a weaker economic environment, while European offtake was hit by sharply higher prices in some local currencies and weak exports, declining by 11%. Meanwhile, a stronger economic performance in North America limited the fall to just 2% on an annual basis.***
- ***Global official coin minting increased by 3% year-on-year in 2016 to an estimated 218.6 tonnes, as the price decline towards the end of the year helped offset earlier weakness.***
- ***Industrial demand slipped 3% to a six-year low of 353.8 tonnes, as ongoing thrifting and substitution, coupled with a generally weak global economic environment, drove demand moderately lower. The electronics sector, while declining, was supported by stronger demand for plating salts and a stabilising of gold used in bonding wire production.***
- ***The stronger gold price and continued substitution losses pushed dental demand to a record low 29.8 tonnes, a decline of 5% year-on-year.***
- ***Other industrial and decorative demand retreated 7% in 2016 to 70.2 tonnes as higher gold prices and a 43% fall in Indian offtake dragged global consumption lower.***

WORLD GOLD FABRICATION



Source: GFMS, Thomson Reuters

JEWELLERY'S SHARE OF TOTAL FABRICATION DEMAND



Source: GFMS, Thomson Reuters

WORLD GOLD FABRICATION (INCLUDING THE USE OF SCRAP)

(tonnes)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Europe										
Turkey	276.8	236.7	111.3	109.0	136.3	114.2	178.1	155.8	111.9	100.5
Italy	228.4	186.7	134.6	126.3	103.3	95.9	92.3	96.0	94.3	88.3
Russia	79.4	76.0	57.5	61.0	66.2	72.2	74.3	70.1	51.8	46.9
Switzerland	62.2	58.2	37.5	40.8	47.9	47.8	46.0	44.3	40.9	34.9
Germany	51.5	49.1	38.1	40.8	38.8	36.4	36.8	36.3	32.3	31.5
United Kingdom	16.9	15.6	15.2	13.9	15.5	15.2	13.9	15.1	20.2	18.8
Austria	6.5	26.3	34.6	19.1	22.3	13.7	21.5	16.2	24.7	18.5
France	14.0	13.0	11.0	11.1	10.1	8.4	7.6	7.8	7.4	6.9
Spain	23.6	19.3	13.6	8.4	7.1	6.3	5.8	5.5	5.6	5.2
Greece	8.5	7.4	6.2	6.2	4.5	4.0	3.5	3.9	4.0	3.8
Poland	5.7	5.8	4.4	2.9	2.7	2.4	2.2	2.5	3.0	2.9
Netherlands	4.2	3.3	2.9	3.0	2.8	2.6	2.4	2.3	2.3	2.2
Portugal	4.6	3.6	2.9	2.3	1.7	1.4	1.4	1.7	1.5	1.4
Czech Republic	1.8	1.8	1.6	1.5	1.3	1.2	1.1	1.3	1.0	0.9
Belgium	1.2	1.1	1.0	0.9	0.9	0.9	0.8	0.9	0.9	0.8
Luxembourg	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Slovakia	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.1	0.1
Other Countries	14.0	13.0	10.2	9.8	9.0	8.3	8.4	7.5	7.3	7.0
Total Europe	**764.7**	**799.9**	**717.4**	**483.3**	**457.7**	**471.1**	**431.7**	**496.7**	**469.1**	**413.3**
North America										
United States	179.0	175.2	173.4	179.1	166.7	148.6	163.3	152.4	165.4	171.2
Canada	22.2	40.1	48.4	43.7	44.9	32.4	44.5	31.7	40.1	40.7
Mexico	25.3	23.0	18.9	18.2	13.2	13.2	7.7	8.5	9.1	8.9
Total North America	**226.5**	**238.3**	**240.7**	**241.0**	**224.9**	**194.2**	**215.4**	**192.5**	**214.7**	**220.8**
South America										
Brazil	23.4	25.0	24.9	29.5	27.7	29.5	32.9	34.0	24.2	22.9
Chile	3.6	3.2	2.8	2.9	2.2	2.2	2.4	2.4	2.3	2.3
Dominican Republic	4.5	4.3	2.8	2.5	1.9	1.8	1.2	1.5	1.8	1.7
Other Countries	15.9	13.0	9.8	9.2	8.0	7.8	7.6	8.4	9.2	8.7
Total South America	**47.4**	**45.5**	**40.3**	**44.0**	**39.7**	**41.3**	**44.2**	**46.3**	**37.4**	**35.6**
Asia										
China	345.0	382.7	431.3	522.5	650.7	697.7	1,174.6	925.3	853.7	731.2
India	684.4	708.1	571.0	783.4	761.0	736.0	715.8	770.6	811.7	505.8
Japan	177.8	163.7	140.5	157.5	147.2	126.1	124.2	118.6	102.2	99.3
South Korea	115.9	107.8	90.6	92.6	81.4	69.9	64.7	61.2	55.7	51.8
Iran	51.6	54.1	60.2	72.4	84.1	86.7	93.3	61.6	56.1	47.2
UAE	49.4	46.3	35.9	32.9	31.9	29.7	37.8	41.6	45.1	45.0
Indonesia	68.0	66.2	50.8	44.7	48.1	52.8	60.9	53.3	49.7	44.9
Malaysia	61.0	56.3	45.0	44.8	41.1	38.7	48.6	44.7	40.9	34.4
Saudi Arabia	99.6	85.0	53.5	46.6	36.8	32.5	41.4	37.3	40.9	31.6
Singapore	32.5	30.6	26.3	28.3	26.6	24.8	28.4	29.0	29.1	27.1
Thailand	50.3	44.0	30.5	27.4	24.9	21.8	29.8	27.1	27.4	23.9
Taiwan	29.7	27.5	23.1	26.1	24.0	22.5	22.2	21.3	20.2	21.1
Pakistan	50.4	43.8	29.7	26.1	22.1	20.6	24.6	20.9	22.6	16.1
Vietnam	22.4	21.5	16.0	14.7	13.6	11.9	12.8	13.9	15.5	15.7
Jordan	8.7	8.7	9.6	9.9	9.2	8.6	9.5	11.4	12.5	10.5
Kuwait	13.1	13.5	11.4	10.6	10.2	9.6	10.3	11.0	10.8	9.8
Lebanon	9.8	8.8	6.5	6.0	6.6	7.8	10.7	10.3	13.8	9.0
Uzbekistan	11.9	10.9	8.8	10.4	11.4	10.9	11.1	11.2	9.7	8.7
Hong Kong	15.4	15.6	14.7	15.8	16.5	14.8	14.6	13.9	12.1	8.6
Kazakhstan	11.9	10.9	8.8	10.4	11.4	10.9	11.1	10.5	8.4	7.4

WORLD GOLD FABRICATION (INCLUDING THE USE OF SCRAP)

(tonnes)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Sri Lanka	5.2	4.5	3.8	3.7	3.2	3.1	3.5	3.5	3.2	7.1
Israel	9.0	8.7	7.2	6.3	5.5	5.1	5.9	6.9	6.0	5.4
Bahrain	9.9	8.7	6.5	5.7	5.1	4.6	5.8	5.6	5.8	5.1
Iraq	5.3	4.6	3.8	3.7	3.8	3.9	5.0	4.9	5.1	4.1
Bangladesh	6.5	5.8	4.6	4.2	3.8	4.4	4.5	6.0	4.5	3.7
Oman	7.1	6.0	4.5	4.1	3.5	3.2	3.8	3.6	3.7	3.3
Myanmar	4.0	3.5	3.0	2.6	2.3	2.3	2.7	2.4	2.6	2.7
Philippines	3.5	3.3	3.1	2.9	2.3	2.1	2.4	2.4	2.5	2.3
Nepal	5.3	4.5	3.5	3.5	3.3	3.5	3.9	3.0	2.9	2.1
Other Countries	29.7	27.2	19.9	18.4	14.1	11.1	10.7	8.6	8.0	7.0
Total Asia	**1,993.9**	**1,982.6**	**1,723.6**	**2,038.0**	**2,105.9**	**2,077.5**	**2,594.4**	**2,341.3**	**2,282.0**	**1,791.5**
Africa										
South Africa	14.0	16.4	28.3	24.6	27.4	27.2	30.8	24.9	30.7	37.7
Egypt	56.5	64.5	44.9	43.3	30.2	38.7	41.8	41.5	38.6	27.5
Morocco	10.3	9.5	7.6	7.0	6.8	6.6	6.5	6.8	6.8	6.4
Algeria	3.4	3.1	2.5	2.4	2.1	2.1	2.3	2.3	2.2	2.0
Other Countries	14.2	13.2	11.3	10.5	9.4	9.0	9.5	9.9	9.4	8.6
Total Africa	**98.4**	**106.6**	**94.7**	**87.7**	**76.0**	**83.5**	**90.8**	**85.3**	**87.7**	**82.2**
Oceania										
Australia	10.5	14.0	14.6	12.0	13.9	13.3	19.6	14.8	13.3	13.9
Total Oceania	**10.5**	**14.0**	**14.6**	**12.0**	**13.9**	**13.3**	**19.6**	**14.8**	**13.3**	**13.9**
World Total	**3,174.2**	**3,102.2**	**2,595.2**	**2,878.4**	**2,929.7**	**2,839.8**	**3,459.3**	**3,147.9**	**3,044.3**	**2,514.9**
...of which:-										
*East Asia**	718.6	725.6	716.0	826.2	928.2	938.0	1415.5	1153.5	1059.1	927.3
*Indian Sub-Continent**	751.7	766.7	612.5	820.9	793.4	767.6	752.3	803.9	844.9	534.7
*Middle East**	253.7	235.5	192.5	191.9	190.1	183.9	212.6	183.8	185.8	161.8
*CIS**	103.2	97.8	75.0	81.8	89.1	94.0	96.5	91.7	69.9	63.0

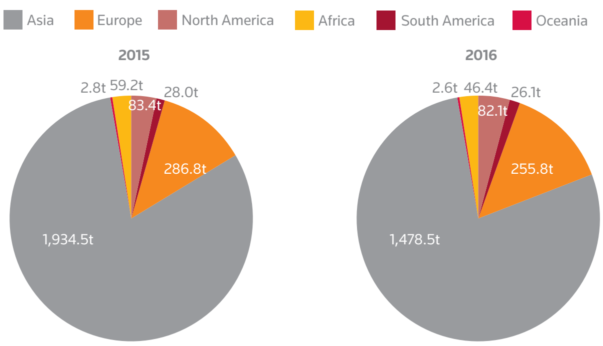
Source: GFMS, Thomson Reuters *The key regional bullion markets

CARAT JEWELLERY

INDIAN SUB-CONTINENT

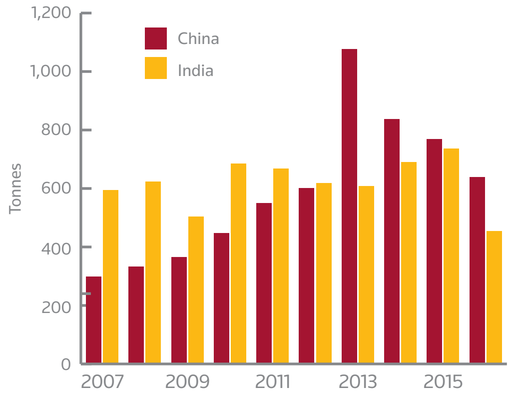
After touching a record 736.2 tonnes in 2015, Indian jewellery fabrication declined 38% last year to 454.4 tonnes, the lowest level in almost two decades. The introduction of an excise duty of 1% was the trigger leading to a fall of this magnitude though this tax was arguably the most efficient way to bring greater transparency to what is often an

GLOBAL JEWELLERY FABRICATION



Source: GFMS, Thomson Reuters

CHINESE AND INDIAN JEWELLERY FABRICATION



Source: GFMS, Thomson Reuters

FABRICATION DEMAND

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

(tonnes)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Industrial Countries*										
Jewellery Fabrication	571.4	486.9	372.1	357.9	321.7	298.5	307.2	313.3	309.6	288.1
Electronics	292.8	277.0	229.6	274.4	263.0	229.3	221.9	215.1	193.7	189.3
Dentistry	53.5	51.5	48.9	44.6	39.3	35.1	32.9	30.7	28.6	27.2
Other Industrial	46.6	45.9	38.6	41.0	39.3	37.2	36.6	36.7	36.1	34.7
Official Coin	49.6	105.9	147.5	116.6	116.9	89.3	119.7	83.2	108.9	111.2
Medals	1.8	1.8	1.8	1.9	3.3	2.3	2.4	2.4	2.3	2.3
Sub Total	**1,015.6**	**969.0**	**838.4**	**836.3**	**783.5**	**691.8**	**720.7**	**681.4**	**679.3**	**652.8**
Developing Countries*										
Jewellery Fabrication	1,902.3	1,868.5	1,494.3	1,725.4	1,769.4	1,762.7	2,302.9	2,155.3	2,085.1	1,603.3
Electronics	52.5	57.4	65.3	71.6	79.9	77.4	78.1	74.8	64.5	64.5
Dentistry	4.2	4.2	3.8	3.8	3.6	3.5	3.4	3.3	2.9	2.6
Other Industrial	42.5	42.6	40.2	44.5	46.0	46.2	48.1	42.6	39.5	35.5
Official Coin	92.6	94.6	97.9	112.1	164.5	148.6	205.9	116.9	103.2	107.5
Medals	66.7	68.0	57.1	86.5	84.5	111.1	101.5	75.0	71.1	49.8
Sub Total	**2,160.8**	**2,135.2**	**1,758.6**	**2,043.9**	**2,147.8**	**2,149.5**	**2,740.0**	**2,467.7**	**2,366.2**	**1,863.3**
World Total	**3,174.2**	**3,102.2**	**2,595.2**	**2,878.4**	**2,929.7**	**2,839.8**	**3,459.3**	**3,147.9**	**3,044.3**	**2,514.9**

Source: GFMS, Thomson Reuters

*Industrial and Developing countries consistent with IMF definitions

JEWELLERY CONSUMPTION * (INCLUDING SCRAP)

(tonnes)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
China	302.2	340.6	376.3	453.8	550.9	608.7	1,088.4	827.0	750.3	612.5
India	557.8	599.8	471.4	657.6	618.3	552.0	612.7	662.1	674.5	463.1
United States	257.9	188.1	150.3	121.4	111.5	104.2	122.0	131.1	140.5	138.2
UAE	99.8	100.0	74.6	71.6	62.1	55.5	68.6	59.9	55.3	46.2
Iran	47.4	45.8	39.9	42.3	41.3	43.4	47.9	35.7	35.4	39.7
Turkey	188.1	153.2	75.2	67.4	70.1	61.5	73.3	68.2	49.3	39.7
Saudi Arabia	122.0	110.9	81.8	71.6	55.7	47.1	59.0	52.8	57.5	38.1
Indonesia	59.2	59.9	45.0	37.8	42.2	46.7	53.7	47.7	40.1	34.2
Russian Federation	85.7	92.4	56.7	60.1	64.7	69.6	73.3	70.6	34.1	30.2
Egypt	67.8	74.3	56.7	53.4	33.8	39.7	45.1	46.9	40.9	27.9
South Korea	62.2	53.2	47.6	43.4	35.1	31.6	29.8	29.5	28.7	26.9
Hong Kong	18.2	17.0	16.4	20.6	35.8	34.3	53.7	41.3	34.3	26.9
United Kingdom	50.3	37.2	31.8	27.3	22.6	21.4	23.4	27.6	27.4	25.2
Israel	28.4	28.1	26.6	25.7	21.9	21.5	25.3	23.3	24.8	20.2
Kuwait	24.3	23.6	19.1	18.1	16.9	16.1	21.2	24.9	23.1	20.1
Japan	31.7	31.2	22.3	21.3	16.6	16.7	21.4	20.0	19.7	19.8
Bangladesh	6.4	5.8	4.6	4.2	12.3	15.2	15.6	16.2	16.5	18.1
Italy	57.4	49.1	41.4	34.9	27.6	22.3	20.2	18.8	18.1	17.6
Canada	24.7	22.3	18.6	17.5	16.3	15.7	16.3	16.7	16.9	16.6
Vietnam	22.2	21.5	16.4	15.6	14.2	12.6	13.5	14.2	15.8	16.3

Source: GFMS, Thomson Reuters

*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.

unofficial trade and in so doing clamp down on the sale of smuggled gold. However, the implementation was delayed till early July following a 41-day strike and the instituting of a sub-committee to review the issues related to compliance procedures. Fabrication hit a low in first the half, with fabricators on an average operating at just 50% of their normal half yearly production. Akshaya Tritya was a missed opportunity in the midst of the crisis. In the second half demand recovered, albeit it was still 27% lower than same period in 2015.

INDIAN JEWELLERY FABRICATION AND CONSUMPTION

(tonnes)	Q1-16	Q2-16	Q3-16	Q4-16
Fabrication	79.2	84.0	122.0	169.2
Consumption	72.9	74.2	120.4	195.6
Average Price (Rs./10g)	27,825	29,701	31,340	29,296

Source: GFMS, Thomson Reuters

EAST ASIA

Jewellery fabrication in East Asia declined for the third year in succession, retreating 16% year-on-year to a four-year low. A 17% drop in Chinese fabrication last year accounted for the bulk of the drop in volumes terms although nearly all markets in the region were weaker on an annual basis. A lack of positive price expectations, weaker economic growth, and softer domestic currencies that exacerbated the dollar gold price rise, all assisted in driving both gold fabrication and consumption volumes lower. Despite a modest uptick at the end of the year as gold prices retreated fabrication volumes in Thailand and Indonesia fell 14% and 10% respectively, while Hong Kong offtake was a casualty of the drop in Chinese demand, falling 29% last year. There were two standout markets in the region last year with Vietnam and Japan recording a 1% annual increase in jewellery fabrication. The former, due to growth within the 24 carat market, while in Japan, a stronger yen cushioned the rise in the dollar gold price with the domestic price 4% weaker than in 2015.

EUROPE

European jewellery fabrication faced another tumultuous year in 2016, recording a 11% year-on-year decline to a new record low, the second in succession. In contrast to 2015 when there were some outliers that recorded growth, 2016 delivered few winners with all the major markets weaker last year as higher gold prices and fragile economic conditions impacted consumer demand. Weaker exports and a slowdown on the home front accounted for the 7% drop in Italian offtake, while in the UK the Brexit shock, and the currency devaluation that followed, saw gold prices surge leading to an acute fall in demand. A weaker currency and economic uncertainties were also the chief culprits for Turkey and Russia where jewellery fabrication declined 15% and 11% respectively with domestic consumption for the former impacted by the ongoing sanctions and the squeeze on discretionary spending this has delivered.

NORTH AMERICA

North American jewellery fabrication fell 1% to 65.8 tonnes in 2016. Jewellery consumption also declined by a similar amount. Jewellery store sales rose by a solid 3.8% to total $31.41 billion in 2016, according to US Census Bureau data. December sales jumped 7% to $6.21 billion from $5.81 billion in December 2015. In contrast, the number of jewellery business in operation fell 6% last year. Not all of it were bankruptcies or foreclosures. A lack of natural succession of mom and pop stores was also one of the reasons behind the decline. The stronger dollar has kept domestic fabrication at bay and motivated participants to import. Jewellery consumption is expected to revive during this year.

MIDDLE EAST

Jewellery fabrication across the Middle East as a bloc was down heavily in 2016, falling an estimated 14% year-on-year to a level not seen since 2012, dragged lower by higher gold prices but also as a result of a weaker economic environment. Sharply lower oil prices have severely impacted government revenues with many countries in the region now contemplating introducing a Value Added Tax (VAT) as well as other forms of taxation to fill the void. Saudi Arabia, which was perhaps the best performer in 2015, fell sharply last year as the economic doldrums severely impacted consumer sentiment with jewellery consumption slumping by more than a third on an annual basis. Demand in the UAE was also tempered by the weaker regional demand with jewellery offtake 16% below 2015 volumes although fabrication held up well due to expansion in the local market. Elsewhere, all other markets in the GCC were

FABRICATION DEMAND

CARAT JEWELLERY FABRICATION (INCLUDING THE USE OF SCRAP)

(tonnes)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Europe										
Italy	215.3	172.6	123.3	116.0	93.8	86.2	82.6	86.2	84.9	79.3
Turkey	219.7	183.2	80.0	73.0	77.0	73.8	87.1	114.8	91.6	77.6
Russia	58.5	53.2	34.9	39.4	45.1	49.2	51.9	49.8	33.3	29.5
Switzerland	36.0	35.0	20.1	21.1	29.4	31.1	30.1	28.7	25.4	19.9
Germany	19.9	19.0	14.8	15.1	15.4	14.7	14.7	14.7	14.0	13.3
United Kingdom	12.2	10.0	9.2	8.2	6.9	6.7	7.3	8.9	9.0	8.8
France	13.0	12.0	10.1	10.2	9.2	7.6	6.5	6.3	6.0	5.8
Spain	21.8	17.6	12.3	7.4	6.2	5.4	4.9	4.6	4.7	4.4
Greece	8.1	7.0	5.8	5.8	4.1	3.7	3.5	3.9	4.0	3.8
Poland	5.1	5.4	3.7	2.6	2.3	2.0	1.8	2.1	2.7	2.5
Portugal	4.5	3.3	2.8	2.2	1.6	1.3	1.3	1.5	1.4	1.3
Netherlands	1.1	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.9
Other Countries	14.6	13.4	10.4	9.6	8.9	8.3	8.3	8.9	8.9	8.6
Total Europe	**629.7**	**532.7**	**328.3**	**311.6**	**300.9**	**290.9**	**301.1**	**331.4**	**286.8**	**255.8**
North America										
United States	94.5	77.0	63.0	66.0	60.3	53.7	61.4	63.8	66.8	65.8
Canada	12.8	12.1	9.8	9.3	8.7	8.2	8.7	9.3	10.1	9.7
Mexico	22.7	18.9	17.3	14.4	11.5	10.6	5.1	6.3	6.5	6.5
Total North America	***130.0***	***108.0***	***90.1***	***89.7***	***80.5***	***72.5***	***75.2***	***79.3***	***83.4***	***82.1***
South America										
Brazil	18.6	19.2	17.7	22.6	19.4	19.3	21.6	25.1	16.0	14.7
Chile	3.6	3.2	2.8	2.9	2.2	2.2	2.4	2.4	2.3	2.3
Dominican Republic	4.5	4.3	2.8	2.5	1.9	1.8	1.2	1.5	1.8	1.7
Costa Rica	1.3	1.3	1.1	1.2	1.3	1.3	1.0	1.2	1.7	1.7
Colombia	1.6	1.4	1.2	1.1	1.2	1.1	1.1	1.3	1.5	1.5
Other Countries	12.0	9.5	6.5	5.9	4.4	4.2	4.2	4.5	4.7	4.3
Total South America	**41.6**	**38.8**	**32.1**	**36.1**	**30.3**	**29.8**	**31.5**	**36.1**	**28.0**	**26.1**
Asia										
China	297.1	329.6	363.6	444.3	547.4	598.8	1074.3	835.1	766.3	636.4
India	594.7	623.2	503.4	685.0	667.0	618.2	607.4	690.0	736.2	454.4
Indonesia	66.7	64.8	49.6	43.4	46.8	51.4	59.5	51.9	48.2	43.5
UAE	48.1	44.6	34.0	31.0	29.8	26.9	34.4	38.7	41.5	41.7
Malaysia	61.0	56.2	45.0	44.8	41.1	38.7	48.6	44.7	40.9	34.4
Iran	36.2	35.7	31.0	32.8	31.8	31.7	35.3	28.0	29.1	32.6
Saudi Arabia	99.6	85.0	53.5	46.6	36.8	32.5	41.4	37.3	40.9	31.6
South Korea	64.0	56.0	48.0	43.8	35.2	29.9	29.4	28.7	27.9	26.3
Thailand	47.6	41.2	28.0	24.7	22.2	19.1	27.0	24.4	24.6	21.1
Pakistan	50.4	43.8	29.7	26.1	22.1	20.6	24.6	20.9	22.6	16.1
Singapore	10.9	10.2	7.9	8.9	9.7	10.4	15.0	15.9	17.6	16.0
Vietnam	22.4	21.5	16.0	14.7	13.6	11.9	12.8	13.9	15.5	15.7
Japan	19.0	17.5	14.4	14.3	12.9	13.3	14.5	13.3	13.0	13.0
Jordan	8.7	8.7	9.6	9.9	9.2	8.6	9.5	11.4	12.5	10.5
Kuwait	13.1	13.5	11.4	10.6	10.2	9.6	10.3	11.0	10.8	9.8
Lebanon	9.8	8.8	6.5	6.0	6.6	7.8	10.7	10.3	13.8	9.0
Uzbekistan	10.6	9.6	7.6	9.2	10.2	9.7	9.9	10.1	8.6	7.8
Sri Lanka	5.2	4.5	3.8	3.7	3.2	3.1	3.5	3.5	3.2	7.1
Hong Kong	11.8	12.2	11.6	12.2	12.8	11.4	11.3	10.9	9.4	6.7
Kazakhstan	10.6	9.6	7.6	9.2	10.2	9.7	9.9	9.3	7.4	6.5
Bahrain	9.9	8.7	6.5	5.7	5.1	4.6	5.8	5.6	5.8	5.1
Israel	8.4	8.1	6.6	5.7	4.9	4.5	5.3	6.5	5.6	5.0
Iraq	5.3	4.6	3.8	3.7	3.8	3.9	5.0	4.9	5.1	4.1
Bangladesh	6.5	5.8	4.6	4.2	3.8	4.4	4.5	6.0	4.5	3.7

