Metals Focus
Gold Focus 2016

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Gold Focus 2016

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About Metals Focus

Metals Focus is one of the world's leading precious metals consultancies. We specialise in research into the global gold, silver, platinum and palladium markets, producing regular reports, forecasts, proprietary data and bespoke consultancy.

The quality of Metals Focus' work is underpinned by a combination of top-quality desk-based analysis, coupled with an extensive program of travel to generate 'bottom up' research for our forecasting reports and consultancy services. Our analysts regularly travel to the major markets speaking to contacts from across the value chain from producers to end-users, to obtain first hand and unique information for our reports.

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Executive Summary

– Metals Focus believes gold's rebound in early 2016 marks the end of the bear cycle and forecasts a $1,350 peak late in the year.

– Mine production in 2015 rose by 2% to a record 3,211t, but the increase was more than offset by a fall in scrap and hedging.

– Lower jewellery and industrial demand, as well as a decline in official sector purchases, saw total demand drop by 2%.

Introduction

The gold price has so far had its best start to a year since 2008. Changing expectations towards the outlook for US rates, the proliferation of negative policy rates and turbulent equity markets have rekindled institutional investor interest in the metal. In turn, this has fuelled a wave of investment inflows into ETFs, futures, options and OTC products. In our view, this is likely to mark the end of the bear cycle that started in late 2011, which saw gold shed more than 45% of its value from its September 2011 peak to its trough in December last year. Over much of that period, professional investor attitudes towards gold ranged from indifference to disdain.

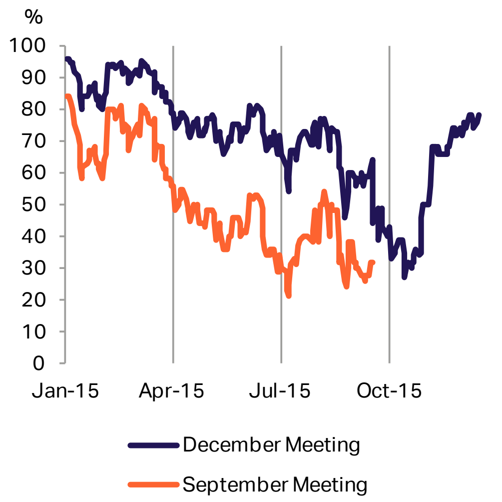
This general attitude was certainly in force during 2015. Anticipation of the first US Fed rate rise since 2006, against the backdrop of further policy loosening elsewhere, continued to support the dollar and weigh on gold's outlook. Weak commodity prices in general and a continued focus on equity markets by institutional investors also did not help gold's prospects. Periods of strength were short and even then activity was limited. Retail investment fared well in a handful of markets, but demand tended to be driven by sharp price moves, rather than the other way around. Overall, global physical investment was virtually unchanged last year, as the

Gold Supply and Demand Balance

								Year on Year	
Tonnes	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016F**	**2015**	**2016**
Supply									
Mine Production	2,765	2,849	2,938	3,074	3,153	3,211	3,197	2%	0%
Recycling	1,532	1,674	1,659	1,266	1,202	1,127	1,118	-6%	-1%
Net Hedging Supply	-	32	-	-	106	9	10	-91%	8%
Total Supply	**4,297**	**4,555**	**4,597**	**4,340**	**4,462**	**4,348**	**4,325**	**-3%**	**-1%**
Demand									
Jewellery Fabrication	2,094	2,164	2,180	2,728	2,503	2,439	2,420	-3%	-1%
Industrial Demand	411	385	364	351	349	334	323	-4%	-3%
Net Physical Investment	1,118	1,380	1,283	1,700	1,008	1,021	1,036	1%	2%
Net Hedging Demand	118	-	47	28	-	-	-	na	na
Net Central Bank Buying	104	516	582	646	584	566	490	-3%	-13%
Total Demand	**3,846**	**4,445**	**4,456**	**5,452**	**4,443**	**4,359**	**4,269**	**-2%**	**-2%**
Market Balance	**450**	**110**	**141**	**-1,112**	**19**	**-12**	**56**	**na**	**na**
Net Investment in ETFs	421	239	307	-916	-185	-134	400	-28%	na
Market Balance less ETFs	30	-128	-166	-197	204	122	-344	-40%	na
Gold Price (US$/oz, PM fix)	1,225	1,572	1,669	1,411	1,266	1,160	1,200	-8%	3%