CARAT JEWELLERY FABRICATION (INCLUDING THE USE OF SCRAP)

(tonnes)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Taiwan	10.3	9.1	5.8	5.3	4.6	4.6	4.9	4.5	4.0	3.4
Oman	7.1	6.0	4.5	4.1	3.5	3.2	3.8	3.6	3.7	3.3
Myanmar	4.0	3.5	3.0	2.6	2.3	2.3	2.7	2.4	2.6	2.7
Philippines	3.5	3.3	3.1	2.9	2.3	2.1	2.4	2.4	2.5	2.3
Nepal	5.3	4.5	3.5	3.5	3.3	3.5	3.9	3.0	2.9	2.1
Qatar	3.2	2.7	2.1	1.9	1.6	1.7	2.1	1.9	2.1	1.9
Syria	17.1	15.0	11.4	11.1	7.7	4.8	3.7	2.4	2.0	1.6
Other Countries	8.8	9.0	5.8	4.8	4.1	4.0	4.4	4.1	3.9	3.5
Total Asia	**1,576.6**	**1,576.4**	**1,342.1**	**1,576.3**	**1,625.8**	**1,606.7**	**2,137.3**	**1,956.2**	**1,934.5**	**1,478.5**
Africa										
Egypt	56.5	62.4	44.0	42.1	28.7	37.5	40.7	40.6	37.8	26.9
Morocco	10.3	9.5	7.6	7.0	6.8	6.6	6.5	6.8	6.8	6.4
South Africa	7.0	7.4	5.1	4.5	3.7	3.5	3.3	3.4	3.0	2.5
Algeria	3.4	3.1	2.5	2.4	2.1	2.1	2.3	2.3	2.2	2.0
Libya	5.2	4.8	3.9	3.5	2.4	2.3	2.5	2.7	2.3	2.0
Tunisia	1.9	1.8	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.5
Other Countries	7.1	6.7	5.9	5.5	5.4	5.2	5.4	5.6	5.5	5.1
Total Africa	**91.4**	**95.5**	**70.5**	**66.5**	**50.7**	**58.5**	**62.1**	**62.9**	**59.2**	**46.4**
Oceania										
Australia	4.4	4.0	3.2	3.2	2.9	2.8	2.9	2.7	2.8	2.6
Total Oceania	***4.4***	***4.0***	***3.2***	***3.2***	***2.9***	***2.8***	***2.9***	***2.7***	***2.8***	***2.6***
World Total	**2,473.7**	**2,355.4**	**1,866.4**	**2,083.2**	**2,091.0**	**2,061.2**	**2,610.2**	**2,468.6**	**2,394.7**	**1,891.5**
...of which:-										
*East Asia**	*621.9*	*628.5*	*598.3*	*664.2*	*753.0*	*796.0*	*1304.6*	*1050.2*	*974.6*	*823.5*
*Indian Sub-Continent**	*662.0*	*681.8*	*544.9*	*722.6*	*699.4*	*649.8*	*643.9*	*723.4*	*769.4*	*483.3*
*Middle East**	*542.6*	*486.9*	*304.7*	*283.9*	*256.8*	*251.0*	*294.8*	*316.8*	*302.1*	*260.5*
*CIS**	*84.8*	*78.0*	*53.1*	*60.2*	*67.4*	*70.4*	*73.7*	*71.1*	*51.1*	*45.2*

Source: GFMS, Thomson Reuters *: The key regional bullion markets

broadly weaker as a lack of positive price expectation and softer economic growth dragged consumption lower. Iran was the surprise outlier, with jewellery fabrication enjoying a 12% annual rise as the market benefited from more favourable economic conditions as the economy recovers due to the bulk of western sanctions being lifted.

INDUSTRIAL DEMAND

- Gold used for industrial and dental applications declined 3.2% year-on-year to an estimated 354 tonnes, the sixth consecutive fall and 26% below the 2007 peak.

- Gold demand in the electronics sector eased just 2% in 2016 as robust demand for plating solutions and a stable market for gold bonding wire limited the fall.

- Global semi-conductor sales dipped just 1% in 2016, supported by a healthy growth in both China and Japan, while the Americas, Europe and the Asia-Pacific all retreated.

- Higher gold prices and substitution-led losses drove dental demand to a record low, sliding 5% to 29.8 tonnes.

FABRICATION DEMAND

CARAT JEWELLERY FABRICATION (EXCLUDING THE USE OF SCRAP)

(tonnes)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Europe										
Italy	158.2	111.6	90.3	70.0	49.8	46.2	58.6	66.2	66.8	60.9
Turkey	164.7	100.2	24.8	18.5	29.0	30.8	51.4	88.5	45.7	29.7
Switzerland	36.0	35.0	20.1	21.1	29.4	31.1	30.1	28.7	25.4	19.9
Germany	14.2	13.3	9.8	10.0	10.4	9.7	11.6	12.7	12.0	11.2
Russia	49.0	43.2	21.2	27.4	34.6	38.2	43.9	31.9	8.9	9.1
United Kingdom	7.1	4.4	4.8	3.4	2.4	1.7	4.3	6.8	6.9	5.9
France	11.0	10.0	8.1	7.7	6.2	4.6	4.5	5.0	4.6	4.3
Greece	6.7	5.1	2.8	2.5	0.8	0.6	2.1	2.8	2.8	2.5
Spain	16.3	11.1	3.7	0.5	0.5	0.2	1.9	2.3	2.7	2.1
Poland	2.5	2.8	1.5	0.2	0.1	0.5	0.7	1.3	1.8	1.5
Netherlands	1.0	0.9	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.8
Other Countries	10.4	8.5	5.0	2.3	0.8	0.3	4.2	6.1	6.1	5.6
Total Europe	**476.9**	**346.0**	**192.7**	**164.3**	**164.7**	**164.6**	**214.0**	**253.0**	**184.5**	**153.7**
North America										
United States	72.0	57.0	41.0	39.5	34.4	27.3	33.4	35.3	40.0	41.3
Canada	8.3	7.6	5.3	4.6	4.2	4.6	5.3	6.3	7.1	6.8
Mexico	14.1	7.8	4.5	1.3	0.4	2.0	4.7	4.8	4.6	4.4
Total North America	**94.4**	**72.4**	**50.8**	**45.4**	**39.0**	**33.9**	**43.4**	**46.4**	**51.7**	**52.5**
South America										
Brazil	13.0	12.6	8.1	9.3	6.7	6.5	6.4	16.2	10.0	8.0
Chile	2.8	2.3	2.1	2.1	1.3	1.3	1.6	1.7	1.5	1.4
Other Countries	7.8	5.3	2.8	1.9	2.1	1.8	2.9	3.9	5.1	4.4
Total South America	**23.6**	**20.2**	**13.0**	**13.3**	**10.0**	**9.7**	**11.0**	**21.7**	**16.6**	**13.9**
Asia										
China	257.0	264.9	262.7	334.6	438.4	468.1	934.4	674.5	577.6	439.5
India	521.7	533.7	387.9	604.0	608.5	505.2	506.6	615.8	648.7	323.1
UAE	36.8	32.0	19.3	9.4	14.7	15.2	24.6	29.6	33.7	33.9
Malaysia	53.5	48.6	36.0	36.3	33.9	32.3	43.0	39.6	36.5	30.0
Indonesia	29.8	33.5	20.8	20.6	24.5	33.9	46.8	39.8	35.0	28.3
Iran	17.9	15.3	11.7	15.0	14.3	15.7	23.0	16.8	19.8	22.5
Saudi Arabia	55.2	38.8	22.4	21.1	14.5	12.5	27.6	24.6	31.0	22.0
Thailand	31.6	24.7	11.4	11.5	9.7	8.8	20.7	18.8	18.7	13.9
Singapore	6.8	5.8	3.4	5.0	5.5	6.9	12.8	13.8	15.8	13.9
Vietnam	13.4	13.0	4.6	4.5	6.8	6.0	7.7	9.1	11.0	10.2
Jordan	6.9	7.0	8.7	8.5	7.8	7.2	8.5	10.2	11.6	9.2
Kuwait	7.6	8.1	6.9	7.0	7.1	7.1	8.5	9.3	9.3	8.3
S. Korea	33.6	25.2	7.3	10.3	5.1	6.2	14.3	12.7	10.7	7.8
Lebanon	8.3	7.2	4.5	4.2	5.3	6.7	8.6	8.2	12.1	7.7
Sri Lanka	2.3	1.5	1.1	1.3	0.9	0.9	1.6	2.1	2.4	6.4
Uzbekistan	9.4	8.3	5.9	7.6	8.7	8.1	8.5	8.8	7.1	6.1
Kazakhstan	9.4	8.3	5.9	7.6	8.7	8.1	8.5	8.0	5.4	4.0
Bahrain	6.7	5.5	3.0	2.8	2.5	2.5	4.2	4.1	4.5	3.9
Israel	3.4	2.2	1.7	1.0	0.9	1.0	2.6	3.6	3.3	2.8
Bangladesh	3.9	3.1	1.6	1.5	1.2	1.7	2.2	4.2	3.6	2.7
Iraq	0.7	0.2	-	0.2	0.7	1.3	3.2	3.2	3.7	2.5
Taiwan	2.7	2.9	1.1	1.2	1.5	2.7	3.6	3.5	3.2	2.5
Oman	4.6	2.8	1.8	1.6	1.5	1.4	2.4	2.4	2.7	2.1
Myanmar	2.9	2.4	1.8	1.6	1.4	1.5	2.1	1.9	2.1	2.1
Pakistan	23.6	14.8	3.9	6.3	6.0	3.8	11.7	6.9	9.8	1.9
Philippines	2.0	1.8	1.6	1.6	1.0	0.9	1.5	1.5	1.7	1.5
Other Countries	34.6	28.4	19.1	17.3	14.5	14.9	20.0	14.4	11.7	6.2
Total Asia	**1,185.9**	**1,139.8**	**855.9**	**1,143.4**	**1,245.6**	**1,180.2**	**1,758.8**	**1,587.1**	**1,532.2**	**1,014.6**

THOMSON REUTERS

CARAT JEWELLERY FABRICATION (EXCLUDING THE USE OF SCRAP)

(tonnes)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Africa										
Egypt	18.0	28.4	6.5	15.1	3.9	5.1	17.2	19.4	19.3	7.7
South Africa	5.8	6.0	3.8	3.2	2.1	2.0	2.2	2.4	2.0	1.3
Other Countries	14.6	11.4	5.8	6.1	4.8	4.7	6.6	7.9	7.5	5.6
Total Africa	**38.4**	**45.8**	**16.1**	**24.4**	**10.8**	**11.8**	**26.0**	**29.7**	**28.8**	**14.5**
Oceania										
Australia	3.7	3.3	2.2	1.7	0.6	0.4	1.2	1.1	1.6	1.2
Total Oceania	**3.7**	**3.3**	**2.2**	**1.7**	**0.6**	**0.4**	**1.2**	**1.1**	**1.6**	**1.2**
World Total	**1,822.9**	**1,627.4**	**1,130.7**	**1,392.4**	**1,470.8**	**1,400.5**	**2,054.3**	**1,939.0**	**1,815.4**	**1,250.4**
...of which:-										
*Indian Sub-Continent**	555.2	555.7	396.0	614.8	618.3	513.7	524.9	630.8	666.7	335.2
*East Asia**	447.3	434.4	359.4	434.5	535.7	576.7	1,100.9	824.8	718.6	552.3
*Middle East**	342.6	256.5	117.3	110.4	105.7	108.2	183.1	221.3	198.0	153.5
*CIS**	72.5	64.9	35.7	44.6	53.3	55.7	62.4	50.1	22.8	20.0

Source: GFMS, Thomson Reuters; *The key regional bullion markets

ELECTRONICS

Gold used in the electronics sector, which at over 70% of the total is the mainstay of industrial and dental offtake, has been trending lower for much of the last decade, retreating at an average of 5% in the last five years. In 2016 the downward trend continued unabated with fine gold consumed in this segment dipping 2% to an estimated 253.8 tonnes, a thirteen year low. While the market retreated again there were in fact positive signs for the industry with the drop in percentage terms the smallest since 2011.

This decade there have been two main drivers for the weakness in this sector. Firstly, the drop can partially be attributable to the parlous state of the global economy, with the exception of the United States where domestic employment and the housing market has gradually recovered and an interest rate increases remains on the on Fed's agenda. The lack of traction for economies in Europe, Japan, and China has slowed domestic demand as well as limited imports. Secondly, and perhaps having a greater impact on fine gold consumption, has been the rapid migration away from gold to cheaper alternatives. Indeed, substitution and miniaturisation have seen gold lose its dominance in the area of bonding wires to bare copper, palladium-copper and increasingly silver and aluminium. A decade ago gold's share of bonding wire production (used for interconnections between semiconductors and its packaging) stood at well over 90%; today this has fallen to below a third of total production. Our research suggests that global gold bonding wire fabrication retreated only at the margin last year, slipping just 1% to approximately 60 tonnes. To place this modest fall into perspective, the average decline over the past five years was 13%.

On a regional basis, Asia, which accounts for over 65% of gold consumed in the electronics sector, recorded a 1% loss year-on-year, compared to a 15% decline the previous year, with growth in China and Taiwan offsetting a slight fall in Japanese demand. Elsewhere, North American demand benefited from a more robust economy, slipping just 2%, while Europe continued to face challenging economic headwinds to register an annual fall of 4%. According to the latest statistics released by the Semiconductor Industry Association (SIA), sales of semi conductors globally surged 12.3% in the fourth quarter to register a 1.1% annual gain totalling $338.9 billion, the industry's highest-ever annual sales. Regionally, annual sales increased 9.2% in China, leading all regional markets, with Japan also stronger, registering a 3.8% annual increase. All other regional markets were weaker compared to 2015.

When it comes to end-application markets, wireless technologies grew close to 10% last year driven by smartphones and the exposure to the memory markets. The memory market in 2016 started with the DRAM and NAND markets in oversupply and prices declining. By the middle of the year, both markets moved into undersupply, and pricing increased as a result. The NAND flash market, in particular, had a slow start in 2016, hindered by oversupply conditions, but deep shortages and rising prices during the second half of 2016 spurred growth. In 2016 smartphone sales to end users totalled nearly 1.5 billion units, an increase of 5% from 2015 with top Chinese brands aggressively expanding into markets outside China, where they will continue to disrupt the top smartphone players in 2017. Meanwhile, PC demand continued to trend lower (this market has fallen each year since 2012), to decline 6.2% according to Industry analysts Gartner, Inc. According to their analysis, semiconductor revenue for the second half of the year was much stronger than the first half, reflecting the strengthening memory market and continued inventory replenishment, as well as inventory build for both the iPhone 7 and the holiday season.

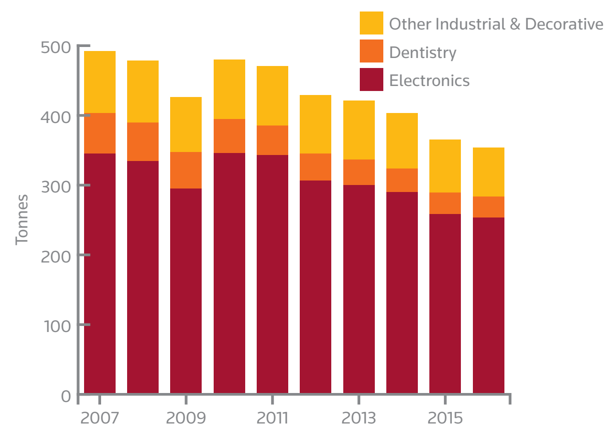
DENTISTRY

Demand for gold used in dental applications continued its secular retreat in 2016, sliding a further 5% to a record low of 29.8 tonnes. In the past decade, the proportion of gold in this segment has been eroded by other more affordable alternatives such as resin composites, ceramics and porcelain-fused metal for both price and cosmetic concerns. Looking more closely at regional demand trends there were falls across all the major markets last year. Japan remains easily the largest market in this industry segment, contributing close to 50% of the global total. Last year, demand for Kinpala, the gold, palladium, silver alloy used in dental applications in Japan, was initially robust as the government rebate for the alloy was higher than the palladium price which encouraged inventory building by dentists. The second half of the year saw demand decline more rapidly as palladium prices rose, delivering a full year contraction of 6%. Elsewhere, demand was just 2% weaker in North America while in Asia and Europe the fall was more pronounced, slipping 6% and 7% respectively.

OTHER INDUSTRIAL & DECORATIVE

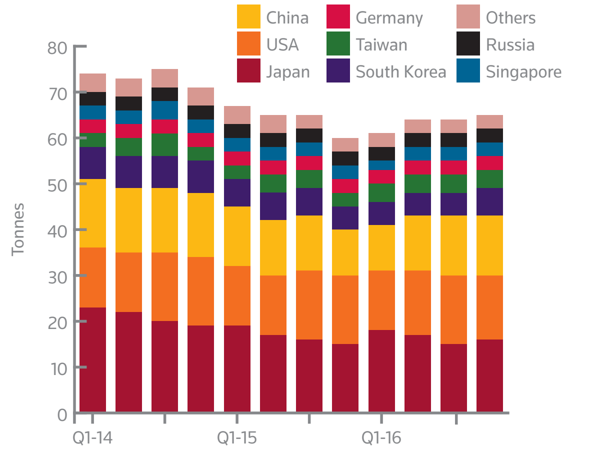
In 2016 gold consumed in the other industrial & decorative segment (OID) declined 7% year-on-year to an estimated 70.2 tonnes, the third consecutive annual fall. The Indian market was again a significant drag on global offtake, slumping 43% on 2015 volumes with the sizeable decline attributable mainly to weak jari (thread of 3 9's and 4 9's gold which is used in fabrics particularly in traditional south Indian dresses) demand with ongoing thrifting and substitution to synthetic alternatives or gold plated silver. Indian demand at just four tonnes last year is more than 80% below the level recorded in 2007 due primarily to higher prices and societal changes. Elsewhere, the declines were more tempered with European offtake easing 3% although Italian fabrication slipped 5% year-on-year with demand for plating salts weaker on a drop in demand for luxury goods, while in North America demand slipped just 2% on annual basis. Demand in East Asia was broadly weaker, retreating 5% year-on-year, with a healthy uptick in demand from Taiwan not sufficient to offset falls in China and South Korea.

GLOBAL INDUSTRIAL DEMAND



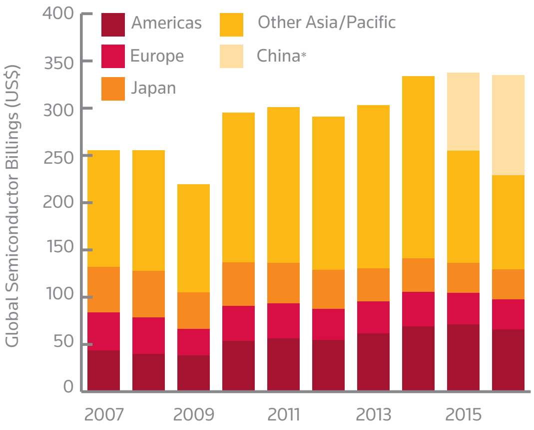
Source: GFMS, Thomson Reuters

GLOBAL ELECTRONICS DEMAND



Source: GFMS, Thomson Reuters

GLOBAL SEMI-CONDUCTOR BILLINGS



* China was combined with Other Asia/Pacific prior to 2015
Source: GFMS, Thomson Reuters

FABRICATION OF GOLD BONDING WIRE

Source: GFMS, Thomson Reuters; OECD

THE GOLD SURVEY'S GOLDEN ANNIVERSARY; FABRICATION PATTERNS BY SECTOR

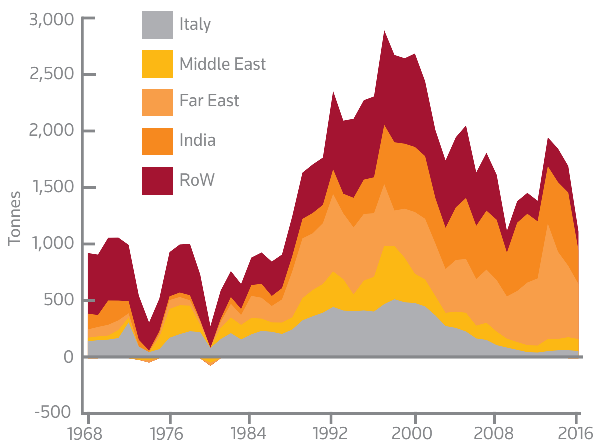
Where percentages of demand are given in this piece they refer only to jewellery and other industrial uses, not to investment products.

From 1968 through to 2016 inclusive, gross jewellery demand, initially in the "non-communist" world, and, from 1989, globally, has averaged 78% of total "industrial" use. Clearly there have been some notable outliers in terms of tonnage demand, particularly in 1980 in the aftermath of the second oil shock, and in 2009. In 1980, jewellery offtake was a mere 528 tonnes (and only 123 tonnes if resales are taken into account). Jewellery had also been buffeted during the bull run in 1979 and it was not until 1984 that demand was again above 1,000 tonnes, as it has been throughout the 1970s.

The hefty contraction in 2009 saw jewellery demand down by 20% with the biggest retreats (in tonnage terms) coming in Europe and India, reflecting straitened economic conditions and the rise in the gold price respectively. In 2016, weak markets overall have meant that jewellery was down by 22% year-on-year, although the size of the sector means that it was still 75% of total.

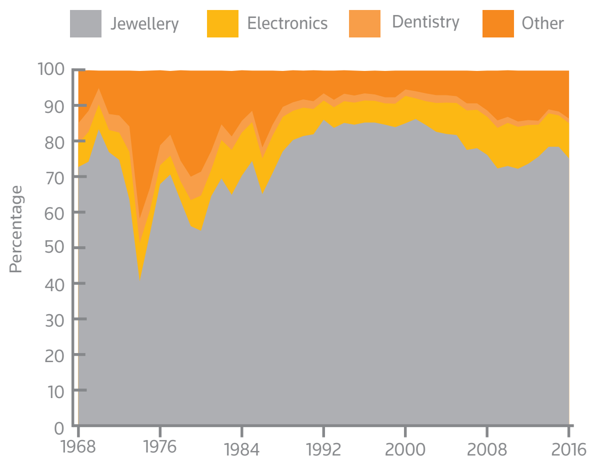
Meanwhile the electronics sector currently has 10% market share.The real loser is dentistry, where prices and technological advances have taken demand from 6% in 1968 to below 2% in the past seven years, with a tonnage drop of 58%.

CARAT JEWELLERY FABRICATION



Source: GFMS, Thomson Reuters

FABRICATION BY SECTOR



Source: GFMS, Thomson Reuters

FABRICATION DEMAND

THE GOLD SURVEY'S GOLDEN ANNIVERSARY; WHERE WAS THE ACTION IN THE EARLY 1970S? WHAT HAS CHANGED - AND WHAT IS CONSTANT?

While the size of the gold market, and the distribution of regional supply and demand patterns, have obviously evolved over the past fifty years, there are a few elements which remain the same; some of these are discussed here, as are some of the fundamental shifts in the market.

South African production was 1,000 tonnes in 1970, when it accounted for 67% of the world's mine production. At that stage all South African gold was marketed in Europe (apart of course from local fabrication although that was – and remains – relatively low). Gold was flown to London and Zurich – and the airliner then used to have its own designated landing areas at Heathrow where the gold moved directly from aircraft to secured vaulting. It may still do, but that of course is shrouded in secrecy. In addition, though, the business of flying consignment stocks into entre-pôt areas such as Dubai, which has been a key conduit for gold into India for a very long time (and has generally held top spot as the world's largest gold entre-pôt). As the author of the Survey "Gold 1972" wrote at the time, "the practice has evolved of flying consignments to entrepôts which levy little or no taxes, and using local knowledge and ingenuity to infiltrate the gold from there to the countries of final consumption". This delicate language was echoed in a rather more robust way to the author of this current piece some years later, when a key operator in Dubai referred to "motorised dhows under cover of darkness". Bad weather in the Gulf is bad for some areas of gold business!

Meanwhile Turkey has been the largest consumer in the Near East for at least fifty years and in the early 1970s was generally serviced by Beirut, with some material coming also from Europe. Now its major sources are more varied. Large bars are usually sourced from Switzerland and the UK, although now that the government has allowed domestic banks to hold kilo bars in their reserves as well as LGD bars, these imports may dwindle slightly as there is good local liquidity in kilo bars. There is also an interesting local set of flows with the refining of German grain into bars and resale in to Germany. Dubai is a significant source for jewellery.

In the Far East in this earlier period Vientiane (Laos) was a major centre for south-east Asia, but increased security measures thereafter in South Vietnam reduced its significance, along with the rise of Singapore, that fed off increased Indonesian demand while also taking some market share from Hong Kong. Meanwhile in the recent past the Chinese government has been encouraging direct shipments straight into Shanghai (and to some extent also Beijing). Hong Kong remains a vital force in trade into the mainland, especially as it is close to the key jewellery manufacturing area of Shenzhen, but is not as dominant as hitherto.

So to summarise some of the key elements:

Change: With Africa is no longer the dominant mining force.

Change: China is now the dominant mine producer and is regularly in competition with India as the world's largest consumer of jewellery. When industrial demand is taken into account, China is consistently the top consumer.

No change: South African beneficiation remains low.

No change: Dubai is still a vital hub in the world's gold flows

No change: The "parallel markets" still thrive, notably in south Asia and parts of south-east Asia.

No change: Indonesia and Turkey have been key areas of demand for over fifty years, something that is not widely recognised. And Singapore and Hong Kong are still in competition.

CHINA

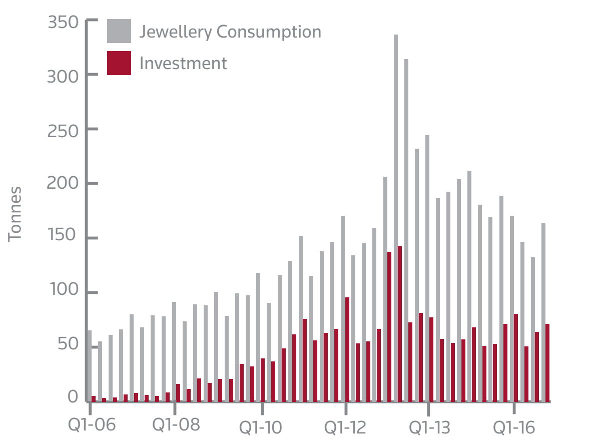
- ***China's total gold demand (excluding central bank purchases) amounted to 968 tonnes in 2016, a 10% year-on-year decline from the previous year.***
- ***China's demand for gold bars posted a seven percent increase, amounting to 237 tonnes for the full year, mostly due to the fear of the depreciation of the yuan, and a lack of viable investment options.***
- ***Jewellery fabrication, which accounts for approximately 67% of China's total gold demand, delivered a 17% annual decline to 636 tonnes in 2016, some 41% and 438 tonnes below the peak of 2013 although it must be recognised that some of the 2013 purchases were advance purchases for 2014.***
- ***A lack of attainable investment alternatives, along with the potential for further depreciation of the yuan, could be working favourably towards the country's investment demand in 2017. Jewellery fabrication, however, is likely to track lower as economic factors continue to be a drag on consumption.***

Jewellery fabrication, which constitutes approximately two-thirds of **China's** total gold demand, continued to decline in 2016. While the first quarter is traditionally a strong quarter, due to seasonal demand, the 19% annual drop in fabrication volumes for this important period hinted at how the Chinese jewellery industry would perform for the full year. With average fabrication fees for 24-carat gold declining by double-digits leaving little room for profit-taking, fabricators were either focused on the 18-carat sector or special designs for 24-carat gold which charge by piece rather than weight.

While the second quarter is usually a relatively quiet period for Chinese jewellery demand, the acute fall in demand during the quarter (18% year-on-year) may be somewhat surprising when coupled with an already low demand level in the second quarter of 2015 (which was due to the strong performance from the domestic equities market at the time which stole the spotlight). In fact, many industry insiders claimed that, compared to the sales in the same month in recent history, the plunge in the fabrication volume in June 2016 had been the most severe month-to-month decline recorded in the last ten years. Industry participants were all looking for ways to survive this nuclear winter. Smaller, not so well financed jewellery fabricators continued to go bankrupt, while the bigger and better financed organisations have been downsizing.

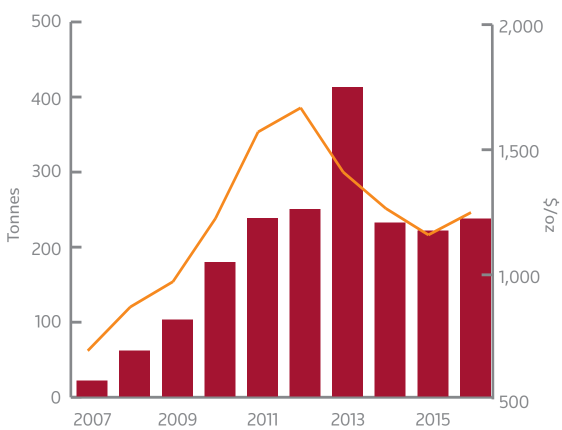
The annual jewellery exhibition in Shenzhen during the third quarter, often the highlight of the year in terms of sales interest by retailers, was a cold and cheerless affair. The scale of the annual jewellery exhibition declined with lower numbers of participating wholesalers and industry participants than seen previously. In fact, several large wholesalers did not even show up at the exhibition because of the low participation rate of the jewellery buyers. That spoke volume for the industry's demand for gold during the third quarter, which dropped 19% on an annual basis.

CHINESE JEWELLERY CONSUMPTION & RETAIL INVESTMENT



Source: GFMS, Thomson Reuters

CHINESE DEMAND FOR GOLD BARS



Source: GFMS, Thomson Reuters

After poor demand in the previous quarters, demand for gold in the final quarter of the year picked up to reach 170.3 tonnes, but was still 12% lower compared to the same time period in 2015. The pick-up in volume was mainly attributed to seasonal demand (wedding season), as well as delayed purchases that were not seen in previous months.

Looking at the numbers above, it seems China's jewellery industry suffered another huge blow last year, this may not be the case in reality. In order to survive when market demand was weaker compared to previous years, many jewellery retailers have reallocated their product mix by increasing the proportion of higher end (higher margin) items in their showrooms. Currently only approximately 40-50% of the product mix in a standard retail showroom is pure gold items, compared to 70-80% in the past. In a tough business environment, retailers have shifted to a high margin strategy. They are focusing promotions on high margin products, and offering greater incentives to sales staff on selling K-gold and gem-set jewellery rather than for pure gold sales, which has placed additional pressure on the level of fine gold consumption. Thus while revenues have continued to decline across the industry in key segments, some retailers have been enjoying improved margins due to a changing product mix.

One particular segment that enjoyed the shift from quantity to quality sales last year was 18-carat gold. The growth in demand for K-gold in recent years can largely be attributed to the younger middle class, who are attracted by fashionable designs and are looking to buy gold primarily for its adornment qualities rather than as a simple investment option. The fabrication volume for this segment has been on an uptrend since 2014, as more and more fabricators have shifted focus, and thus the number of carat segment fabricators has increased exponentially. The fabrication fee for a traditional 24 carat piece is approximately 1.50 – 3 yuan per gramme, but the fee for an 18-carat piece ranges from 18-60 yuan per gramme. Indeed, due to the poor market demand in recent years, many platinum and palladium jewellery fabricators also shifted a portion of their production capacities to the K-gold segment.

The Chinese have an affinity to the gold colour in jewellery consumption. Thus even when the market demand shifted to K-gold, the consumer preference remained for the gold colour (yellow gold). Indeed, yellow gold now makes up about 60% of the whole Chinese K-gold market. The market share of platinum and white gold have been eroded by the popularity of yellow gold, and many gem sets in China now also use yellow gold instead of the white colour material.

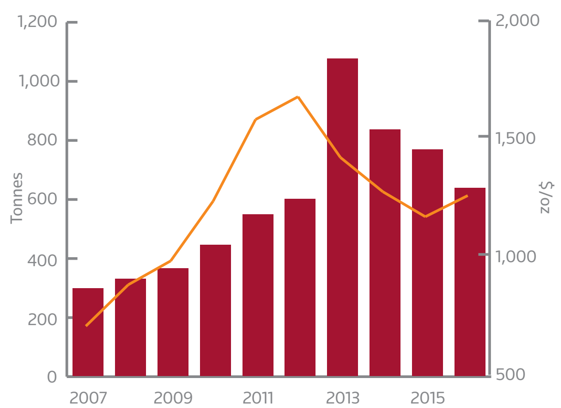
However, because of the fabrication technique often used by local manufacturers yellow 18-carat has experienced some quality issues. While many have claimed that the yellow colour of the 18-carat could last for two years before fading, some industry feedback received has pointed out that for some, the colour actually started to fade within months of purchases, which in turn resulted in customer complains.

In order to tackle the colouring issue, fabricators introduced a new product to the market last year – 22 carat gold. As the 22-carat is higher purity than 18-carat, fabricators believe this could improve the colouring problems being experienced in the 18-carat segment. The 22-carat segment was first introduced in the Sichuan province around the middle of last year, and it quickly became a market hit. Therefore, the 22-carat segment has now spread to other provinces, and has become the up-and-coming sector within the gold jewellery market. We estimate that the total tonnage involved in the K-gold sector reached 60 tonnes last year, or slightly more than 9% of the whole gold industry in 2016, compared to approximately 50 tonnes in 2015.

INVESTMENT DEMAND

Unlike demand from the jewellery sector, China's investment demand for gold actually increased last year, the first annual increase since 2013. China's demand for gold bars took a severe hit as of the second half of 2013, when the government first started taking additional steps to curb corruption.

CHINESE JEWELLERY FABRICATION



Source: GFMS, Thomson Reuters

COUNTRY SECTIONS

The depreciation of the yuan resumed after the first quarter last year, and it accelerated during the second half. In conjunction with a lack of faith in the domestic equities market last year, there were not many viable investment options left for the Chinese, and investing in gold became an easy decision. Indeed based on our knowledge, demand for physical gold rose notably after Brexit and during the sharp retreat of the gold price after Donald Trump won the United States presidential election. We estimated that demand from China for gold bars increased 7% in 2016, to 236.8 tonnes.

The increase in investment demand for gold was also reflected by the strong inflows in the ETFs sector. In 2016, total tonnage held in the domestic gold ETFs increased 480% to 36.4 tonnes, from only 6.3 tonnes at the end of 2015. The first quarter recorded the strongest inflow, adding 11.1 tonnes, while the second and the third quarter added 7.0 tonnes and 9.6 tonnes respectively. While there were some notable outflows recorded in early November and towards the end of the year, the final quarter still managed to add 4.8 tonnes.

We also noticed that while still early, there is a new trend emerging in terms of China's gold investing that could play an important role in the future. As some sharp eyes may have noticed, the lifestyle of the Chinese has been highly dependent on the usage of online applications on smart phones. For example, it has become daily habits for many Chinese to use these applications to book taxi cabs, order movie tickets, online shopping, ordering food deliveries, paying fees, and of course, online trading. Many have termed the industries that provide online (particularly payment) services as 'The Emerging Economies', and the market share of the many traditional companies across various industries has been hit hard due to the rise of the former. In the past two years, various online platforms have emerged in China that enable any casual investors to trade physical gold with simply a few clicks on their smart phones. We believe it is becoming more convenient than ever before for casual investors to trade gold, and along with the already high market penetration rate of existing platforms, investment gold demand from this particular segment should continue to surge.

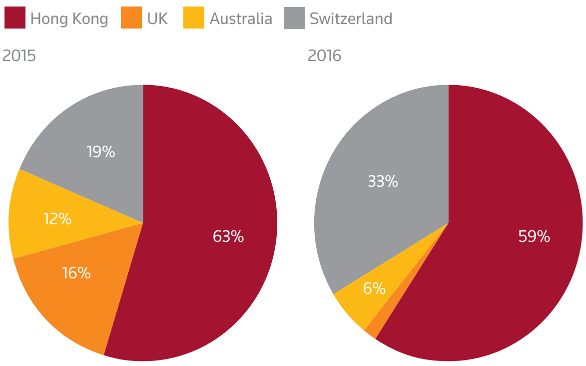
Two years ago when this kind of gold trading platform first emerged, there were only a handful of companies in the industry. Today, there are approximately 20 (as gold is a monetary commodity, meeting the requirements from government authorities is often more difficult compared to other industries). While on the surface all these platforms look similar, providing an online platform for investors to trade gold, yet each platform is based on a somewhat different business model.

G-Banker, one of the first industry entrants, provides its registered users with a platform to purchase gold, and investors can also receive a dividend payment during the holding period. The minimum unit per trade on their platform is 1 milligramme (equivalent to about 27 cents RMB, or just USD 4 cents) of gold, and every purchase is backed up by the Shanghai Gold Exchange's (SGE) AU9999 contracts. Similar to bank deposits, investors, while purchasing gold on their platform, can choose how long they plan to hold onto their gold. The longer the term they choose, the higher yield they can receive. For a one-year fixed term, the average yield could be as high as 6.0% per annum, while invested gold that can be redeemed at any time, would only yield approximately 1.9% per annum.

The reason G-Banker can pay such an attractive yield to its gold investors is that, while investors own the gold, it is the company who has the physical possession of the metal. They usually lease part of the physical gold, which is owned by various online investors, to companies within the gold industry who have a genuine demand for the metal. The average leasing rate charged for borrowing their physical gold varies between 8-12% per annum, depending on the credit rating of the borrowers.

When this platform first commenced in late 2014 it generated a marketing buzz in the local media. Their operations effected transactions of over 17 kilogrammes

CHINESE GOLD IMPORTS BREAKDOWN (THE MAJOR SOURCES)



Source: GFMS, Thomson Reuters

COUNTRY SECTIONS

of gold within the first 20 days of operations. Today, accumulated trading volume on their platform is equivalent to over 17 tonnes of gold, with the latest monthly trading volume on their platform averaging two tonnes. Total net gold holdings (net buying positions on their platform) is estimated to be two tonnes as of writing (at the start of March).

Another popular household name within this segment is called Cun Jinbao, a division under Alipay (an online payment platform under the Alibaba Group). Their gold holdings are backed by Bosera Gold ETF, a gold investment ETF in China. Alipay is one of the country's most popular third-party online payment systems. According to a report issued by a domestic investment company, third-party online payment systems totalled 87 trillion yuan ($12.7 trillion) of payment in 2016, a 75% year-on-year increase.

The Bosera Gold ETF is an open-end fund that invests at least 90% of its net assets in SGE spot gold contracts, while the rest is usually invested in short term bonds or highly liquid money market funds. Another special feature is that the Bosera Gold ETF is allowed to conduct gold leasing activities (lending gold for interest) through the SGE. Indeed, the ETF (as well as Cun Jinbao) would actually return to its investors some of the proceeds (though this is not guaranteed) that it receives from gold leasing. It literally enables investors to own gold but also to receive a dividend payment.

The entry level is low. One can invest in Cun Jinbao at a minimum 1 RMB (equivalent to about 15 cents USD) per trade. While gold holdings in the domestic ETF market rose substantially in 2016, gold holdings at Bosera ETF actually decreased from 2.45 tonnes by the end of 2015 to just 1.59 tonnes a year later.

However, a new player has recently joined the segment this year and has created another marketing frenzy in the domestic media. The new platform, called WeGold, is developed by Tencent, the mastermind behind China's most popular chatting application, WeChat. We think WeGold could possibly accelerate the development of the country's gold trading industry. WeGold teamed up with ICBC, the biggest domestic bank in China, with all the gold holdings traded on the platform being backed by the bank's GAAP account (paper gold trading account backed by physical gold). Their minimum gold unit per trade is 0.01 gramme.

We think the market potential for WeGold could be enormous. While the platform is still at early stages of development and nowhere near a finished product, Tencent is already planning to integrate WeGold into its WeChat system. Other than Alipay, WeChat is another popular online payment system in China. One of its popular features, other than making online payment, is that users can give out red packets (a Chinese tradition for the New Year) that contain digital money to anyone on their WeChat contact lists, or even in a chat group for chat members. In the case of giving out red packets in a chat group, other chat group members who click to open the red packets could receive a fraction (could either be at a fixed fraction or at random, determined by the offerer) of the total monetary value in the red packet. After the total value in the red packet has already been taken by various members, the late comers receive nothing. Therefore for the Chinese, monetary reward is usually secondary but the fun and excitement makes giving out red packets through WeChat a popular practice in China. It is also a good marketing tool for Chat group managers trying to boost the attention and participation rate of the chat members.

According to the local press release, registered WeGold users can also distribute red packets that contain gold units through WeChat. Based on 840 million registered WeChat users in China, WeChat has already done the front running work and provided a highly penetrated market for the WeGold platform. As mentioned above, WeChat is already a popular online payment system in China. One can simply pay digital money from his own WeChat account (capital can be channelled from and into bank accounts) when using a taxi, or indeed for almost any purchases. Imagine in the future, if retailers were willing to accept payment from the WeGold account? That could be a game changer.

While we acknowledge that WeGold offers blue sky potential, the platform at present is still at the early stages of development. Moreover, given WeChat's already massive market penetration, along with the potential of using WeGold account as payment in future, we would imagine this platform may come under further scrutiny from government authorities. While there is no guarantee that WeGold (and the whole online gold trading platform community) will be a long term success, the combination of technology and the Chinese affinity for gold could possibly bring a new revolution to the country's investment landscape in the longer run.

BULLION FLOWS

Turning the focus to China's gold imports, the country imported a total of 1,281 tonnes of gold in 2016, a 19% decrease from 1,581 tonnes in 2015. Last year Hong Kong, as the major entrepôt for the region, remained the largest source of supply for Chinese bullion imports. Given Shenzhen, which is just across the border from Hong Kong and the centre where most of the country's jewellery fabrication activities take place, it makes logistical and economic sense to import gold from Hong Kong. For the first 11 months last year, Hong Kong's market share averaged 65.6%, maintaining its dominant position. However in December, over 150 tonnes of gold were shipped directly to Shanghai from Switzerland, compared to just 51.5 tonnes shipped from Hong Kong. This means Hong Kong's market share dropped to just 23.6% of total gold imports in December, the lowest level since January 2011.

Indeed, we were surprised by the strong import number in December. After a monthly average of just 88.2 tonnes of imports between August and November last year, China's gold imports ended the year with a bang, importing 217.9 tonnes in December. While it was still 2.5% down on an annual basis, we were surprised that China imported over 200 tonnes during the final month of the year. During the third quarter last year, there were rumours that, facing a constant outflow of the yuan, the People's Bank of China (PBOC) needed to slow down the process, and thus 'discouraged' banks from importing gold. As a result, China's monthly gold imports averaged just 92.3 tonnes per month between September and November. Thus the December import number was really unexpected.

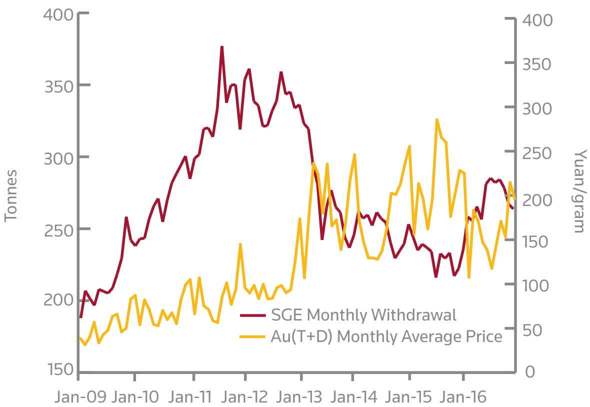
Indeed, the constraint on gold imports in the previous months, along with an accelerated depreciation of the yuan, forced the premia between the domestic and international gold prices to rise rapidly. Based on the Shanghai Gold Exchange (SGE)'s most populated contract, Au (T+D), average premia were $4.40, $12.98 and $32.52 per ounce in October, November and December respectively. The increase in premia translated to arbitrage opportunities for importing banks.