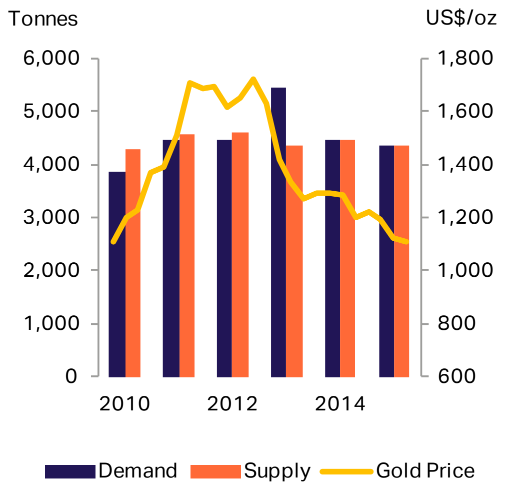
Source: Metals Focus

Probability of a Rate Hike by FOMC Meeting*



* Percentage probability inferred by bond prices
Source: Bloomberg

Market Balance



Source: Metals Focus, Bloomberg

healthy gains seen in a handful of Western markets and China were offset by declines elsewhere.

There was also limited support from gold's other fundamentals. Jewellery demand fell again, albeit at the margin, with another decline in Chinese consumption particularly noteworthy. Central bank purchases remained elevated, but were also slightly lower. A small decline in overall demand was broadly matched by a fall in supply, due to lower recycling and producer hedging, leaving the market virtually balanced for a second consecutive year.

Gold thus continued to trend lower over 2015. That said, most of the long overhang that had developed during the bull market had been unwound in 2013 and 2014. The scope for further liquidations was therefore limited. As a result, the 2015 low of $1,046 was only 8% lower than the 2014 one.

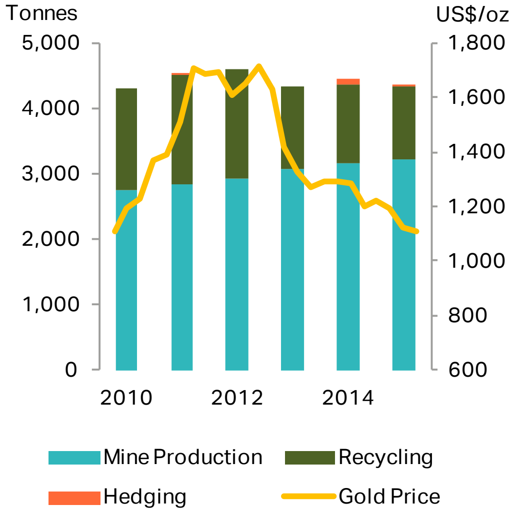
Looking ahead, we are optimistic about gold over the rest of this year and our projections see it peaking at $1,350 in the fourth quarter. In the near term, there may well be some liquidations of tactical positions. However, there are clear signs that the consensus on gold has changed profoundly and this should underpin further purchases. Importantly, even though recent inflows have been significant, the overall length in the market remains modest, meaning there is plenty of scope for additional fresh investment. Our view is naturally also linked to our outlook for the global economy and markets. We have long believed that US rates will only rise slowly and our assumption is that the Fed upper bound reaches 1% by year-end. Our expectation for the US dollar, meanwhile, is that a rebound is likely and we would not even rule out the possibility of a new high. However, this would probably only be marginally above the one seen last year.

Interestingly, we do not see the price recovery having a large impact on gold's supply/demand fundamentals. Demand in many price-sensitive markets is already starting from a low base, leaving limited scope for further declines. Moreover, price elastic declines will at least be partly offset by consumers actually buying into the price rise in search of capital appreciation.

Market Balance in 2015

Looking at the individually estimated elements of our gold supply/demand balance, the market was once again virtually balanced last year, with demand exceeding supply by a mere 12t. This implied draw-down in stocks, pales in comparison to the 134t of ETF liquidations that were seen last year. Meanwhile, the collapse in investors' net long positions in Comex gold futures suggests there was even more net selling not captured by our physical supply/demand balance. These additional sources of supply imply that there were hefty purchases elsewhere. This is puzzling, given our information that investors were probably modest net sellers overall in the OTC market. It would therefore appear that there were some unidentified institutional purchases of bullion elsewhere, whether by private, official or quasi-official entities.

Global Supply



Source: Metals Focus, Bloomberg

Gold Supply in 2015

In 2015, **mine production** rose by 1.8% to another record high of 3,211t. This represented a further slowdown in the pace of growth, and highlights the diminishing impact that projects commissioned during the last bull market are having on global supply. On a mine-by-mine level, production benefitted most from the ramp-up of a number of mines that actually entered production in 2014. The most prominent here included Cerro Negro (Argentina), Éléonore (Canada) and Otjikoto (Namibia), which together added 22t. Furthermore, a significant portion of last year's net growth was derived from higher by-product gold production from copper mines. The most notable was output from Batu Hijau in Indonesia, which rose ninefold to 21t. The continued ramp-up of Salobo (Brazil) and Oyu Tolgoi (Mongolia) also contributed. Meanwhile, offsetting losses were limited, as ongoing cost cutting by producers meant that the number of mine closures was limited despite another year of lower (dollar) prices. Versus 2014, global all-in sustaining costs fell by 8% y-o-y, to an average of $897/oz, helped by weaker local currencies and lower oil prices.

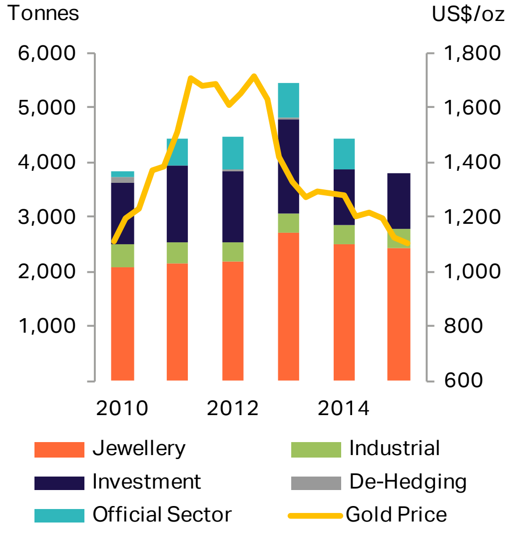
Producer **hedging** remained on the supply side of the balance in 2015. However, with a net nine tonnes of supply, the relative market impact was muted. More prominently, the recovery in prices in late July brought with it a flourish of hedging activity, although ongoing deliveries from existing positions over the rest of the year dampened its impact.

Recycling fell by 6% to 1,127t in 2015, a level almost one-third below its 2011 peak. While this result appears largely in line with the 8% fall in gold prices, it hides some marked variations between markets. In particular, Turkey consolidated its position as the world's largest scrap market, with volumes surging 35% on the back of record local gold prices. If we exclude this country, the fall in the rest of the world was far greater at 11%. In part, this was due to a price elastic response in most developing markets in Asia, in particular China and India, although the decline for the latter was also magnified by a rise in the exchange of jewellery. A significant reduction in near-market stocks was the key factor behind the decline in scrap for North America and Europe, although strong euro gold prices helped explain why the drop for the latter was the smaller of the two.

Gold Demand in 2015

While **jewellery** consumption continued to ease last year, the 3% decline was far smaller than that seen in 2014. Once again, China accounted for a large portion of the losses last year. This continued weakness chiefly stems from soft consumer confidence in response to a slowing economy. Changing consumer preferences, both within jewellery and in terms of non-jewellery alternatives, also weighed on demand. The other notable declines worth mentioning last year include Russia, Turkey and most Persian Gulf countries. For many, the outcome was chiefly down to a deteriorating economic backdrop, currency depreciation and geopolitical tensions. Weak consumption in these markets was also the key driver of the 3% decline in European fabrication as it hit Italian jewellery exports.