Therefore, in December when the premia were sky high, banks imported gold from overseas to take advantage of the price difference, even though the permit to import had yet to be issued. Thus contrary to the traditional means, banks directed import orders to be shipped directly to Shanghai's Free Trade Zone (FTZ). Most of the gold imported in December were stored at the vault in the FTZ, and technically speaking, the FTZ has its own import/export rules and thus is not subjected to ordinary Chinese regulations. Indeed, gold imported and stored at the FTZ is not considered as entering Chinese soil. The banks imported and stored the gold at the FTZ, sold the gold in the forward market, and then slowly waited for the import permits to be handed down. Once the permits were in place over the next two months, the banks then transported the gold from the FTZ vault into other Chinese cities. This explained the substantial increase of gold import volumes in December, which literally, given the volumes involved, could satisfy the country's demand in the next few months.

As a matter of fact, some industry contacts are suggesting that China's gold import volumes may no longer be a reliable proxy of the country's genuine demand for the physical metal as the volume of imported product at times is more correlated with profit opportunities for the banking sector. High premia, the relatively huge gap between the yuan onshore and offshore rates, the desire to remit dollars outside China, as well as gold being used as a leasing vehicle, all provide incentives for banks to import more gold.

Indeed, we noticed that there was a substantial amount of gold bullion being smuggled out from China into Hong Kong last year. The smuggled gold was often sold in Hong Kong at a $2-5 dollar per ounce discount compared to the international

SGE WITHDRAWALS



Source: GFMS, Thomson Reuters

price. As capital controls by the authorities increased and it became more and more difficult to either purchase foreign currencies within the country or transfer yuan overseas, smuggling gold out of China and receiving payment in dollars basically provided a convenient vehicle to purchase dollars and to transfer capital outside the country. It would appear that some Chinese traders are beginning to investigate the possibility of smuggling physical gold from China to Japan, where opportunity exists to profit from smuggling due to the 8% consumption tax applied to gold purchases there.

On the other hand, the gold leasing market contracted in China last year. In the past, gold leasing was treated as cheap credit for companies, whether in the gold industry or not, for financing purposes. Many companies borrowed gold from banks to buy guaranteed return financial products and pocketed the difference. Several stock brokerage firms also borrowed huge amounts of gold from banks for financial purposes. The size of the leasing market was so big that, for example, there was one entity that had already borrowed several hundreds tonnes of gold accumulatively. However, government authorities would not want gold leasing activities to become another bubble, and would prefer gold only to be used in the real economy. Therefore, it has become much more difficult for banks to lend physical gold to any companies, especially if that company is not in the gold industry.

According to data released by the **Hong Kong** government, total retail sales value amounted to 436.6 billion Hong Kong dollars ($56.3 billion) in 2016, a fall of 8.1% compared to 2015. After enjoying robust growth since 2004 which many termed as "The Ten-Golden years" for Hong Kong's retail industry, the sector has been going downhill in recent years and has now recorded 22 straight monthly declines in sales since March of 2015. Jewellery, watches and other luxury gifts fell 17.2% in 2016 compared to 2015. One of the key reasons for the ever declining gold consumption in Hong Kong is the decreasing number of tourists. The total number of Chinese tourists, the main contributor to domestic gold consumption, fell 6.7% compared to 2015. For reference the total number of Chinese visitors fell 3.0% in 2015. Meanwhile, total global visitors fell 4.5% in 2016, compared to a 2.5% drop in 2015.

It remains to be seen whether Hong Kong's retail industry is out of the woods. Firstly, it is becoming more and more evident that the numbers of vacant street level shops available for rent have been increasing in the city, despite landlords slashing rents trying to attract tenants. In 2016, the total numbers of commercial stores transacted in Hong Kong were just 1,313 cases, a 32.4% severe decline from 2015 and the lowest recorded since 1996. In value terms, total transactions amounted to just 24.3 billion Hong Kong dollars ($3.1 billion), a 37.8% decrease and the lowest recorded since 2003. The lacklustre number of transaction deals recorded showed that market investors were reluctant to participate in this area as an investment, and the general market pessimism towards the outlook of the domestic retail industry. Given that the strong dollar makes goods relatively expensive to tourists who are from non-dollar pegged countries, such as China and Europe, it will be difficult to raise rents unless the economic environment dramatically improves.

For the **Taiwanese** market, total gold demand increased by 11% in 2016, to 27.5 tonnes, mostly due to a strong increase in demand for gold bars, as well as from the industrial sector. Gold demand from the industrial sector recovered from the loss recorded earlier in 2016, with exports of electronics rising more than 20% year-on-year. The domestic electronics sector benefited from solid demand for Taiwan's integrated circuit (IC) products from mainland China and other Asian regions. New orders for mobile chipsets have also surged since the second quarter last year. For example, TSMC, the world's largest semiconductor foundry, obtained 100% of the production of the A10 processor for Apple's iPhone 7. As each new iphone contains approximately 30mg of gold, and with offtake approximately 70-80 million units in 2016, this would deliver an additional 2.1-2.4 tonnes of local gold consumption for the second half of 2016.

The brightest segment was seen in retail investment in a form known as Gold Passbook (a popular product in Taiwan to invest in gold, which is backed by physical gold stored in local banks or overseas vaults) which surged by 43% for the year. While the volume of buy-side activity increased 20% year-on-year, sell-back volumes were down by more than 50%. As the gold prices fell to the level of $1,250/oz at the end of September, early October and early November, the daily traded volume doubled. Indeed, Taiwanese investors are relatively sensitive to the price volatility compared to their mainland China counterparts.

The jewellery sector, which contributed 12% of the total demand, delivered a dourer outlook, with changing domestic consumer sentiment for wedding purchases dragging offtake lower. Unlike China or Hong Kong, local jewellery shops are still one of the major channels to buy gold in Taiwan, especially for purchasing 24-carat products, which sometimes results in quality control issues with consumers complaining that the purity of gold jewellery is below par. Demand for gold for weddings also weakened last year as young couples who are in need of the traditional wedding gold sets chose to rent the sets for their wedding day instead of buying. Feedback gathered from local jewellery scrap dealers suggested that a consolidation will develop in the next few years, as at least one third of Taiwan's retailers could exit the market and recycle their inventories. We estimate Taiwan's jewellery fabrication demand fell 15% year-on-year in 2016 to an estimated 3.4 tonnes.

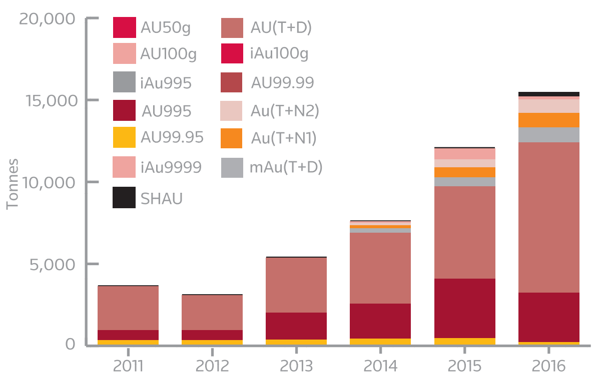
CHINA MARKET OUTLOOK

The prolonged downtrend in China's gold demand was partly attributed to the lacklustre domestic economy. In the face of an uncertain economic outlook and rising inflation, spending sentiment has remained cautious. While business has suffered for many jewellery retailers due to this cautious consumer sentiment, many have reallocated their product mix by increasing the proportion of higher end (higher margin) items in their showrooms. They are focusing promotions on high margin products, and K-gold and gem-set become the obvious beneficiaries. For example, the average gross margin for a pure gold item is approximately 10-15%, but the margin for a K-gold piece could be more than double. Thus while revenues have continued to decline across the industry, some retailers have been enjoying improved margins due to a change in product mix. As a result with retailers shifting from volume to a high margin sales strategy, this has placed additional pressure on the level of fine gold consumption.

The Chinese New Year started relatively early in January 2017 instead of the usual February, and thus there was a notable uptick in offtake since mid-December. However, after the New Year when retailers went back to fabricators to restore inventories they came back empty handed as factory workers at the fabricators were not yet back to work. Therefore jewellery fabrication volume may track lower year-on-year in the first quarter. Industry participants in general are not optimistic towards the domestic gold jewellery market in 2017, with demand likely to continue to fall as the consolidation phase continues. Many of them are of the view that if their business this year can maintain the levels recorded last year, then they would consider their sales target achieved.

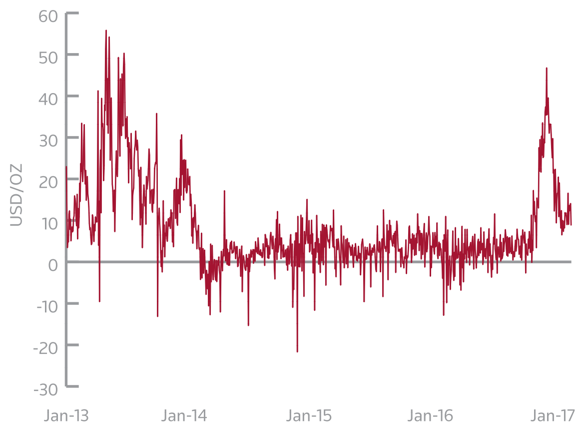
We also expect the quota for gold importing entities in China to decrease in 2017, as the PBOC may still have a long way to go defending the yuan. However, we do not expect the decrease in the quota to be substantial. The PBOC were likely quite nervous when Chinese gold premia were trading above $30/oz in December, as they knew that high premia would attract high import volumes. Thus they will be trying to walk a fine line between reducing imports and maintaining premia at tolerable levels for the banking sector.

SGE GOLD CONTRACTS TRADINGS IN TONNES EQUIVALENT



Source: GFMS, Thomson Reuters

SGE GOLD PRICE PREMIUM/DISCOUNT



Source: GFMS, Thomson Reuters

INDIA

- ***Indian gold imports declined by 43% year-on-year to 510.6 tonnes, as a clampdown on unaccounted wealth and efforts to streamline the industry derailed the fast track growth recorded in 2015.***

- ***Fine gold from doré declined 41% year-on-year to 121.5 tonnes in 2016, but its share of total imports for domestic supply increased to 35% up from 30% in 2015.***

- ***Retail investment declined by 30% and jewellery consumption by 31% year-on- year, taking total consumption to 602 tonnes, the lowest since 2003.***

Last year was an eventful year for the Indian gold and jewellery market as steps initiated to crack down on unaccounted wealth of individuals, and efforts to streamline the cash flowing into the gold and jewellery trade curtailed growth in new gold demand. Tightening of cash flows, specifically due to the lock up of capital in real estate for people at the top of the income pyramid due to stagnancy and poor agricultural yields following the third consecutive year of a poor monsoon, which impacted incomes of nearly one-third of the jewellery consumers. Each of these factors played a significant role in determining the domestic price, which for a record period was at discount to landed price, with the differential widening to its highest ever, touching $100 in some regions on 4th July 2016. That said, it isn't too far back in the distant memory the gold price in the domestic Indian market stood at a record premium of $160 an ounce over the landed price. As a result demand for imported bullion bars dropped to the lowest since 2003 to 510.6 tonnes while net imports were the lowest in any year since gold was first allowed to be imported under the Open General License (October 1997). On the other hand we are also noticing that traders who have been only in bullion business are expanding to jewellery. In the text below we look at each factor that has brought about this significant shift in the industry.

GOVERNMENT POLICIES AND THE DRIVE TOWARDS BRINGING TRANSPARENCY TO THE ECONOMY

The Indian gold market has been at a point where even a marginal rise in imports has been pushing the market to a discount given the high level of inventory. This was most apparent in January and February of 2016. On the back of this challenging backdrop arrived the excise duty, while rising prices also added pressure to the industry. Excise duty of 1% on jewellery was put in force effective 1st March 2016. In 2012 a similar measure had led to a nationwide strike by the jewellery industry for more than 20 days and in 2016 it led to a nationwide strike extending for 41 days. It is estimated that fewer than 2,000 jewellery manufacturers had registered for excise as of end of 2016; this may seem a small percentage given the numbers of manufacturers spread across India but this is because it is mandatory only for those jewellers who had more than Rs.150,000,000 ($2.2 M) of annual turnover in the previous financial year to register for excise, which in volume terms is approximately 50 kg of fine gold annually. Whereas from the financial year 2016-17 the threshold was set at Rs.100,000,000 ($1.5 M). However, those with an annual excise duty payment of below rupees one crore (~$150,000) were exempted from any excise audits and those with over rupees three crore (~$450,000) duty payments were to be audited every year. Overall the amended legislation basis the recommendation by the government-appointed sub-committee was accepted in the last of week of July and implemented. This eventually eased the situation for the majority of the manufacturers, thereby limiting the need for a number of jewellers required to register for excise.

COUNTRY SECTIONS

GROSS INDIAN BULLION IMPORTS*

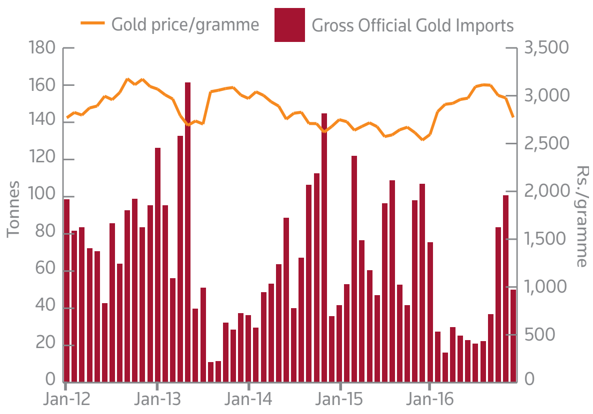
(tonnes)	2009	2010	2011	2012	2013	2014	2015	2016
Gross Imports*	779	1,123	1,211	969	783	826	904	511
Local Price (Rs./10g)	15,310	18,386	24,003	29,730	29,310	28,278	26,488	29,395

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

Source: GFMS, Thomson Reuters

This was however a precedent to the Goods and Services Tax which was under discussion then and will come into effect from July 2017. In other words manufacturers and retailers had to ensure that they moved away from the conventional method of maintaining two books of accounts, which was not just to evade tax but to protect their customers who transacted using their unaccounted cash. Moreover this led to destocking by retailers, with many not replenishing their sales movements, instead, redirecting the funds elsewhere.

GROSS OFFICIAL GOLD IMPORTS (TONNES)



Source: GFMS, Thomson Reuters

In the federal budget announced on 28th February 2016 the government asked those who had undisclosed income held in any form of assets to come clean by paying 45% tax and added that the source of income would not be questioned. The window for disclosure was kept open from 1st June to 30th September 2016. This was later re-introduced with a second chance towards end of the year as part of the demonetisation drive. As the scheme provided immunity from any further questioning we noticed through our various discussions that there was heavy dis-investment of gold with the price standing to their favour as prices were 50% more than the previous ten-year average price. Thus it still made sense to liquidate gold holdings and disclose the previously undisclosed income.

What the Income Disclosure Scheme delivered was a further tightening of liquidity in the market. The widespread advertisements on the consequence of not abiding by income tax laws has forced many investors and consumers who would otherwise purchase gold using cash to stay away from splurging on jewellery or even consider investing. This was very evident from the discounts offered on cash transactions which were on some days a percentage or more higher than purchasing by cheque. Interestingly the trend changed during demonetisation as cash sales were at a premia and gold was sold at a premia of 60 to 70% over the spot rate in exchange for demonetised currency, reflecting the sustained local trust in gold during this period.

In the 2015 federal budget it was decided to make it mandatory to produce a PAN card (personal identitification card) for every cash transaction of over Rs. 200,000/- (~$3,000) on the purchase of jewellery. This was however later seen as a failed attempt with bills being split with multiple entries in the ledger, thus showing transaction levels below the threshold limit. This became more evident following demonetisation, given the high volumes reportedly sold ahead of the deadline for scrapping high denomination currencies. That said, the government has now made it illegal to transact in cash over Rs. 300,000 (~$4, 500).

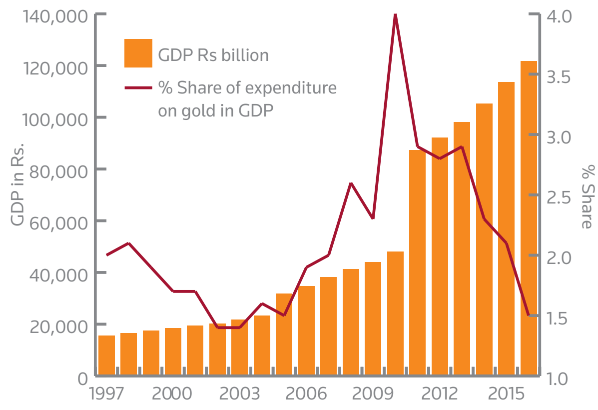
INDUSTRY DEPENDENCE ON AGRICULTURE INCOME DENTS CASH FLOW

The backlash of a poor monsoon and resultant poor agricultural yields is seen to have a wider impact in the quarters following the harvest seasons of Rabi and Kharif crops. Below normal monsoon rainfall in 2014 and 2015 had weighed on gold consumption from households dependent on farming income, and the impact was felt hard in 2016. Consumption from this population segment is not sensitive to gold price levels but exhibits high elasticity to income. This income sensitivity is evidenced by increases in nominal gold expenditure during years of normal or above normal monsoon.

Last crop year was a year of drought, which reduced farm revenue by a percentage in nominal terms and by 3% in real terms. The impact of the weak monsoon was offset by an average 4% increase in the Minimum Support Prices per unit of crop output. Consequently, the most adversely impacted were marginal farmers for reasons related to logistics, irrigation and harvesting techniques involved. These marginal farmers constituted the majority of the farming population though their combined income levels would be still lower than the rich farmers. This was evident from the dip in sales of jewellers in rural and semi-urban India, a segment that contribute to one-third of the sales.

According to the 1st Advance Estimates of Production released in October 2016 of Major Kharif Crops for 2016/17, total kharif food grain production reached a new record of 135.03 million tonnes, up 9% (11 million tonnes) from the previous year when monsoon rainfall was 14% below normal. Specifically, the normal monsoon rainfall during June-September facilitated kharif plantings and increased crop yields. The higher area and yields raised production estimates of major kharif crops to record levels, including rice, maize, pulses, and so forth. For rabi crops, such as wheat, monsoon precipitation doesn't feed crop growth directly, but it alleviates soil moisture deficits from the previous two years and recharges lakes and reservoirs. As a result, adequate soil moisture and irrigation water benefit rabi crop plantings and subsequent crop growth, although rabi crop yields could still vary depending on growing season weather (roughly November through April).

GOLD EXPENDITURE AS A SHARE OF GDP



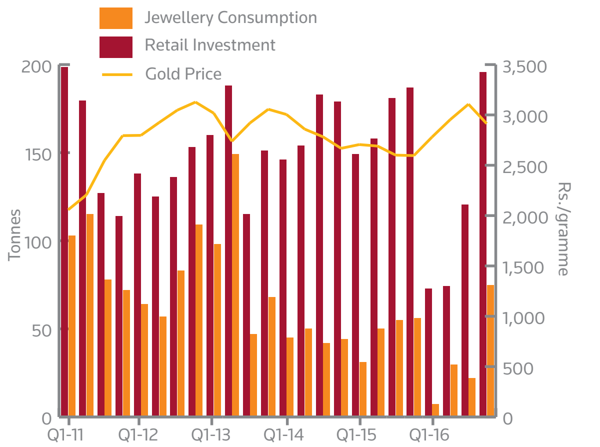
Source: RBI, GFMS, Thomson Reuters

INCREASE IN FARM INCOME TO HELP CONSUMPTION EXPENDITURE

One-third of Indian gold consumption is estimated to come from agricultural households. On the basis of statistics provided by the National Sample Survey Office and India Census 2011, approximately 78 million households are engaged in farming. This makes it 32% of the total Indian household and 46% of the total rural households. When calculating consumption it makes sense to study basis households instead of total population as expenditure has a direct relation with household income than individual income. In essence this would translate into an average of four grammes a household. However, this number would increase on further dissecting into demographics; for instance only about half the population in rural areas stay in a house that is defined as "good" by the Census. As a good home takes a priority over anything as part of bigger expenditure in any household, it is an indicator that we will give a higher weighting when calculating consumption. It goes unsaid that the pursuit to own a good home also depends on farming output. This is why it makes it more compelling to understand the influence of farm output on gold consumption. Additionally only 55% of the rural households have availed themselves of banking services, suggesting that a good part of saving will be in the form of gold and silver.

Gold consumption has been seeing a rise during the crop year 2016-17 (September to August) following a near normal monsoon after two consecutive years of below normal monsoon rainfall. It was visible until February and is likely to continue during the April to June demand period as well. A near normal monsoon and the increase in the Minimum Support Price (MSP) can potentially increase farm revenue by 6% as kharif crop production is expected to touch record levels. That said it is important to note that the MSP holds significance where there is participation by government institutions, which is largely in the case of wheat, rice, cotton, sugarcane and pulses. Pulses farmers this year are going to benefit further by additional bonus over the MSP, but those MSP is defined only for government purchases as rest is market driven and unfortunately pulses prices have crashed significantly over a year.

JEWELLERY CONSUMPTION AND RETAIL INVESTMENT



Source: GFMS, Thomson Reuters

THE BIG DAYS FOR GOLD: WEDDING BELLS, JOY OF FESTIVITY AND AUSPICIOUS DAYS

Starting with the harvest festival in January and ending with Christmas, consumption has bounced from posting more than a 50% year-on-year decline in the first two quarters to rising by 5% in the last quarter. A poor crop harvest had a big impact on discretionary consumption and demand for fresh gold; there was a surge in volume of exchange of old jewellery for new, thereby limiting demand for imported gold. Similar sentiment was carried on to Akshaya Tritya, an auspicious day in the Hindu calendar when people donate to good causes, embark on a new venture, or purchase goods that will not depreciate in value. Traditionally, this day has made a major positive contribution to jewellery retailers' second quarter sales. However, last this year has been different. Consumers, while continuing the age old practice of purchasing gold have turned to buying jewellery with grammage as low as 3 to 5 grammes and in some cases one gramme coins. As a result demand in volume terms was 45% lower than 2015 at just 17 tonnes. That said the period was also clouded by the strike following the announcement of an excise duty. The turnout at stores during the day was lower and failed to pick up once the working day had finished - the time when households normally step out to make purchases. Responding to the low turnout, many retailers considered shutting their stores at the regular time rather than staying open until midnight. That said, some of the very large national and regional retailers did note an average footfall. Even so, unlike the more usual Tritya days, sales people, who would normally handle two to three customers at the same time, were not that busy.

Nevertheless, consumers became adjusted to higher prices as the festive season of September and October approached. This was being reflected in a strong pick up in sales during the festive month of October helped by pent up demand and wedding related purchases. This was despite the price averaging 13% higher than the same period in 2015. However, at some locations nearly 60% of the sales were against exchange of old jewellery against a norm of 35%, for last year our estimate is 50 to 55% of the jewellery sales were for exchange of old for new. Fabrication volumes started improving by late September and were back to seasonal averages by October. This pick up in retail sales provided some green shoots to the industry after nearly eight months of lacklustre demand. Gold jewellery volumes were boosted largely by an increase in sales from southern and western regions.

COUNTRY SECTIONS

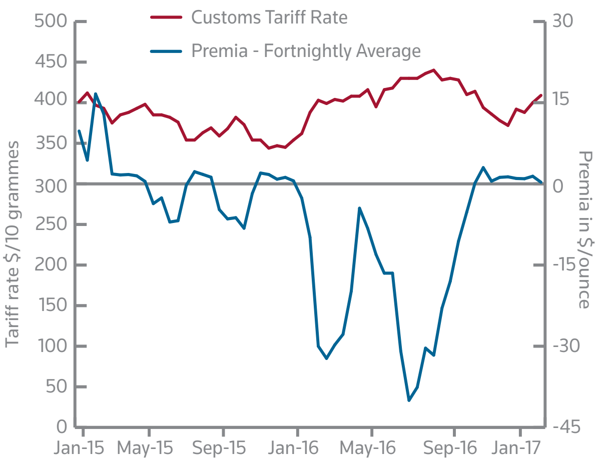
BULLION TRADE

IMPORTS CLASSIFICATION

(tonnes)	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Annual
Banks					
- Duty paid	39.0	26.9	20.8	81.6	**168.3**
- Duty free	3.9	5.7	9.3	13.9	**32.8**
Nominated Agencies					
- Duty paid	10.9	3.0	5.3	34.3	**53.5**
- Duty free	29.9	25.8	33.1	37.5	**126.3**
Fine gold from doré	32.7	14.1	9.4	65.3	**121.5**
Direct import by exporters	2.4	2.5	2.0	1.3	**8.2**
Gross Total	**118.8**	**78**	**79.9**	**233.9**	**510.6**
Net Total	**82.6**	**44.0**	**35.5**	**181.2**	**343.3**
Average price (Rupees/10 grammes)	27,805	29,538	31,066	29,137	29,395

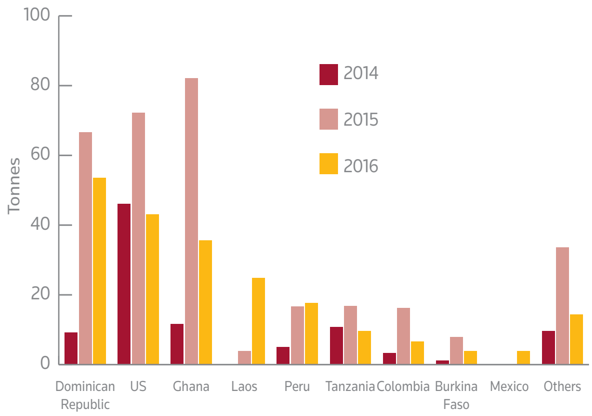
Source: GFMS, Thomson Reuters

IMPORT TARIFF VS DISCOUNT/PREMIA



Source: Thomson Reuters, CBEC and NCDEX

COUNTRY OF ORIGIN OF DORÉ



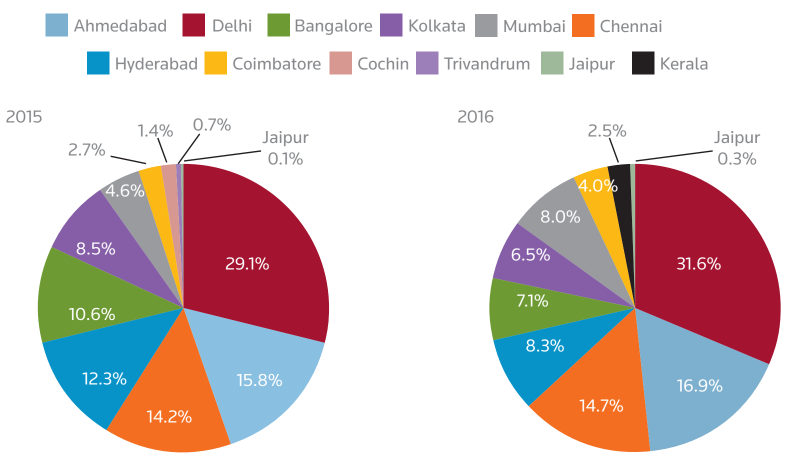
Other supplying countries in 2016 were Bolivia, Brazil, Guinea, Mali, Philippines and Botswana
Source: GFMS, Thomson Reuters

Gross imports in 2016 declined to the lowest since 2003 for reasons discussed earlier in this chapter. The import tariff had a clear influence on the timing of imports, as seen from the chart here on customs tariff and domestic spot price. In total eight nominated agencies, 12 banks, 21 refiners and 40 exporters together contributed to the domestic supply. As seen from the table below the share of banks to domestic supply was less than 50% as against 70% share through most of 2015. This shift is attributed to the increase in volumes from refiners whose share has increased from 30% in 2015 to 35% last year. There was however a notable decline in supplies through nominated agencies, attributed primarily to the change in the definition for attaining and retaining a nominated agency licence. This was further tightened by making it mandatory effective Q4 2016 that to qualify for one needs to export from the Domestic Tariff Area and not from a Export Oriented Unit or Special Economic Zone.

The bullion trade was not short of interesting stories last year. The most popular was the duty free replenishment scheme. With the market at a deep discount it was profitable to procure local gold and export as crude jewellery, taking advantage of the available credit for the exports by importing duty free as discounts narrowed. Traders, after removing costs, clocked close to a one percent gain. And this was not just restricted to bullion but also in using fine gold from dore; that said some even took dual benefit of an excise duty credit in addition to duty free import.

Taking a look at key supplying countries the shares were similar to 2015 with Switzerland leading by supplying 72% of the imported bullion, followed by the UAE at 11%, and then South Africa, US, Australia, Canada, all of which in aggregate had a share of 97% of the total supply.

REGIONAL DELIVERY CENTRES



Source: GFMS, Thomson Reuters

COUNTRY SECTIONS

The Indian **gold refining industry** passed through a tough phase last year as many had to mothball their refining units as the discount of prices to the spot market for a long period made it less attractive to refine in India. Nevertheless, we understand that some of these traders shifted their base to the UAE for trading dore in the international market. Indeed while UAE became the largest exporter to Switzerland as a partial reflection of this, total dore imports to India declined by approximately 115 tonnes or 42% from 2015. As can be seen from the table on the previous page dore supply picked up significantly towards the fourth quarter as prices returned to premia due to the seasonal factors and unusually heavy demand during the period of demonetisation.

Supply of bullion by melting down jewellery, medallions and articles imported through a **Free Trade Agreement** ended in a phased manner through last year. This was possible as the government imposed countervailing duty on those imports thereby making it a non profitable trade.

Unofficial imports declined for the second consecutive year falling 13% year-on-year to 123 tonnes in 2016. Discounts were the key reason for the decline. However, the channel was kept operational despite shrinking margins. Smuggling volumes were largely via and the routes from eastern part of the country, though challenged by regulatory changes in Bangladesh. Following demonetisation this trade has reduced to just 30% of the average weekly volumes as it has been more challenging to route payment given the clampdown on shell companies and *hawala* operators used to route currency through unofficial money exchanges. Last year *hawala* premia averaged 3% till November which then surged to 50% during the first week of demonetisation.

Jewellery **scrap** return increased by 50% in 2106 to 131 tonnes, the highest since 2003, thereby further adding pressure to domestic supply. Indian scrap sales are highly elastic to two main factors; one is obviously the price of gold; and secondly, the availability of credit through formal banking channels which is dependent on macro factors. It is normal to see households selling jewellery on a price surge, but the cost of credit and its access is equally critical as it is a factor pushing small and medium enterprises to cash in household jewellery to sustaining cash flow for businesses. Additionally the rise in debt level of agricultural households following less than normal monsoon for three consecutive years only worsened the liquidity situation, more so in southern states.

IMPORTS IN 2017, CAN WE EXPECT A TURNAROUND?

India's average monthly gold import demand for domestic consumption was approximately 60 tonnes in 2015. However, last year during February to September average monthly imports stood at just 13 tonnes as compared to 60 tonnes in January and 68 tonnes in October and then rising to 84.5 tonnes in November. The key reasons for such an anomaly have been discussed earlier and most of these factors will remain in place this year as well. However, one of the key factors on which the trade is hinged is what will be the GST rate. Indeed, a higher rate than forecast could potentially bring the trade to a standstill as happened in other consuming nations.

The fall out of demonetisation was worrisome until the dust settled. Sales in the second half of November dipped as a result but this shortfall was negated in December by a resurgence in offtake as gold prices traded lower. The resultant demand surge lifted offtake and in turn made the fourth quarter the strongest of the year. The sudden demand surge lifting offtake and in turn made the fourth quarter the strongest of the year. This healthy recovery meant that the volume consumed in Q4 2016 exceeded that of Q4 2015 volumes by an estimated 5%; this estimate is higher than the preliminary estimates published in our Gold Survey Update where consumption volumes remained flat for the period. This was largely a result of revision to our consumption estimates for the western, central and eastern regions of the country during the last quarter. Interestingly the increase was despite restrictions in currency circulation. Most importantly bar hoarding surged by 35% in Q4 2016 as compared to the same period in 2015. The gains were a sharp reversal from three consecutive quarters of declines in bar hoarding activity.

This positive sentiment has carried forward into Q1 2017 as well with January gross imports reaching close to 57 tonnes with reports that healthy flows continued at least to the middle of February. According to sources imports slowed abruptly at this point as the latest tariff rate was set at $409/10 grammes on 28th February, which was the highest since 31st October 2016. While wedding related demand is attributed as the chief reason for the robust start to the year remonetisation has also helped restore normalcy.

EXPORTS AND ROUND TRIPPING

In 2016 the import of duty free gold which was destined for manufacturing jewellery and medallions for exporting declined by 15% to 167.3 tonnes from 196.2 tonnes in 2015. Out of this we estimate 125 tonnes were used for round tripping and 38 tonnes for exports during 2016. Exports of genuine jewellery declined by 14% for the whole year; that said strong gains in exports to the UAE in the fourth quarter helped cap the decline which was otherwise 22% in the first nine months. Looking ahead, exports of genuine jewellery are likely to see a slowdown from the second half of this year given the 5% import duty in the UAE which came into effect from 1st January this year. That said, handmade jewellery which constitutes a significant volume of the jewellery exports will continue to retain its competitive advantage due to labour costs and ease of availability of skilled artisans.

BANGLADESH AND SRI LANKA

Last year two of India's neighbours went through critical policy change. Ironically, one led to reduced supply of unofficial gold and the other helped increase supply. Below we take a look at the changes to import policy in Sri Lanka and Bangladesh.

On 20th January 2016, the Central Bank of **Bangladesh** scrapped the decision to allow passengers to carry up to two kilogrammes of gold bars into the country. Prior to that every Bangladeshi passenger was permitted to import bullion into the country. Following the changes to the taxation levels passengers were only permitted to carry 200 grammes in the form of gold jewellery (this is as against 300 grammes until the revision). Out of this the first 100 grammes are tax free while weights over that attract a customs duty of taka 3,000 per tola (11.668 grammes), which is approximately 9% of the value. However, the same jewellery if imported commercially attracts a customs duty of 25%, and after including other taxes the total tax incidence is at 58.69%. Customs duty is also applicable on the import of gold bars and this too has recently has seen a material change. Customs duty was adjusted from taka 150 per tola that existed prior to the change in tax rules to taka 3,000 per tola and a VAT of 5%. However, if the same is imported commercially there is a tax in the form of an Additional Trade VAT of 4%; this takes the approximate total tax on a percentage basis to 19%. As a result gold smuggling is rampant into the country to meet local needs. This has also thereby reduced supply into India.

Recently a GFMS analyst visited Bagladesh to gauge the consumption for the region following changes in import regulations and it was surprising to note the level of volumes traded. Following this visit we have revised our consumption estimate to 18 tonnes from 2.5 tonnes. The source of supply is primarily through importing tola bars through unofficial routes and exchanging it for jewellery with Indian dealers. In addition to this, Bangladeshi expatriates hand carry jewellery which is then exchanged at high premia in the domestic market; gold prices in Dhaka are normally 40% over the LBMA price. Last year it is estimated that consumption grew by 10% year-on-year, helped by increased remittances.

Sri Lanka for many years followed tight restrictions over importing gold; following the increase in duty to 10% by India in August 2013, the island nation implemented the same measures to stop smuggling through water borders. However, last year the government decided to make imports duty free from June and started talks with the trade to issue import licences. Following this move Sri Lanka imported more than 10 tonnes of gold in 2016 as against one tonne in 2015. While it does facilitate smuggling of gold from Sri Lanka to India very conveniently, on the fabrication front it is seen as a big boost to the local manufacturing business.

NORTH AMERICA

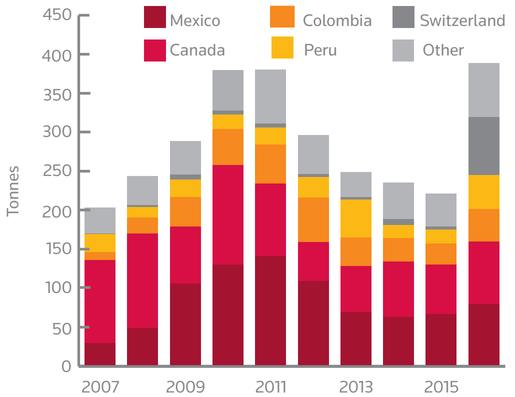
- ***Total North American fabrication demand increased to 220.7 tonnes last year, up 3% from the previous year. The rise was mainly driven by increased retail demand.***
- ***Retail investment rose 10% to 103.7 tonnes in 2016 in the region, largely driven by a 13% increase in official mint sales of bullion coins and numismatics. Retail investment surpassed the 100-tonne mark again for the first time in three years.***
- ***Jewellery fabrication fell 2%, as domestic manufacturers struggled against price-competitive foreign sources. Shop closures rose 6% last year in the United States.***
- ***Scrap sales continued to retreat, falling for the fifth consecutive year by 3% to total 90.2 tonnes, its lowest level since 2005 and representing only 41% of the 2011 peak of 218.3 tonnes.***

Total fabrication demand for gold in the United States increased to 199.7 tonnes last year, which was 3.7% higher than in 2015. Gold bullion imports rose a whopping 64% last year to 408.3 tonnes. Supply from South America was partly responsible for that massive surge represented by the usual suspects such as Peru, Bolivia and Colombia all increasing their flows to the United States, albeit at different growth rates, by 143%, 3% and 52% respectively. Mexico and Canada also shipped more material to their neighbour by 20% and 27% respectively representing around half of total U.S. imports.

But the biggest driver was the shipments from Switzerland last year, which surged in approximately ten-fold in May, June and July. Indeed, during the 2005-2015 period, imports from Switzerland averaged three tonnes per annum clearly functioning as material requirements for the various LBMA accredited refiners in the country. But last year's total of 74 tonnes, or a 2,033% increase year-on-year, sketches a huge contrast compared to the previous years and indicates something else was going on. Field research suggests that during May, June and July last year there was an arbitrage opportunity between the New York Exchange for Physical (EFP) and shipment costs in May, based on the front month forward price, which favoured shipping from Switzerland into the United States and pocket a risk free profit. Participants took advantage and hence the flows from Switzerland to the United States surged in that specific period, representing 86% or 64 tonnes of the annual total.

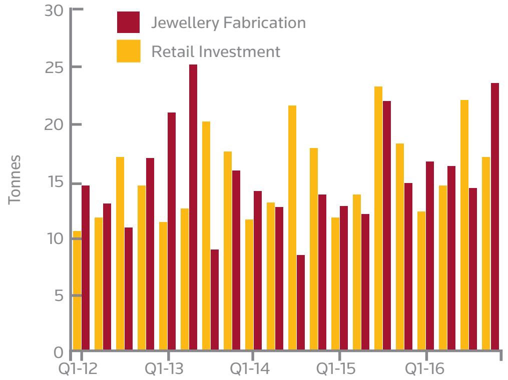
Official coin fabrication in the U.S. was 41.9 tonnes last year, which at 24% annual growth, represents another stellar year's performance following the 42% annual increase in the prior year. Compared to 2015, when coin sales surged mainly in the third quarter by 210% from the same period in 2014, last year's increase was actually more evenly spread with the third quarter being the weakest. Although part of the demand strength was due to some pent up consumption from the end of 2015, the majority of the year-on-year growth mostly reflects stronger demand for gold as a safe haven and increased buying activity in a rising price environment.

UNITED STATES BULLION IMPORTS



Source: GTIS; GFMS, Thomson Reuters

UNITED STATES JEWELLERY FABRICATION & RETAIL INVEST.



Source: GFMS, Thomson Reuters

Physical gold stocks in United States depositories have been rising in recent years in part due to growth in allocations to Individual Retirement Accounts (IRAs). Since the Taxpayer Relief Act of 1997, IRA holders have been allowed to allocate a portion of their investments in physical bullion coins and bars minted by recognised national mints or bullion products made by COMEX and NYMEX approved refiners. Consequently, as of end 2016, an estimated 0.04%, or $3.1 billion, of total IRA assets were denominated in gold and silver bullion. IRA allocations to precious metals vary, from as low as 2% of total portfolio value to as high as 30% and tending to average around the recommended 10% level. Physical precious metals assets serve mainly as a hedge against United States dollar assets and a portfolio diversifier. At present, there are around 100,000 active physical precious metals IRAs, with an average account value of $30,000.

Gold jewellery consumption in the United States fell a modest 1.6% to 138 tonnes last year. This was mainly driven by a drop of 1.4% in jewellery fabrication to 65.8 tonnes. Adjusting for exports of domestically produced jewellery, imports accounted for 53% of domestic gold jewellery consumption in 2016. With the decline in gold prices and a stronger United States dollar, domestic manufacturers faced increased difficulty in terms of cost competition. Nonetheless, retail sales of domestically produced jewellery expanded as the growth in overall sales benefited demand from both domestic and particularly foreign sources. Jewellery store sales rose again by a solid 3.8% to total $31.41 billion in 2016, according to US Census Bureau data. December sales jumped 7% to $6.21 billion from $5.81 billion in December 2015. The monthly sales average for the 11 months before December was $2.29 billion, meaning that December sales represented a 170% increase on the average of the previous 11 months. In contrast, the number of jewellery business in operation fell 6% last year. Not all of it were bankruptcies or foreclosures. A lack of natural succession of mom and pop stores was also cited as one of the reasons behind the decline.

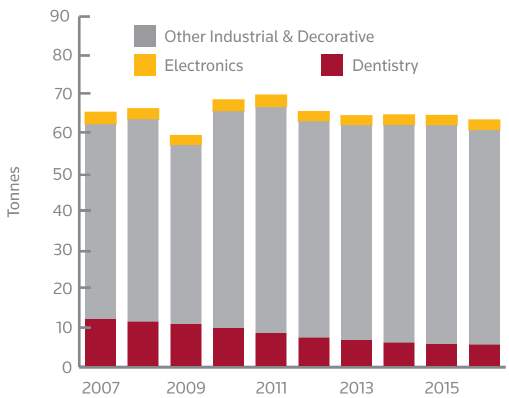
Industrial fabrication fell 2% last year to 63.4 tonnes. Demand for gold from the dental industry continued to creep lower. Electronics accounted for 87% of industrial demand last year and fell by 2%. Demand from this sector continued to weaken due to declining computer sales and reductions to gold content through minimisation of devices and enhancements to gold components.

Scrap in the United States dropped to 58.7 tonnes last year, down 8% from the previous year. This decline marked the fifth consecutive drop on an annual basis. Various refiners have indicated that sourcing scrap for their material requirements has remained a challenging task. The annual decline, however, does not reflect the intra-year availability of scrap, which can suddenly spike for various reasons, one of which is a rising gold price. Distressed sales, which are more present in some parts of Europe, have also remained soft in recent years.

Fabrication demand in **Canada** remained flat to total 41 tonnes last year. Canada is a large mine producer and refiner of precious metals, while its biggest contribution to North American fabrication demand is its coin minting. The Royal Canadian Mint produced and sold 30.6 tonnes of gold coins last year, up a modest 3% from a year ago. Fabrication demand in **Mexico** fell by 3% to total 8.9 tonnes in 2016 following a 8% rise the prior year. Demand was curbed by an increase in gold prices in local terms. Gold prices averaged 23,303 peso/oz last year, 27% higher than in 2015.

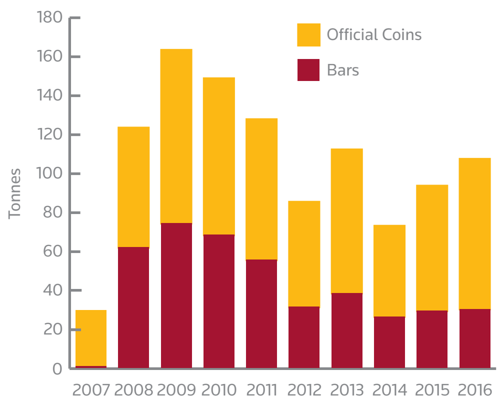
COUNTRY SECTIONS

US GOLD OTHER FABRICATION



Source: GFMS, Thomson Reuters

NORTH AMERICAN RETAIL INVESTMENT



Source: GFMS, Thomson Reuters

TURKEY

- ***Jewellery fabrication weakness prevails in the domestic market and competition for exports is increasing. A 5% import duty in Dubai, however, has slowed business and forced fabricators and traders alike in the region to reposition.***

- ***Continuous efforts to make Turkey a global gold hub remain key with further flexibility implemented in the banking sector. The Turkish authorities have also raised the amount of gold that the banks may hold in their reserve requirements to 35%.***

On the back of a weakening TL/USD exchange rate, gold priced in Turkish lira recorded a 20% increase year-on-year to TL/g 121 in 2016. We estimate that scrap returning from the market increased by a relatively modest 4%. During the first half of the year when the TL gold price was posting new highs, refiners and banks recorded strong volumes returning from the market. That trend waned, however, in the second half of the year as consumers preferred to hold on to their gold in what were perceived as increasingly more uncertain times.

Although gold is also recovered from mining, gold scrap returning from the market functions as the large input feed for the Turkish refiners. Gold mine production in Turkey is estimated to have reached 26 tonnes last year which is considerably short of what the main five refiners in the country tend to use for domestic as well as the export markets.