Global Demand



Source: Metals Focus, Bloomberg

That said, there were a number of countries posting gains last year. Following a modest recovery in 2014, Indian consumption for example rose further last year, up 6% to a five-year high, thanks to still robust GDP growth and strong bargain hunting on weaker prices. In the US, jewellery sales benefited from the gradual shift back to carat gold jewellery by some retailers as a result of lower prices and improving margins. This marked a stark contrast to Europe where consumption continued to suffer from economic uncertainty in addition to ongoing rivalry from other consumer goods, branded silver and costume jewellery.

Following a heavy decline in 2014, **physical investment** improved slightly, growing 1% to 1,021t in 2015. China accounted for the largest slice of the gains, although this was in comparison to a relatively low base in 2014. Much of last year's growth was skewed to the second half of the year when turmoil in the Chinese equity market and the surprise devaluation of the yuan prompted demand for safe haven assets. Investment in Europe and North America also recorded healthy increases in 2015, albeit for different reasons. For the former, investor appetite in gold was underpinned by growing doubts about the euro amid new accommodative monetary policies announced by the ECB and heightened worries about the Greek debt issue mid-year. By contrast, the recovery in US demand can be largely attributed to the price retreat over the summer.

That said, not all was positive last year. For instance, Indian investment fell for the second year in a row, as bearish price expectations and growing confidence in the local equity market reduced gold's investment appeal. Sizeable losses were also recorded in the Middle East, led by Turkey, as demand was hit by a poor economic climate, high local gold prices and continued geopolitical uncertainty.

Industrial demand dropped by 4%, marking the fifth consecutive year of losses. The electronics sector recorded the largest decline, a result of disappointing consumer product sales, especially in emerging markets, coupled with the ongoing impact of substitution and thrifting in key applications. Dental offtake extended losses last year, as the shift to cheaper materials continued. Despite gains for the two largest players, India and Italy, decorative & other industrial fabrication dipped slightly due to such issues as weaker sales of gold-plated jewellery.

In spite of a 3% decline in net purchases to 566t, the **official sector** remained a significant buyer last year. In line with the trend seen in previous years, purchases in 2015 were almost exclusively driven by emerging markets wanting to diversify their largely dollar-denominated reserve portfolios. China and Russia contributed the majority of purchases. In particular, the People's Bank of China confirmed in July 2015 that it had been quietly buying gold since 2009, with 604t being added to reported reserves through to end-June. Since then, the Chinese central bank has switched to more timely reporting, which showed a 104t increase in its official gold holdings in the second half of the year.

Chapter 2

Market and Price Forecast

– Further price increases are forecast for the rest of 2016, with a peak of $1,350 in the fourth quarter.

– The first decline in mine production in eight years and a further decline in scrap will keep supply under pressure.

– In spite of the price recovery, jewellery is forecast to decline only at the margin and investment demand actually to rise.

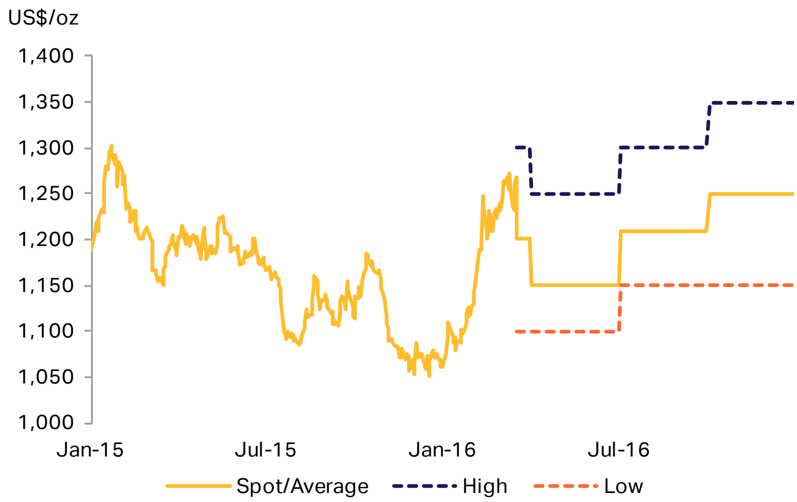
Introduction

Gold's more than $200 rise during the first two months of this year signals that the metal's multi-year bear market has ended. While a further correction from the high point of $1,285 is possible during the second quarter, this is expected to mark only a temporary setback before prices increase again in the third and, especially, fourth quarters. By the end of this year gold is forecast to be trading as high as the $1,350 level.