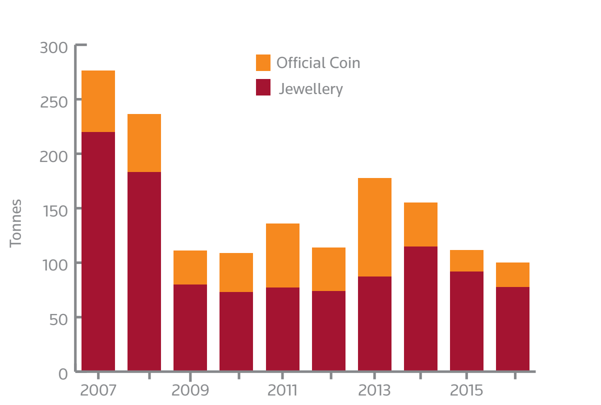
Gold scrap typically gets returned to jewellers, small collection shops or refiners, who tend to have various branches in the major cities. Contrary to some other countries however, banks in Turkey also tend to offer a service for their clients to return old gold scrap. Banks will have weekly or monthly days where scrap returns are actively promoted, with an expert from the refiners present in the various branches assaying the gold scrap. The gold returned from the market gets usually accredited to a metal account and added to the bank's reserve requirement.

The Central Bank of the Republic of Turkey introduced a reserve requirement option mechanism in 2011, which allows banks to use gold as up to 10% as part of their required reserve assets. Later it was boosted to 30%. The measure has been used actively by a number of banks boosting the holding at the Turkish Central Bank by more than 450 tonnes. It frees up interest bearing liquidity that can be allocated elsewhere.

In September 2016, the permissible gold reserves were lifted by a further 5% including the use of gold scrap, giving the banks a total potential reserve requirement in gold of 35%. In addition, on top of the large (400 oz) bars, Turkish banks are also now allowed to hold kilo bars in their reserve requirements stored at Borsa Istanbul. The applied coefficient for gold is 1:1 which is four times cheaper versus reserves in Turkish lira. The measure is intended to increase the liquidity into the system allowing banks to lend out their TL. Central bank data indicated that at the end of last year banks held around 24% of the maximum 30% allowance, but only 0.2% of the 5% in scrap allowance.

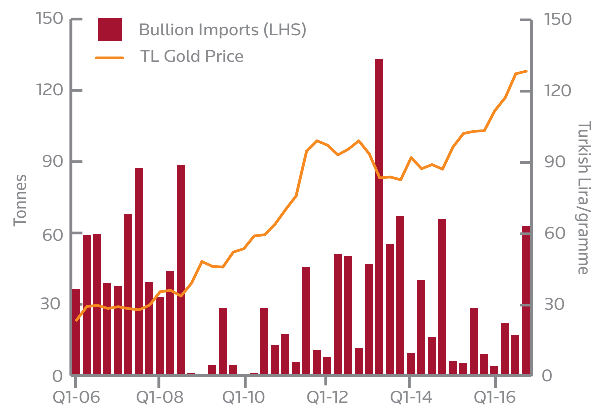
Further developments in the Turkish gold market include a crackdown on margin trading and the introduction of a potential gold backed government bond. The government has introduced a measure in which leverage will be reduced

TURKISH FABRICATION DEMAND



Source: GFMS, Thomson Reuters

TURKISH LIRA GOLD PRICE/GRAMME



Source: Borsa Istanbul; GFMS, Thomson Reuters

COUNTRY SECTIONS

THOMSON REUTERS

from 1:100 to 1:10 which potentially puts some foreign exchange trading platforms under treat. Some have argued for a more gradual reduction of the leverage ratio but the government has decided in favour of a more rigorous approach. In addition, the minimum threshold of trading is raised to TL 50,000 ($13,258), which is a considerable sum of money for most people. Although the majority is based on foreign exchange trading, gold trading is estimated to be around 20-30% of existing volume and will therefore almost certainly be affected by this measure. The expectation is that business in margin trading will reduce significantly and move abroad.

Moving abroad is what some of the jewellery fabricators are looking to do as well. The domestic market remains very challenging for them with TL gold prices at record highs. The various economic uncertainties in the country are a drag on business and the high-tension political instability has continued to keep the country in a state of emergency. We estimate that jewellery fabrication fell 15% last year and domestic consumption even more by 20%. For jewellery fabricators, the landscape has become increasingly competitive at home as well as abroad. Domestically, some of the big brands have had to close their own production and source material from various small scale producers, eventually selling it under their brand. Many jewellery fabricators are therefore looking abroad.

Accommodating export markets is however not an easy switch from selling your jewellery at home. The Turkish domestic market typically likes 22-carat gold with, for example, zirconium stones or other attributes that foreign markets might not prefer. Selling abroad as opposed to supplying the domestic market therefore could mean significantly adjusting your portfolio to accommodate different tastes. On the other hand, however, with the strong devaluation of the lira, costs in foreign currencies have reduced making margins more attractive.

Countering that development however has been the recent introduction of a 5% import tax in Dubai. This has reduced the attractiveness of selling metal in Dubai which in turn gets distributed to surrounding countries as it functions as a hub. Perhaps only 20% of total material stays in the country. Some jewellers report business has come to a halt following the tax introduction, as the tax is based on the total value of the product including the raw material and the fabrication charges. This cuts significantly in producers' margins. Suggestions have already been made to tax the labour charge only. Some of that import tax in Dubai can be reclaimed up to 4.5% when fabricators can show customs documents of re-exported merchandise, but a number of importers don't want to do the business via the official route. In that case fabricators won't be able to claim the tax rebate. Typically smaller jewellery fabricators borrow the gold from the refiners, manufacture the jewellery and return to the refiner for exports. Refiners tend to pool the fabricators' merchandise with other sellers and charge them a fee for the service. In 2016, jewellery exports (not exclusively gold jewellery) to various regions fell approximately 17%. Unsurprisingly, exports to the European Union (good for half the total) contracted 13% and sales to Asian countries (responsible for 30%) also fell. The remaining 20% is scattered over various countries of which North America held the largest share in 2016 at around 5%.

OUTLOOK

Further efforts to increase Turkey's attractiveness as a hub for gold trading are surely increasing, particularly on the banking side. The various efforts imposed by the government to introduce more flexibility and confidence in the financial system have been well received. There is still plenty of potential, however. Estimates vary but only approximately 55 tonnes (or 1%) of the 3,000-5,000 tonnes of 'under the pillow gold' has been brought back to the various bank branches and deposited on a metal account. Introducing a gold backed government bond might increase some more diversity in the range of gold backed financial products in the market but the extent to what it will be a success remains to be seen. It will require active marketing efforts and persistence. The years of tradition in holding physical gold will not disappear overnight.

On the jewellery side, however, many domestic fabricators are struggling and competition is intense. In this area as well, government imposed stimulus as well as foreign imposed taxes, are likely to shape the dynamics of the industry going forward. Some lobby groups are working hard to promote Turkish jewellers abroad. If for example ten companies in the same sector establish a subsidiary abroad they get 70% of costs subsidised. As we write the Turkish electorate is due to vote in a referendum over power consolidation and the uncertainty over the domestic outlook is leading some to look abroad. The outcome of the vote may lead to yet another shift in the domestic market dynamics.

JAPAN

- ***Jewellery fabrication volumes held firm in 2016, boosted by a lower domestic gold price.***
- ***Japanese investment demand was also stable, remaining at elevated levels,as investors took advantage of the low price to rebuild inventory.***
- ***Increased demand for plating solutions and a recovery in bonding wire production was not sufficient to offset falls elsewhere as industrial offtake slipped 3% year-on-year to an estimated 85.8 tonnes.***

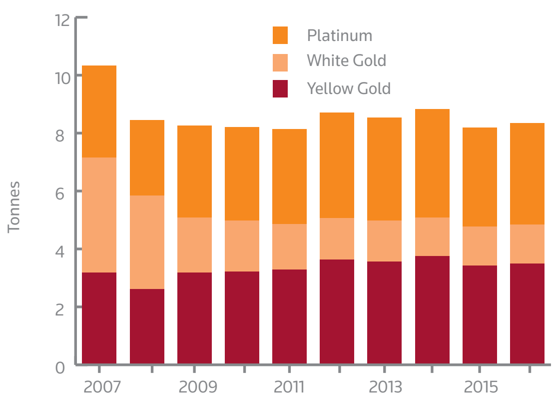
In a year when global jewellery consumption for gold saw a material fall Japanese offtake held up remarkably well in 2016 considering the parlous state of the domestic economy, with the market little changed on 2015 volumes. Economic uncertainty has for many years dogged retail spending in Japan as the country has struggled to achieve a steady recovery after decades of deflation and stagnation. Prime Minister Shinzo Abe has been trying to accelerate an economy that, since he took office at the end of 2012, has created millions of new jobs but little wage growth. Economic output has oscillated between expansion and contraction, with a number of stimulus programmes failing to produce sustained growth. In June last year Prime Minster Abe announced he would delay a planned increase in the national sales tax by two and a half years. Then in August the government detailed another package of financial measures that was estimated at 28 trillion yen, or $274 billion, equal to more than 5% of Japan's gross domestic product after the economy again stalled in the first half of the year, stymied by a stronger currency which severely impacted exports.

Economic activity performed relatively well in the final quarter of 2016 as the weakening of the yen following Donald Trump's victory in the November U.S. presidential election and a modest pick-up in global growth supported business confidence. Although GDP expanded for the third consecutive quarter in Q3, the reading was revised down due in Q4 due to a worse-than-expected performance in private investment. A recovery in the performance of the Nikkei in the final months of the year also buoyed investors, breathing a little life back into the retail sector.

While Japan's weak economic environment provided little stimulus to the retail sector a healthy rise in tourist visitors and importantly spending from this sector boosted demand for consumer goods across the country. According to data published by the Japan National Tourism Organisation (JNTO) 24 million people visited Japan in 2016 which is a record high for the country. Double the figure of just two years ago and a year-on-year rise of almost 22%. Visitors from China, at 6.4 million, expanded by 28% year-on-year, with Korea and Taiwan the next largest markets. Spending by tourists was estimated at ¥3.75 trillion ($33 billion dollars), a 7.8% gain.

The volume of fine gold used in Japanese jewellery fabrication last year is estimated to have increased only at the margin, or by less than 1%, to around 13 tonnes. After a strong start to the year which saw fabrication enjoy a 9% year-on-year rise in the first quarter demand fell away thereafter, impacted mainly by the softening economic environment. Demand was aided somewhat by a weaker domestic gold price which remained 6% weaker on an annual basis for both the first two quarters. The strength of the yen in the second half of 2016, and particularly following the Brexit vote in late June, cushioned the rise in the dollar gold price. The average gold price in yen terms last year declined 4% against an 8% jump in the US dollar gold price which may partly explain the stronger performance then many of the countries in the region.

JAPANESE JEWELLERY FABRICATION



Source: GFMS, Thomson Reuters; Japan Chain Makers Association

ITALY

- ***Gold jewellery fabrication fell by 7%, to an estimated 79 tonnes, in 2016. This was largely driven by lower demand from the country's key export destinations, although there was also continued weakness at home.***

The long-awaited recovery for the export-oriented Italian jewellery market has become an even more distant dream. Bleak trade data shows this as external demand for Italian jewellery dropped by 14% over 2016 (excluding December for which data is not available at the time of writing). Meanwhile our research suggests that the demand in the local market has also come under pressure as consumption continues to suffer from long-term structural shifts and economic and political uncertainties. The latter was hardly helped by the referendum and change in political leadership at the end of the year.

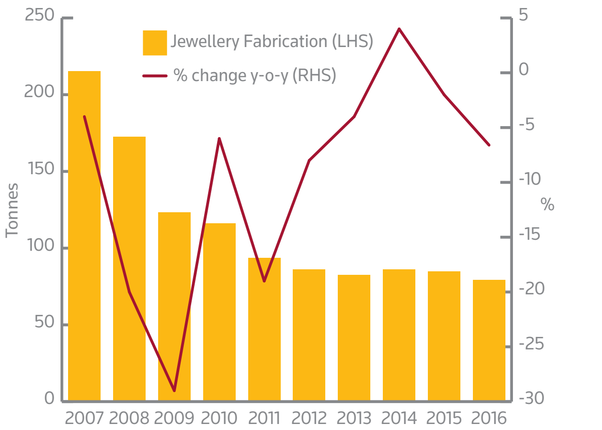
After a steady start to 2016 the drop in exports kicked in during Q2 and then accelerated, with Italian jewellery exports falling by an average of 17% year-on-year in the second half of the year. Shipments to the largest importer of Italian jewellery, the UAE, were down almost 24%. This a reflection of the poor state of Middle Eastern demand as the region grappled with fiscal constraints. However, the declines were more widespread for Italian jewellery demand than this. Gold jewellery exports to the second largest destination, Switzerland, were also hit, falling by 9%, although this should be viewed through the context of the fact that demand for Swiss precious metal watches was down by approximately 25%. Declines were recorded to almost all major European destinations (the UK was a Brexit-fuelled exception), with the drop to France, the fifth largest destination, at 24%, especially severe as that market suffered from soft tourist numbers and reduced demand for high-end goods.

Given the poor state of jewellery demand in China and Hong Kong it is perhaps unsurprising that exports to Hong Kong (the third largest destination) dropped by a fifth last year, although this was partially offset by gains in some other countries in the region, including Japan, Malaysia and South Korea. Shipments to North America declined by 5%, as exports to the US were steady but exports to Canada and Mexico plummeted by a quarter.

THE GOLD SURVEY'S GOLDEN ANNIVERSARY; ITALY'S ROLE IN THE JEWELLERY SECTOR

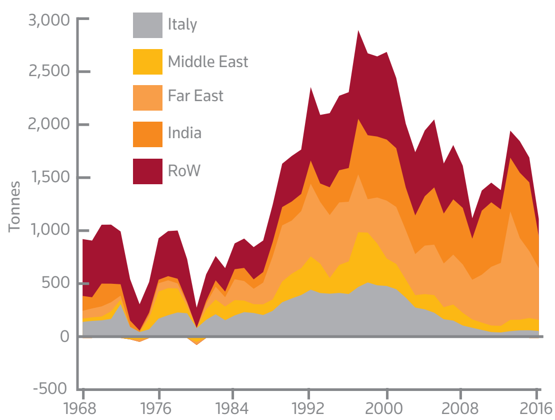
The accompanying chart shows the development of the jewellery fabrication industry since 1968. Back in those years Europe was the dominant fabricator of jewellery, with Italy the world's largest (although India was not far behind), at 145 tonnes or 16% of the world total. This reflects the Italian flair for design and for many years it was the world's largest jewellery fabricators, with sales split broadly evenly between North America, Europe and the Middle East. In 1980, with so many people selling jewellery back into the market in the wake of gold's rocket to $850/ounce, Italy actually commanded 70% of the world's fabrication! Its average market share over the 1970s and 1980s was 25%. Then the Indian market expanded rapidly in the 1980s following liberalisation. The accompanying growth in the Far East has meant that Italy, while still a force to be reckoned with, has had its share squeezed to below 10% of total.

ITALIAN JEWELLERY FABRICATION



Source: GFMS, Thomson Reuters

GLOBAL JEWELLERY FABRICATION BY COUNTRY/REGION



Source: GFMS, Thomson Reuters

SWITZERLAND

- ***Despite a strong end to 2016 gold investment in Switzerland edged lower for the year as a whole, to 43 tonnes, a nine-year low.***

While the pivotal role of the Swiss refining industry is central to trade flows, investment flows are much more subdued. Swiss investment started 2016 well, buoyed by the rallying price but interestingly demand was at its healthiest at the tail end of the year as the Swiss franc price slipped lower. Indeed, field research indicates that there had been a pickup in investment demand from Italian clients around the time of the Italian referendum, both in Italy and in Switzerland, although the latter in our view is predominantly in the Italian speaking part of Switzerland. However, in both cases the volumes concerned are relatively small. In the middle of 2016 demand had been subdued and there was also more sales than usual as prices moved sharply higher, to a four-year peak in the aftermath of Brexit.

The most dramatic shifts though were in manufacturing and sales of precious metal watches. From a strong Swiss franc, to the most protracted and substantial anti-corruption crackdown in China, to downturns in oil fuelled economies in the Middle East and Russia, the headwinds facing the Swiss precious metal watch industry are immense. Some commentators even argue that the introduction of smartwatches are a factor, although we are firmly of the opinion that while this is impacting the structure of the watch industry we believe that any impact on precious metal watches is marginal at most, not least because of the substantial difference in price points between these products. Indeed, a more significant factor for precious metals watches is lower tourist spending in Europe, particularly in France following terrorist attacks. The exception to this pattern is the UK market, where in the aftermath of the Brexit vote and the sharp decline in the level of sterling, sales of high end watches have risen sharply. As a result, the UK moved from being the eighth biggest market for Swiss watches in 2015 to the fifth largest overall last year (and third at its intra-year peak), according to data from the Federation of the Swiss Watch Industry.

Overall our field research indicates that precious metal watch manufacturing is down around 25% for gold and 45% year-on-year for platinum. This is partly a function of weak sales but there has also been significant destocking from retailers and manufacturers. Indeed, Richemont has publicly stated that it has bought back inventory to assist multi brand retail partners. In terms of the decline in gold, which uses 18-carat alloys, there has been a shift in the usage pattern as the decline in watch cases was around a fifth, while the drop in demand for profiles used in watch straps was more than a third as leather straps gained market share. This appears to have been driven partly by fashion but also because this can halve the price.

A topic that is less widely understood is that the watch industry generates a substantial amount of scrap during the various stages of the manufacturing process. Consequently, this supply has dropped off for these refiners in step with demand. The amount of scrap from platinum watches has declined even more sharply in recent years as manufacturers have become increasingly familiar with using this metal.

OUTLOOK

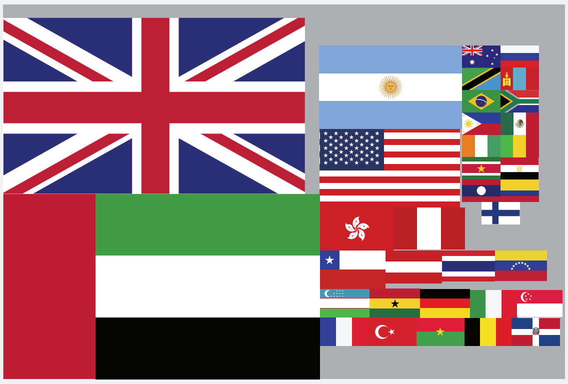
It can often be the darkest before the dawn, and to our eyes that characterised the situation in the watch industry at the turn of the year and there are tentative signs of stabilisation in 2017. For example the Middle Eastern and Russian markets may be bolstered a little from slightly higher energy prices. More significantly, the destocking that impacted the industry substantially throughout 2016 will stop being a drag in 2017, albeit it is likely to be the second half of the year before a genuine recovery occurs. Meanwhile, we think that the string of European elections and geopolitical risks may well lead to a rally in Swiss investment demand, plausibly to a four-year high.

SWISS FRANC GOLD PRICE (PER OZ)

Source: LBMA, Thomson Reuters

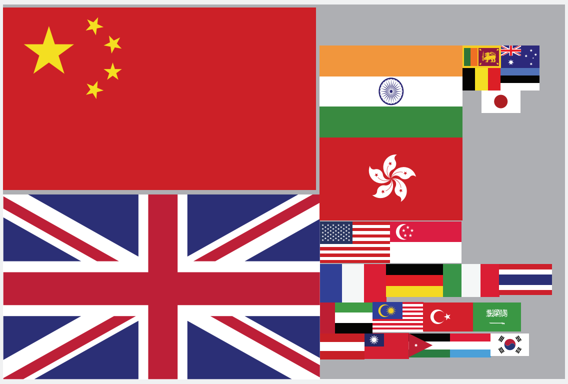
SWISS GOLD BULLION TRADE

2016 Imports



2,697 tonnes

2016 Exports

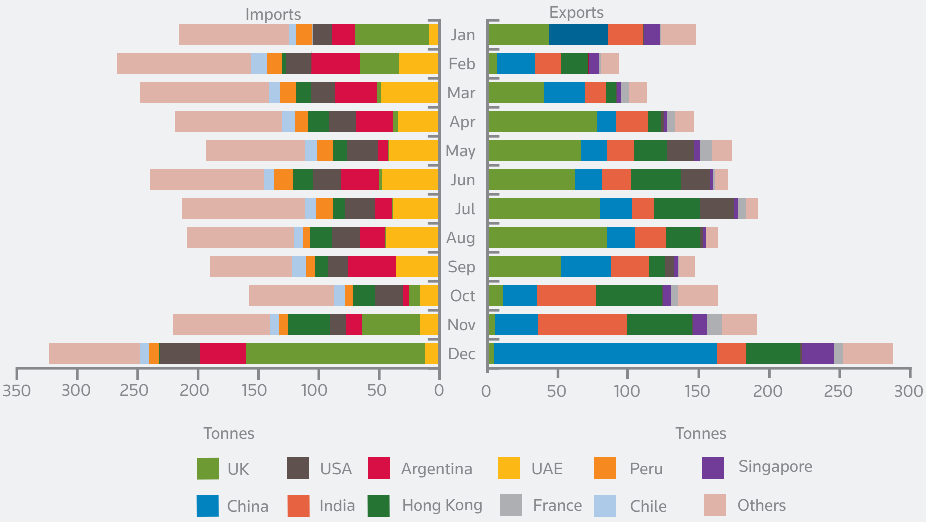


1,991 tonnes

Source: GFMS, Thomson Reuters; 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.

2016 MONTHLY TRADE



Source: GFMS, Thomson Reuters; Swiss Impex

In 2016 Switzerland's gold imports increased by 46% largely thanks to a surge in supply from Hong Kong, Venezuela, Thailand and UAE. The UAE pulled itself to the top rung as the largest exporter of gold to Switzerland, rising approximately 400% year-on-year to 377 tonnes. Volumes gained traction from February last year as gold in India was available at a discount, and doré to India was being diverted from Dubai to Zurich after refining which was then converted to good delivery bars in Zurich. This trade however stalled after being active from February to September, also a period when the Indian market was at a discount to the landed price. During the fourth quarter shipments to Zurich from the UAE declined by 50% as refiners in India refined 65 tonnes as against the previous two quarters averaging just 12 tonnes, suggesting a strong inter relationship. On the other hand, exports from the UK to Switzerland declined by more than half on increased demand from ETF's, leading to gold moving to allocated accounts.

For exports the influence of western investors was evident in the surge in exports to the UK and US, up 2,000% and 900% respectively, although the former was also influenced by London being the terminal market at a time of weak Asian demand. Indeed, India's rank as the largest export destination shifted to third place as tax regulations led to a decline of 37%. Hong Kong remained the major route of China's gold imports, with its market share increased from 54% in 2015 to 59% in 2016. However, during the final month of last year, over 150 tonnes of gold (compared to a monthly average of 24 tonnes in the first 11 months) were shipped from Switzerland directly to China, with the majority tonnage shipped to Shanghai's Free Trade Zone. The decline in unofficial flows to India in the form of tola bars was also evident from the 45% drop in exports from Switzerland to the UAE. Its inter-relationship stems from fact that tola bars are largely smuggled from the UAE to neighbouring countries and hand carried to India. Additionally, a drop in GCC's investment demand was yet another reason for the decline in exports of Swiss minted medallions and coins. Saudi Arabia, which otherwise imported on average 55 tonnes in the previous two years, reported a decline of 77% year-on-year to only 12 tonnes.

* All tonnages calculated from trade values in Swiss francs.

COUNTRY SECTIONS

RUSSIA

- ***Jewellery consumption continued to fall in Russia in 2016. We estimate a drop of 12%, but the pace of decline was markedly slower than in 2015, helped by gold regaining market share from silver albeit in the form of lighter pieces.***

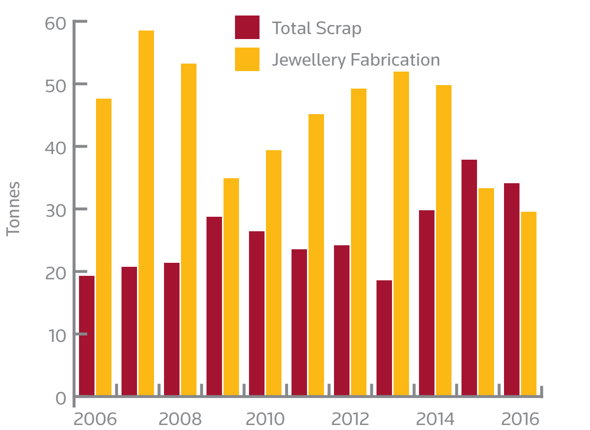
- ***Despite record rouble gold prices, scrap supply eased by 10% year-on-year in 2016, to 34 tonnes, as the phenomenal record high of the previous year proved unsustainable.***

The Russian gold industry is understandably known for its mining and refining with output of 254 tonnes, which is the third largest globally, and rising, and the fact that for the last five successive years the Central Bank of Russia has been the largest reported acquirer of gold. Last year it purchased 201 tonnes. These elements are discussed in greater detail in the mine supply and official sector chapters and hence here we focus on jewellery and scrap.

We estimate that Russian gold **jewellery consumption** slipped to 30 tonnes last year, the lowest level this century. In many ways though this can be viewed as a victory for the industry and marks an upward revision to our previous numbers. Recent local field research, though, suggests glass half full view of gold jewellery consumption in the country is justified in light of the broader conditions. The Russian economy continued to contract in the teeth of sanctions and still relatively low energy prices, resulting in a continued squeeze on consumers' purchasing power. Against this backdrop consumer spending was constricted, especially on discretionary items, while an 18% higher average rouble gold prices in 2016, for another all time high, of RUB2,601/g, added further pressure. Despite this, gold jewellery consumption dropped by 12% in our view, a marked improvement compared to the halving in 2015. Partially this slower pace is due to the fact that the rate of economic decline has eased and the increase in the gold price on an average basis was substantially lower; indeed the all time price highs in rouble terms were recorded early in the year and prices actually ended the year a little softer. However, another crucial aspect was that whereas the initial reaction to the dramatic price rise had been a slight, reluctant, shift from gold to silver pieces, last year there was a shift back towards gold, albeit in the form of lighter pieces. Indeed, it is our view that in the closing months of 2016 the number of pieces of gold jewellery actually started to rise again, just, but the decline in the gold content per piece meant that there was still a decline year-on-year in gold usage.

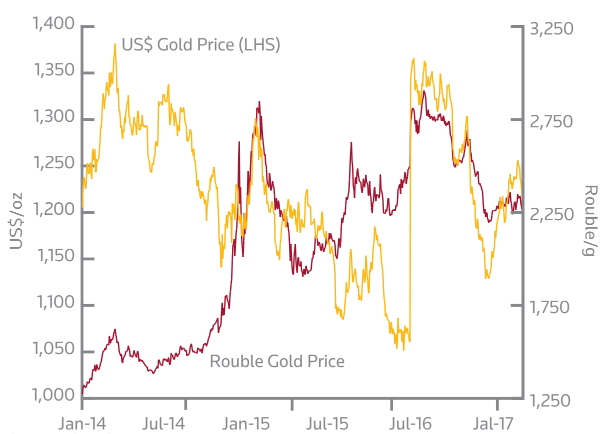
Scrap supply fell in 2016, by 10% to 34 tonnes, with supply at its softest at the end of the year. Given the all time price high in rouble terms, on both an intra-year and annual average basis, and an economy that is still in recession, this is a surprising result. Taking a step back though, it is clear that the 34 tonnes is still an impressive level by historic standards - it is still nearly double the level as recently as 2013 after all. It is also clear from discussions that there is a lack of near-market stocks. **Looking ahead**, and assuming there is not another bout of rouble weakness, then it is plausible that by the end of this year domestic gold jewellery demand may be rising for the first time since 2013 as the long-standing affinity for gold in the Russian market comes to the fore again. Meanwhile, we expect to see scrap supply dropping further unless there is fresh all time price highs in rouble terms.

RUSSIAN JEWELLERY FABRICATION AND SCRAP



Source: GFMS, Thomson Reuters

GOLD PRICE IN US DOLLAR AND ROUBLE TERMS



Source: GFMS, Thomson Reuters

GERMANY

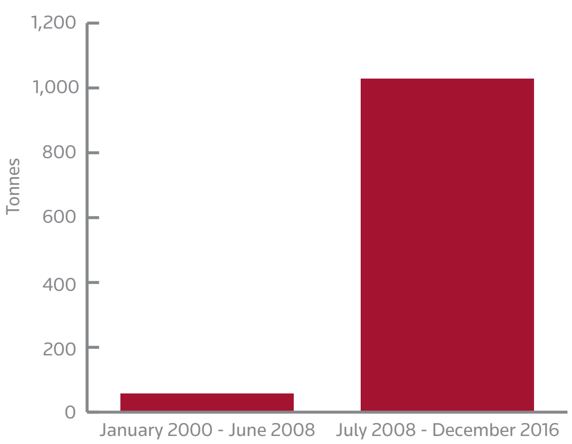
- ***German gold investment had a rollercoaster ride in 2016, being unexceptional in the first half, then experiencing an unusually high level of selling in the aftermath of Brexit before accelerating to end the year exceptionally strongly.***

German jewellery and dental demand for gold continued to ebb lower in 2016, partly due to structural factors. However, the greatest variability was in investment, which is also the largest source of demand in this country. Investment was unspectacular during the first half of 2016 and then there was an unusually high level of sales in the aftermath of the Brexit induced price spike. However, demand started to recover in September and the final quarter of the year saw interest rising each month against its predecessor. In fact, demand in December was exceptionally strong. It is typically a busy month for retail investment demand anyway, due to the purchasing of gold as gifts as well as investors receiving bonuses which they allocate some or all into gold or silver. Field research made clear that even after accounting for seasonality demand was very strong. This pattern also continued in January 2017 which, while markedly softer than in December was also experiencing demand at a seasonally very high level. The picture started to change in February, and while more mixed, it was more a case of demand returning to normal levels rather than weakness.

Underpinning this view, German bund yields have hit record lows, as fears grew about a victory for the far right presidential candidate, Marine Le Pen, in France as she continued to lead. These negative nominal yields and even worse real yields make gold an attractive option for many investors. This attractiveness for asset allocation is also highlighted by the fact that the DAX, the German stock exchange (at time of writing in early March) is also near multi-year highs which is off-putting for some investors as they see limited upside. Arguably even more important than these economic factors have been concerns about the geopolitical landscape. There is a whole laundry list of topics that fall under this umbrella which are individually or collectively motivating investors. The most often but far from an exhaustive list were the election of President Trump, the potential for another bailout of Greece, the elections in France and the Netherlands and Brexit. Given this backdrop it is hardly surprising that German investors have highlighted once again their affinity for gold. We have raised our estimates for gold bar demand for the final quarter to a gain of 41% year-on-year. It is interesting to note though that this did not, quite, prevent a decline for 2016 as a whole, albeit a marginal one. This was due to the price induced selling in the aftermath of Brexit, ensuring a softer period over the summer. The bigger picture though is that this was another of year of at least 100 tonnes of purchases by German retail investors. If we split the 17 years from the beginning of 2000 in two 8.5 year periods, the first half (i.e. up to the end of June 2008) saw total net buying of 54 tonnes. Since then in response to the "Financial Crisis" there has been an estimated 1,026 tonnes of net purchases.

Elsewhere, and more unusually, the German gold ETF, Xetra has seen holdings rise very aggressively since Trump was elected President. The day before that vote holdings were shy of 96 tonnes; by early March they had risen to 161 tonnes. This is interesting as the fund has been in existence since 2007 and had by German gold investment standards seen a relatively modest increase over this long period, although the pace had accelerated appreciably in 2016. The former slow pace showed that Germans have a preference for physical over gold ETFs. However, the recent activity appears to be different in character, possibly highlighting the involvement of institutional interests rather than an unprecedentedly widespread uptake of this fund from investors. Indeed the growth since 8th November has occurred on only a handful of days, suggesting large scale purchases.

GERMAN RETAIL INVESTMENT



Source: GFMS, Thomson Reuters

This year has got off to a cracking start for the investment community for gold and while there is huge uncertainty the fundamental underpinnings of this appear likely to be a recurring theme in 2017. Therefore, we expect a year of higher German investment due to the combination of negative bond yields and elevated geopolitical tensions.

UNITED KINGDOM

- ***A Brexit fuelled price rise sparked a sharp upturn in investment and scrap supply, while gradually causing jewellery demand to stutter.***

Clearly the referendum result was the single most influential moment on the precious metals sector in the UK in 2016, despite the fact that almost half the year had already passed. The vote on 23rd June to leave the EU sparked an overnight plummet in the value of sterling as it hit a 31-year low against the dollar for example, from which it has yet to recover, despite a great deal of volatility in the meantime.

Towards year-end, jewellery demand, which had already been struggling, was deteriorating further as the optimism at the time of the International Jewellery London show in September proved to be largely illusory as it struggled to translate into orders. The intervening period has done little to provide any justifiable reasons for solace. The markedly higher precious metal prices post Brexit, as shown below, exacerbated by the exchange rate have clearly been biting and unsurprisingly margins have been squeezed. Indeed, in early 2017 we believe that the full impact on sales has yet to be felt through the entire retail sector as a significant portion have not factored in the full price rise.

There is also growing evidence that the market is likely to get tougher still for retailers. The inflationary impact on prices is starting to be felt by the consumer leading to a tightening of budgets, while pay rises have started to decline. Given this backdrop it is unsurprising that retail sales have been down two months in a row (after stripping out seasonality). What's more, business rates are likely to squeeze jewellers, especially in the south-east as rental prices have risen substantially since they were last reviewed. Against this backdrop it is perhaps to be expected that a number of contacts have said that the recent industry gathering in Birmingham was a grave disappointment and business has been painfully slow in early 2017.

WEAK STERLING IS NOT ALL BAD

In contrast, **investment demand** and **scrap supply** have understandably been buoyant since the Brexit vote. The effect was almost instantaneous and while in both cases it has ebbed and flowed since those extraordinary peaks - demand doubled for some at its zenith - especially for scrap. For 2016 as a whole scrap supply was up an estimated 26% for gold and continues to be up substantially so far in 2017. This has broken the run of four successive years of declines in scrap supply and is likely to be further buoyed by the return to gold around £1,000 per oz again in February 2017. Meanwhile **bar hoarding**, which also experienced a period of marked sales, was up by an estimated 39% to 9.6 tonnes of gold last year and has begun 2017 in robust fashion. We are also of the view that this is not solely due to the price affect but is also supported by concerns around Brexit, Eurozone elections and Trump.

OUTLOOK

On the jewellery side of the market it is hard to be positive, particularly for high street retailers, with the partial exception of high-end jewellery in London which is being bolstered by tourists. In fact, there are signs of life for the usage of platinum aided by the marked discount to gold is encouraging manufacturers and retailers to push this option. And finally, attempts to standardise EU legislation around VAT on gold led to the eradication of VAT on gold sales in the UK, supported by the Value Added Tax Act 1994, which came into force on January 1, 2000. It is currently far from clear how Brexit will pan out but if the legislation is not replaced in UK law then this is likely to cause a substantial dent to gold investment in the UK and could shift demand into illegal areas.

STERLING GOLD PRICE (£ PER OZ)

Source: LBMA, Thomson Reuters

COUNTRY SECTIONS

SOUTH KOREA

- ***Internal conflicts, along with a slowdown in exports, put South Korea's economy into a somewhat desperate situation in 2016. The restructuring of the ship building industry, the nationwide labour strike of the domestic auto industry, and the ever growing scandal surrounding President Park, all put a dent in domestic spending sentiment and impacted demand for precious metals.***

- ***South Korea's demand for gold declined across the board last year. Following a 29% rise in demand for gold bars in 2015, demand dropped 24% in 2016. Softer industrial demand also resulted in a near 9% decrease of gold consumed from this sector last year. Meanwhile, domestic jewellery fabrication demand fell 6% year-on-year to an estimated 26.3 tonnes.***

We estimate gold investment demand in Korea surged 29% in 2015. One would assume that given the lacklustre economic performance of the country, along with a strong performance in the gold price, investment demand would have continued to hover at elevated levels. However, this was certainly not the case in Korea, where people remained pessimistic about the economic outlook with many not convinced their jobs are secure. Thus many prefer to maintain liquidity at high levels and to hoard cash instead of thinking about other investments. As a result, demand for gold bars dropped 24% year-on-year, to an estimated 15.6 tonnes last year.

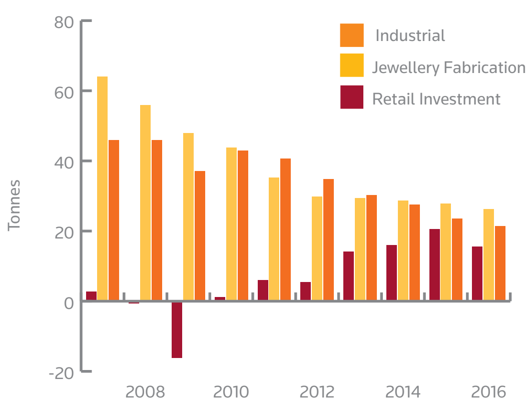
Given consumer sentiment remained cautious in the face of a gloomy economic outlook, it comes as no surprise that demand from the jewellery sector also decreased. Pure gold jewellery, which saw strong growth and constituted approximately 20% of total gold jewellery demand in 2015 (14-carat and 18-carat made up the rest), saw a substantial drop last year. In fact, many locals explained that the Korean culture has been changing in recent years, and that while in the past friends and families would offer a new born baby pure gold jewellery pieces as blessing gifts, more and more have now been simply gifting cash instead. The country's jewellery fabrication volume is estimated to have dropped 6% year-on-year to 26.3 tonnes in 2016.

On the other hand, a relatively stronger won (compared to the yen and yuan) made Korean products relatively more expensive to overseas buyers. Lacklustre overseas orders from the semiconductor sector, particularly in the first half of last year, negatively impacted the industry's demand for gold. In addition, a large domestic gold bonding wire (GBW) fabricator also encountered some operational problems which affected production for a few months. As a result we estimate that Korea's industrial demand for gold declined by 9% last year, to 21.5 tonnes.

To conclude, Korea's total gold demand dropped 12% to 67.4 tonnes in 2016. The fall in demand is mostly due to dwindling investment demand, and to a more pessimistic view from the population on the domestic economic outlook, which is leading people to maintain liquidity at high levels and hoard larger cash reserves.

While orders from the semiconductor sector rebounded during the second half of last year, and order books remained at similar levels during the first two months of 2017, there are still several issues that could potentially hamper Korea's economic outlook this year. First Trump's protectionism policies could harm Korea's exporting industries, as about half of Korea's GDP relies on its exports. Secondly, there are talks that China has expressed its displeasure at South Korea over its intention to install a U.S. backed missile defence system which may lead to sanctions imposed on Korea, including stopping Chinese travel agencies organising group tours, which could cause huge impact on the domestic tourism industry. Further disturbance to the Korean economy would certainly affect its economic growth and hence its demand for gold.

SOUTH KOREA GOLD DEMAND



Source: GFMS, Thomson Reuters

COUNTRY SECTIONS

INDONESIA

- ***Indonesian jewellery demand fell by 10% year-on-year as a weaker rupiah drives gold to a record high.***

Jewellery fabrication in Indonesia is understood to have fallen to 43.5 tonnes in 2016, down 10% from 2015 volumes. This marks the third consecutive annual decline pushing offtake to a six-year low. Last year it was the stronger gold price that dulled the retail sector driving jewellery demand lower across the archipelago. Indeed, while the dollar gold price was well below its 2011 peak, the average gold price in rupiah terms rose 7% last year, peaking in July at an all time high when the local price briefly breached 575,000 rupiah per gramme due to the weakness of the local currency.

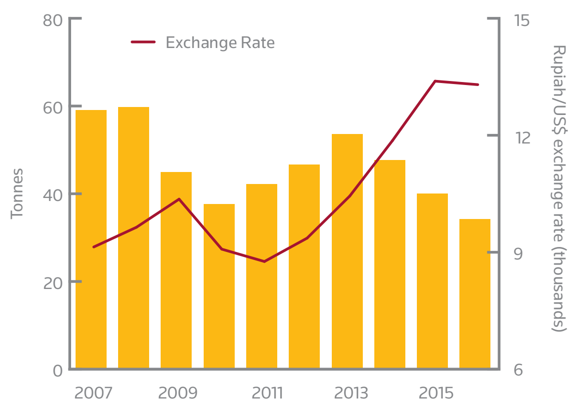
In addition to these price pressures the Indonesian economy also played a role in negatively impacting consumption across the country as consumer sentiment remained weak. South-east Asia's largest economy remained subdued in 2016 after the fourth quarter growth dipped below 5%, weaker than expected and a second straight quarter of slowdown. Annual economic growth moved back above 5% in 2016, only just. In 2015, growth slumped for a fifth straight year, falling to 4.8%, the lowest since 2009.

The year started well with traders across the supply chain suggesting January offtake was the strongest in several years but as gold prices moved higher thereafter demand started to wane and remained subdued for much of the year. There were periods of renewed demand in the final quarter as gold in local terms retreated below 500,000 rupiah per gramme in December, encouraging restocking by both consumers and the supply chain, but this brief wave of interest was not enough to offset earlier losses. After a weak year exports also returned in the final quarter with shipments to the Middle East and Hong Kong markedly stronger but for the most part were down on previous years. Healthy demand from the United States for much of the year did provide some much needed support to local fabricators though overall volumes were relatively modest.

The elevated level of the domestic gold price encouraged profit taking during several months of the year in 2016 though a wave of fresh demand in December helped lift the annual retail investment total by 6% to an estimated 12 tonnes. In addition, scrap collection also benefited from the higher gold price with supply estimated to have risen by 20% in 2016. The Indonesian market is somewhat unique in that jewellery is often recycled and resold via retailers rather than being collected and melted. It is not unusual, particularly in rural areas, for the same item to be returned to the retailer three or four times before it is eventually sent for refining. These traders clean and repolish the piece before selling it again, often at a lightly discounted price given it is regarded as second hand. The notable change last year was that consumers were less willing to upgrade to a new design and preferred instead to cash in their jewellery items. This impacted local consumption volumes and has resulted in a build up of inventory that retailers have been forced to liquidate in order to manage cash flows. Local refineries have confirmed that they saw a notable rise in jewellery scrap this year with the bulk of these flows seen in the third quarter.

Not all gold collected for recycling is jewellery scrap or investment bars with gold doré collected from artisanal miners across the archipelago also boosting supply and lifting exports. The true size of artisanal mining in Indonesia has always been very opaque given the unofficial nature of the trade. In recent years the team at GFMS has worked hard at quantifying the size of this market and to understand the flows of this metal during research trips there. The collectors of this material are well organised and have the facilities to refine and upgrade the gold doré produced. It is often sold to jewellery fabricators across the country that prefer purchasing this material, often at a discount, then purchasing LBMA accredited bars from the banks or refiners.

INDONESIAN JEWELLERY CONSUMPTION



Source: GFMS, Thomson Reuters

MALAYSIA

- ***Malaysian gold jewellery fabrication slumped 21% in 2016, dragged lower by weak domestic consumption and softer export demand.***

- ***Investment rose marginally as investors replenished stocks at year's end as gold prices retreated.***

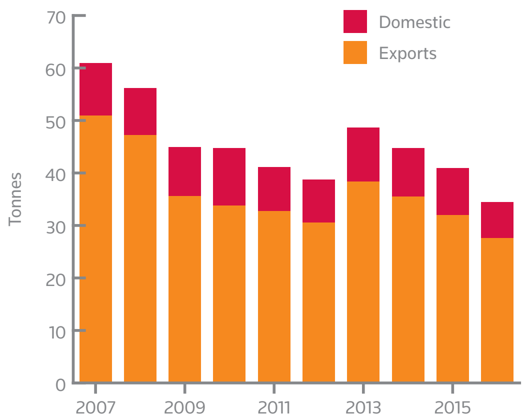
Malaysian jewellery fabrication volumes failed to rebound from the heavy losses experienced in 2015 to record another material fall last year. Domestic gold consumption in Malaysia was hit hard in 2015 following the introduction of a 6% goods and service tax (GST) that was introduced on the 1st April that year. Those across the supply chain had hoped the market would rebound from the lows in 2015 but unfortunately this was not the case with jewellery fabrication retreating a further 16% year-on-year to an estimated 34.4 tonnes, a level not seen since the late 1980s. A weaker currency pushed the average domestic gold price 14% higher last year, with the sharp rise keeping many consumers on the sidelines. Indeed, jewellery consumption in Malaysia fell by more than the price increase, almost 25% year-on-year.

Aside from the obvious price impact consumer sentiment remained subdued last year as economic and political issues dominated the market. The Malaysian economy expanded at a slower pace of 4.2% in 2016 when compared with the 5% expansion in 2015. The modest drop was a reflection of weaker commodity prices, policy uncertainties, heightened risk aversions in the global financial markets, as well as geopolitical developments.

Domestic unrest among sectors of the population saw street protests aimed at the government. Protestors marched to demand the resignation of Prime Minister Najib Razak, whom they accused of heading a corrupt public service and allegedly embezzling nearly $700 million, although Najib ardently denied all allegations of malfeasance. Meanwhile several sectors of the economy have started showing signs of a recovery. Growth in the services sector continued to expand at 5.6% while in construction expansion remained driven by the civil engineering sub-sector, recording a growth of 7.4% on an annual basis. However in the agriculture sector, which contributes around 8% of GDP, economic activity contracted 5.1%, reflecting the impact of El Niño on crude palm oil yields.

The Penang based jewellery fabricators, whose exports make up the bulk of the country's fabrication volumes, also faced their own challenges last year as most key markets were materially weaker. While several of the larger fabricators are solely export focused (primarily the Middle East, India, and Hong Kong) there are a number that oscillate between supplying the domestic market and exporting surplus product. In most cases the preference is to supply the local market as margins are far higher than abroad where stiff competition drives labour charges lower. The Dubai market remains the largest destination for Malaysian made jewellery (mainly 22-carat items) but as with 2015 this market remained weak with demand intermittent and driven largely by price fluctuations. Following a near 10% year-on-year drop in first quarter consumption, demand in the UAE and broadly across the entire GCC and surroundings regions fell away sharply thereafter, only recovering some lost ground in the final months of the year.