The main reason for expecting a recovery in prices during the course of 2016 is the change in investor sentiment that has occurred and that we believe is more likely to solidify than melt away in the months ahead. The consensus on US monetary policy has shifted to expecting a slower pace of tightening. With it, a further round of dollar appreciation now seems less likely. Confidence in central banks also remains under challenge with, for instance, doubts growing over the ECB's monetary policy, the efficacy of the Bank of Japan's initiatives and measures taken by the People's Bank of China, to name just some of the most important examples.

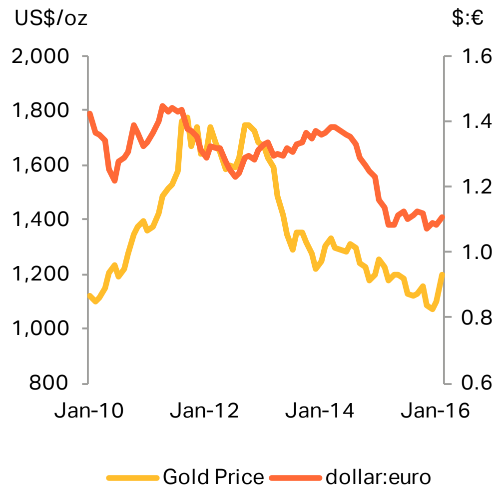
The transformation underway in the zeitgeist is not just related to waning confidence in economic management by central banks and governments. It has also been heavily influenced by the turmoil in global stock and bond markets this year. Major swings in equity prices and in bond valuations have contrasted with the solid double-digit returns seen in the gold market. Gold has also benefited from the growing view that commodity prices in general may have seen their lows, following significant rebounds in oil, iron ore and copper prices from arguably over-sold levels.

Quarterly Gold Price Forecast



Source: Metals Focus, Bloomberg

Gold Price and $:€



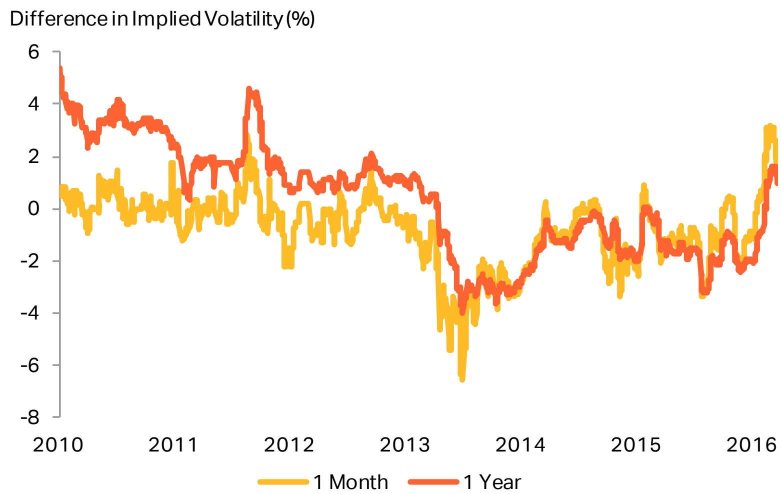
Source: Bloomberg

This transformation in investor sentiment is manifest in a higher level of gold bullion purchases, particularly in the ETF sector, but also in futures, options and the OTC market. Indeed, over the first two months of the year, global ETF holdings rebounded by some 276t, with at least an extra 35t bought in March-to-date. This trend is expected to continue over the rest of 2016, albeit at a much reduced pace of net purchases. Importantly, however, selling pressure should ease considerably, with investors more inclined this year to take advantage of dips in the price to acquire gold due to their changed expectations on gold and other asset classes.

A more positive outlook for gold will generally be supported by supply/demand developments. First, while our forecast drop in mine production this year is small, its signalling effect will be important because it marks a shift in trend from rising to plateauing output in the medium term and then to a longer term slide in production. Second, some will take comfort from supply also failing to grow through higher scrap; we are forecasting this to fall by 1% despite the 3% price rise in 2016.