MALAYSIAN JEWELLERY EXPORTS



Source: GFMS, Thomson Reuters

The Saudi market, which had outperformed most in the region the previous year and accounts for a significant proportion of the Malaysian flows into the UAE recorded a precipitous fall in offtake last year as a weaker economy drove consumer spending lower. A number of Penang fabricators noted stronger demand from Hong Kong last year, though this was primarily for niche product lines that are not easily available on the Chinese mainland.

COUNTRY SECTIONS

THAILAND

- ***Thai investment demand declined 15% in 2016 while jewellery fabrication retreated 14% year-on-year to a four-year low as the passing of the Thai king dragged the gold market lower in the final quarter of 2016.***

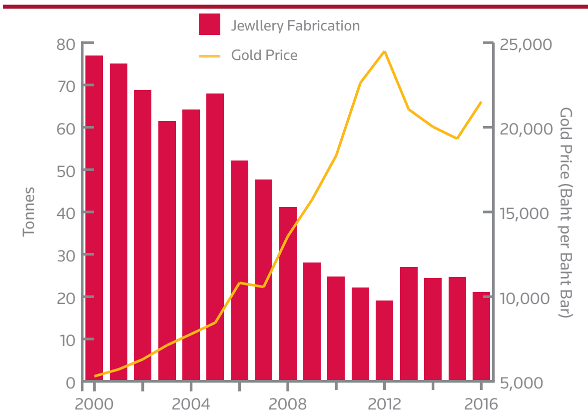
Thailand's gold market struggled in 2016 as higher gold prices and soft economic growth impacted consumer sentiment. The passing of Thailand's much beloved King Bhumibol Adulyadej in mid October was another blow to the retail industry as demand following his death was almost nonexistent with consumers mourning his death staying home, reluctant to purchase luxury goods. On the investment front, sellers had the upper hand for much of the year with retail investment demand slipping to a seven-year low of 58 tonnes.

Thailand is one of the largest physical markets in South East Asia with gold playing a central role as a simple non complicated investment option that can be easily liquidated should the need arise. It is widely used in rural areas as a savings vehicle as there remains a lack of services but also trust in the financial services sector. Annual net physical investment demand exceeded 100 tonnes during the 2011-2013 period, peaking in 2013 at almost 150 tonnes. Since then, and with gold losing some of its lustre as it has tracked lower, investment demand has waned as would-be buyers have looked to other asset classes for a stronger return. There were intermittent pockets of demand last year, as gold prices occasionally retreated, but many mum and dad investors were reluctant to enter the market believing gold had little upside potential. In a clear indication of the mood of the investment sector in Thailand, the first nine months of 2016 was dominated by sellers with bullion exports surging to multi-year highs as consumers booked profits. Demand, and as a result imports, only returned in substance in the final quarter of the year with bullion imports in the final three months accounting for more than 50% of the annual total. Bullion imports for the full year reached 145 tonnes, a year-on-year drop of 25% and the lowest level since 2009. Meanwhile, exports surged almost 80% on an annual basis to a four-year high of 175 tonnes.

Despite a healthy recovery at the end of the year as lower gold prices encouraged consumers back to the market, jewellery fabrication in Thailand retreated by 14% year-on-year to an estimated 21 tonnes. Domestic consumption was driven lower by higher gold prices (the domestic gold price rose 11% last year), a soft economic performance (the Thai economy expanded at just 3.6%), and the death of their much beloved king in October. The king's untimely death concluded a reign that lasted more than seven decades and initiated a year-long period of mourning, bearing substantial consequences for the nation's luxury and fashion sectors. The fourth quarter of the year is usually the peak tourism period and the months that retailers enjoy the strongest sales during the holiday season. Last year, however, the mood was very sombre with many retailers cancelling all promotions and activities relating to sales in October and November and this, not surprisingly, has had a severe impact on sales demand. The gold sector too was badly affected with jewellery and ornament sales in October acutely lower as the country was in mourning. Several Chinatown traders reporting monthly sales were down by as much as 50% for the period. As a result, jewellery offtake slumped 22% in the final quarter, with full year consumption weaker by 20% on 2015 volumes.

The jewellery export sector was also weaker for much of 2016 as demand in key markets eased as higher gold prices and economic headwinds limited orders. After solid gains in 2015, gross exports last year were down 19% year-on-year with falls seen in most of the major markets. The United States, which is the largest destination for the Thai market, saw shipments ease 9% on a gross weight basis.

THAILAND JEWELLERY FABRICATION



Source: GFMS, Thomson Reuters

VIETNAM

- ***Vietnam's jewellery market holds up surprisingly well in 2016 while investment demand stabilises.***

In a year when many countries in Asia suffered significant declines in jewellery consumption a country moved against the tide to register a modest gain. **Vietnam** looks to have recorded its fourth successive annual increase in jewellery consumption with an estimated 3% year-on-year rise. In 2015 Vietnamese gold consumption jumped 11% to a six-year high as weaker gold prices and demand for pure gold jewellery boosted domestic offtake. In 2016 jewellery demand looks to have maintained this growth trend despite the annual average local gold price rising 10% year-on-year. As was the case in 2015 it was demand for pure gold jewellery (mainly rings) that instigated the rise, offsetting several other purity segments that have struggled to maintain growth. In previous articles on Eikon and in the GFMS Gold Survey we have discussed how government intervention has reshaped the Vietnamese gold industry. To recap, in May 2012, concerned that the sharp rise in bullion imports was impacting the current-account deficit the government of Vietnam introduced new legislation (Decree No.24) on the management of gold trading activities which essentially placed production, import and export of gold, and trading of gold bars/bullion in the hands of state-appointed organisations.

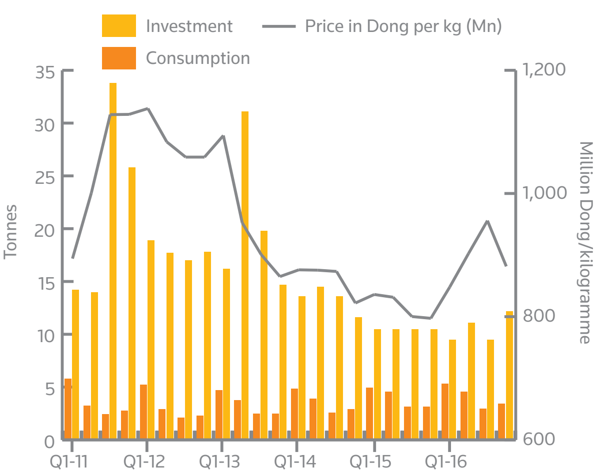
This move by the State Bank of Vietnam (SBV) has restricted access to investment bars in the domestic market, especially in rural agricultural regions, and as a result consumers wishing to purchase gold as means of investment, something discouraged by the authorities, have had to look to alternative sources. There are three main options. Firstly, to purchase local Saigon Jewellery Company (SJC) bars through the small number of banks given licences to sell the product, often sold at a hefty premium to the international price, or to buy unofficial gold bars that have been smuggled into the country. These are mainly 4 9s kilo bars that have had their logos removed and often cut into slices that are more affordable. The size of this unofficial trade is enormous with estimates ranging from 60-80 tonnes per year and entering the country mainly from Cambodia. We are also aware of gold smuggled from China and Laos.

The final option for consumers is to purchase 24-carat jewellery or medallions as a quasi investment option as they can be easily sold back for minimal losses should the need arise to liquidate. This 24-carat jewellery is sold capsulated, much like a small investment bar, and attracts a much lower mark-up then that of the official ten tael bar (375 grammes or 12.1 ounces) and is in greater supply and far more accessible than the SJC bars. Demand for this product has been strong in agricultural areas where it is common to purchase gold after harvest. Indeed, it is the strength of this jewellery segment primarily that has driven the expansion of the Vietnamese gold market this year.

Like many markets in the region lower carat jewellery has gained market share in recent years, mainly as result of the higher price that has forced fabricators to offer an affordable product to the masses. Products of 10 and 14-carat, both plain and gem set, have been gaining market share, selling well among the younger generations who are attracted by the lower price point. Branded jewellery outlets are on the rise with the country's largest retailers expanding their empire at a rapid rate in recent years.

The wholesale market looked to be the area where demand was down last year. Plain jewellery of lower purity had been selling well in urban centres where the economy was stronger but demand was weaker outside the major cities. Severe drought and then flooding across large swathes of the Mekong Delta region and central Vietnam in 2016 have reduced income for many rural residents who after clearing their bills after harvest have less surplus cash.

VIETNAM JEWELLERY CONSUMPTION & RETAIL INVESTMENT



Source: GFMS, Thomson Reuters

COUNTRY SECTIONS

MIDDLE EAST

- ***Jewellery consumption across the Middle East as a bloc was down heavily in 2016, falling 19% year-on-year to an all time low, dragged lower by higher gold prices but also as a result of a weaker economic environment.***

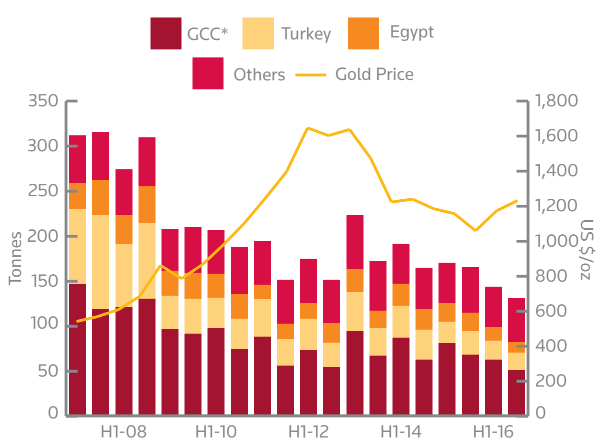
The **UAE**'s jewellery trade faced one of the most challenging years in recent history, to an extent questioning its sustainability as a gold and jewellery trading entrepôt. However, its position as a gold trading hub was proven with the volumes that were refined and exported to Switzerland (detailed in Switzerland section) making it the largest exporter to Switzerland. This helped the transformation of its image from being regarded as a country of lower compliance, related to risks in the supply chain to being on par with the developed world. Jewellery demand on the other hand declined sharply, by 16%, due to a easing in tourism growth with 14.9 million visitors last year as compared to 14.2 million in 2015 and 13.2 million in 2014. Moreover, the growth rate for Indian tourists halved compared to the previous year. As demand declined, the most affected were small sized jewellers who are seeing customers shifting to large stores primarily run by Indian jewellers. Thus it shouldn't surprise when large retailers speak of an increase in turnover volumes while smaller stores are experiencing a drop in retail sales of more than 50% on an annual basis.

Demand in **Egypt** looks to have fallen sharply in the final quarter of 2016, delivering the second consecutive annual fall after a period of sustained growth following the uprising that led to the overthrow of Egyptian President Hosni Mubarak in January 2011. Jewellery consumption is estimated to have fallen to an all time low of 28 tonnes, a drop of almost 54% from the level a decade earlier. The country's currency crisis in November that saw the pound lose 48% following the depegging from the dollar has resulted in an almost doubling in the local gold price which has severely impacted retail spending, with gold jewellery demand a casualty of the drop in sentiment. The sharp rise in the local price and the desire for US dollars has seen a wave of gold exit the country in recent months. Indeed, Dubai and Lebanon have been awash with gold from this market.

Iran was the one bright spot in a gloomy market last year. Jewellery fabrication is estimated to have risen by 12% year-on-year to a three-year high of 32.5 tonnes. The market as a whole benefited from more favourable economic conditions as the economy recovers due to the bulk of western sanctions being lifted. **Kuwait's** jewellery consumption was weak last year, slipping 13% year-on-year as higher gold prices and concerns over rising taxation limited consumer spending. The Indian brands that have been rapidly expanding, catering mainly to the Indian sub-Continent expatriates and selling primarily 22-carat items, outperformed local brands that are focused primarily on 21-carat and 18-carat gem set designs.

Elsewhere in the GCC, **Bahrain** and **Qatar** faced similar economic headwinds that drove jewellery fabrication sharply lower, with the former slipping 12% to a four-year low while Qatar eased 9% year-on-year despite a modest improvement at year's end as gold prices retreated. Jewellery consumption in **Lebanon** was impacted by an economy that is straining with registered refugees now comprising over one-quarter of the population. The refugee presence is impacting local communities, adding to poverty and unemployment, and placing further pressure on the economy's already-weak public finances and infrastructure. Beirut received a significant flow of scrap gold from Egypt and Africa in 2016, the latter only when the Indian market was trading at a discount. The refugee influx was also a heavy weight on the economy of **Jordan** where jewellery consumption fell 16% to a three-year low.

MIDDLE EAST JEWELLERY CONSUMPTION



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

SAUDI ARABIA

- ***A weaker economy and a lack of price expectation drives jewellery fabrication to record lows in 2016.***

Following a healthy rise in 2015 **Saudi Arabian** gold demand looks to have recorded one of the worst results in close to a decade with jewellery fabrication weaker by 23% year-on-year to an estimated 31.6 tonnes. A weaker economic environment was central to the decline with traders suggesting consumers were not spending as a result, preferring instead to hold on to any additional funds. In 2015 Saudi gold consumption moved against the regional trend to record a 9% annual rise. In 2016 demand looks to have fallen sharply with all jewellery segments hit hard. Fabrication volumes saw a material decline while imports were also significantly impacted. Despite a modest uptick in December domestic consumption declined an estimated 26% in the fourth quarter, recording a 34% decline for the full year.

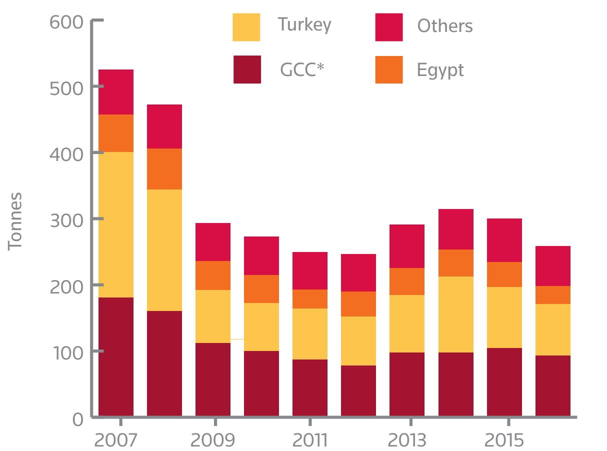
Like many countries in the region Saudi Arabia has been jolted by a severe oil shock. Crude oil that sold for over $100 per barrel in 2014 was trading at only $26 per barrel in February 2015 and while the price has subsequently hovered around $55 it remains half of what it was two years ago. The petroleum sector accounts for roughly 87% of budget revenues, 42% of GDP, and 90% of export earnings so it is not surprising that the hefty fall in the oil price has had a significant impact on the domestic economy.

Unemployment across the kingdom remains at elevated levels. Indeed, unemployment among all Saudis rose to over 12% in the third quarter of 2016, the highest since 2012. A quarter of all Saudis under 30 are unemployed, while foreigners are more than half of the labour force. It is not surprising then, given these statistics, that consumer spending came under severe pressure in 2016. Added to this has been the ongoing war with Yemen and the country's involvement in the Syrian conflict, both of which have also undermined consumer sentiment and added to the uncertainty. In a clear sign that the government is determined to rein in spending and look to increase non-oil revenue to balance the budget they announced measures such as value-added taxation that they hope will raise more than $100 billion in non-oil revenues by 2020. In addition to this the government announced that from 1st October last year Saudi Arabia will cut ministers' salaries by 20% and scale back financial perks for public sector employees to save money at a time of low oil prices. The measures constitute the first pay cuts for government employees, who make up about two-thirds of working Saudis. The National Transformation Plan published in June said the government planned to trim public sector wages as a proportion of the budget to 40% by 2020 from its current 45%, or a decrease in salaries from 480bn Saudi riyals ($128bn) to Sar 456bn by 2020.

Recent field research has confirmed our assumptions that the domestic gold market was in free fall in 2016. As a result of our discussions with the trade our estimates for Saudi gold jewellery consumption were again reduced to reflect the true state of the domestic market. While the cut to civil service workers wages and bonuses only came into effect 1st October, many believe this measure severely impacted jewellery consumption in the final quarter of 2016 and has also played a role in driving the market lower in early 2017.

Given that two thirds of Saudi nationals work directly for the government such a cut to earnings will have an immediate impact on spending habits as workers adjust household spending in line with their reduced pay packets. Hardest hit from such austerity will be discretionary items, with jewellery just one segment that is likely to suffer. Unless gold prices fall substantially this year, encouraging a surge in consumer and industry restocking, it is hard to mount an argument as to why Saudi gold demand will recover from the current weakness in the market.

MIDDLE EAST FABRICATION



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

WILL THE GCC GOLD MARKETS SURVIVE THE INTRODUCTION OF A VALUE ADDED TAX?

Value Added Tax (VAT) is the most common consumption tax in the world, introduced in more than 150 countries, including all members of the Organisation for Economic Co-operation and Development (OECD), with the exception of the United States. The introduction of a VAT or Sales Tax is not a new phenomenon in the Middle East either with several countries having already adopted such a strategy to generate additional revenue. Countries such as Iran, Lebanon, and Egypt all now have a VAT in place while Jordan and Yemen still operate with a sales tax system.

The proposed introduction of a VAT in the Gulf Cooperation Council (GCC) States will present a number of challenges for businesses and individuals operating in these countries. VAT is expected to be introduced at a rate of 5% with some limited exceptions including basic food items, healthcare and education. The GCC, of which the UAE and Kuwait are member states, along with Saudi Arabia, Qatar, Bahrain, and Oman, will start implementing VAT at a rate of 5% from 1st January 2018. According to the latest data available, the VAT in the GCC will, most likely, be based on the European system and will be charged at each step of the supply chain. Introducing a 5% VAT in the GCC countries is expected to generate revenues approximately equal to 1.6% of the GDP in Bahrain and Saudi Arabia, 1.5% in the UAE, 1.4% in Kuwait and Oman, and 0.8% in Qatar, implying a significant rise in current, non-oil revenues.

WHAT DOES THIS MEAN FOR THE JEWELLERY INDUSTRY?

The extent of the impact to the industry will largely depend on what exceptions are introduced. In some markets the full cost of the jewellery item is subject to the VAT and this can lead to a considerable increase in costs for the consumer. If this method was adopted in the GCC, gold jewellery costs would jump 5% overnight. The jewellery associations across the GCC are fighting for another option, which they argue will have a far smaller impact on retail sales and the health of their industry, and that is to tax only the labour charge component of the cost of the jewellery item. How gold jewellery will be treated is yet to be announced.

Some may suggest that a 5% increase in the cost of jewellery is minimal and that after the implementation it will soon be business as usual. We would argue that in terms of the gold industry in the Middle East where a significant proportion of jewellery is purchased as a quasi investment option, a 5% movement in the price is quite substantial. In other markets where a new VAT has been introduced or increased, such as Malaysia, Iran or Japan, consumption volumes have fallen sharply and in the case of the former, where it was a new tax system, the market has struggled to find its feet after the introduction of a 6% VAT in April 2015.

Markets in the GCC that do not have a significant tourist market, and that is really all countries other than the UAE, will eventually come to terms with the rise in price and the new taxation regime but the impact on offtake in the UAE and on Dubai in particular may be more lasting. Losing the ability to promote the UAE as a tax free shopping destination for tourists may impact demand. If prices of goods are not a great deal lower than in their home countries then tourists may be more reluctant to buy. In all reality though, the low markup structure of jewellery sales in the UAE should still provide advantage for most visitors to the region although there may be some erosion on the periphery.

Dubai remains one of the true great gold wholesale entrepôts of the world, acting as a distribution point for the entire Middle East. Gold products are imported mainly from Asia and Europe before being re-exported across the region. Just how a VAT on this wholesale jewellery trade will impact demand is a question on many traders' lips as they await clarification on how the tax will be implemented. Could the tax signal a death knell for the industry? We view this as highly unlikely but if the tax is applied to the full cost of the jewellery item this will certainly impact cash flow among the supply chain and could potentially lead to lower stock purchases as a result. The Dubai wholesale market is a mature and resilient one and while it may be rocked by the implementation of a new taxation regime it will eventually rebound, although it may lose some skin along the way.

APPENDIX - GOLD PRICES IN 2016

	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	1,249.84	1,250.80			36,305	39,555	4,353.80	1,680.06	589,454	927.15	29,653
Maximum	1,370.00	1,366.25			39,577	42,864	4,672.00	1,818.03	658,112	1,060.22	32,500
Minimum	1,072.70	1,077.00			32,025	34,851	4,104.51	1,504.82	501,413	734.10	25,450
Range:Average	23.8%	23.1%			20.8%	20.3%	13.0%	18.6%	26.6%	35.2%	23.8%
Monthly Average											
Jan	1,095.66	1,097.38	1,116.25	1,077.00	32,471	35,518	4,169.68	1,568.24	577,610	763.02	26,219
Feb	1,194.89	1,199.91	1,250.75	1,126.50	34,750	38,236	4,420.01	1,681.21	607,846	838.93	28,694
Mar	1,246.31	1,246.34	1,277.60	1,217.60	35,990	39,320	4,523.91	1,660.95	614,715	874.25	28,808
Apr	1,241.45	1,242.26	1,285.65	1,213.60	35,226	38,489	4,375.00	1,621.84	582,342	868.09	29,345
May	1,259.76	1,259.40	1,294.00	1,212.10	35,853	39,646	4,412.59	1,726.09	622,430	868.18	29,730
Jun	1,273.58	1,276.40	1,324.55	1,212.40	36,520	39,759	4,324.86	1,723.73	616,620	900.02	29,877
Jul	1,337.43	1,1337.33	1,366.25	1,313.15	38,868	42,201	4,473.84	1,776.64	618,696	1,017.46	31,216
Aug	1,340.86	1,341.09	1,363.75	1,309.25	38,485	41,863	4,366.06	1,759.19	593,316	1,023.64	31,438
Sep	1,326.62	1,326.03	1,348.35	1,308.35	38,028	41,501	4,340.63	1,747.15	597,614	1,008.80	31,362
Oct	1,268.93	1,266.57	1,313.30	1,251.75	36,947	40,181	4,228.01	1,663.65	566,588	1,027.26	30,200
Nov	1,240.29	1,235.98	1,303.75	1,178.10	36,841	39,576	4,310.75	1,641.81	553,604	993.74	29,984
Dec	1,152.17	1,151.40	1,177.65	1,125.70	35,082	37,705	4,288.38	1,563.14	511,829	920.44	27,931
Quarterly Average											
Q1	1,180.30	1,182.56			34,435	37,727	4,374.45	1,637.90	600,419	826.41	27,825
Q2	1,258.48	1,259.62			35,877	39,300	4,369.42	1,690.51	607,038	879.27	29,701
Q3	1,334.93	1,334.78			38,454	41,850	4,392.27	1,760.75	602,971	1,016.62	31,340
Q4	1,221.86	1,221.55			36,359	39,232	4,275.67	1,626.12	545,747	983.65	29,296

Source: LBMA; GFMS, Thomson Reuters

APPENDIX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