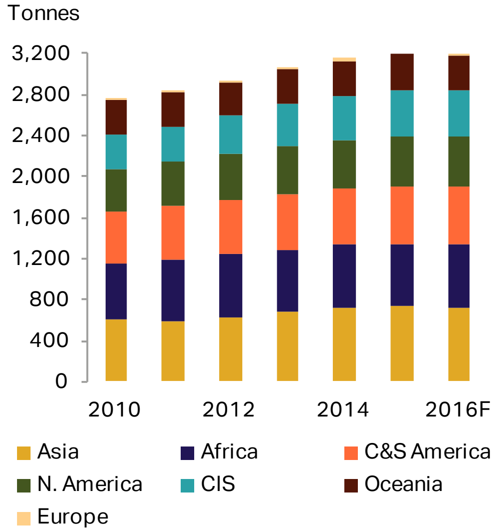
More importantly, we should see the physical markets furnish gold with a higher 'price floor'. In 2015, this floor as provided by Asian jewellery and bar demand ratcheted down, at least in US dollar terms. In contrast, this year a somewhat stronger tone to jewellery and bar demand, especially in India, should see this floor start to creep higher. This may not be immediately apparent as physical markets have yet to fully adjust to current gold price levels. Lastly, central banks will continue to buttress the price by adding gold to their reserves. Although there could be some slippage in terms of net purchases, we think this will be limited due to a high base level of demand from on-going accumulation by China and Russia.

Gold 25-Delta Risk Reversals*



*The difference in implied volatility between 25-delta call and put options. This illustrates whether investor interest in the option market is skewed to the call side (if positive) or put side (if negative), as well as the extent of the skew.
Source: Bloomberg

Mine Production Forecast



Source: Metals Focus

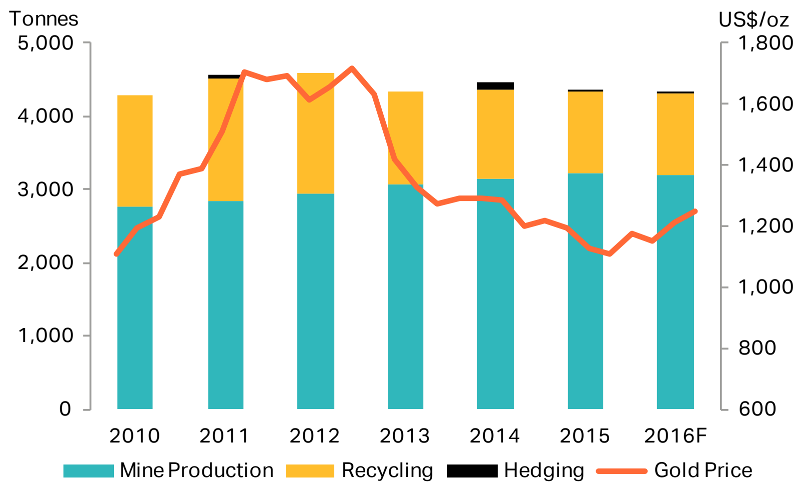
Supply Outlook

We forecast that **mine production** will decline marginally this year, with a thinner pipeline of projects no longer able to drive global mine supply higher. That said, with a 0.5% drop currently projected, the outlook is more one of equilibrium. Gains from the start-up of projects within developing gold producing countries, such as Guyana, Suriname and Burkina Faso, are largely expected to offset natural declines from more mature gold producing nations, such as the US and Australia. Furthermore, the cost curve in large part remains relatively healthy, given the degree of cost reductions over recent years. In addition, the continued weakness of many currencies relative to the US dollar and low oil prices should bring some further cost savings. As such, we do not expect cost cutting closures to materially impact supply in 2016.

We expect to see **producer hedging** remain on the supply side in 2016, with several companies having already moved to lock in higher prices earlier this year. This will therefore represent the third consecutive year of net hedging. However, we expect the volume of net producer activity to remain small, even though negative sentiment in the past towards the practice has eased despite sizeable hedge positions having left many producers unable to fully participate in the last bull market.

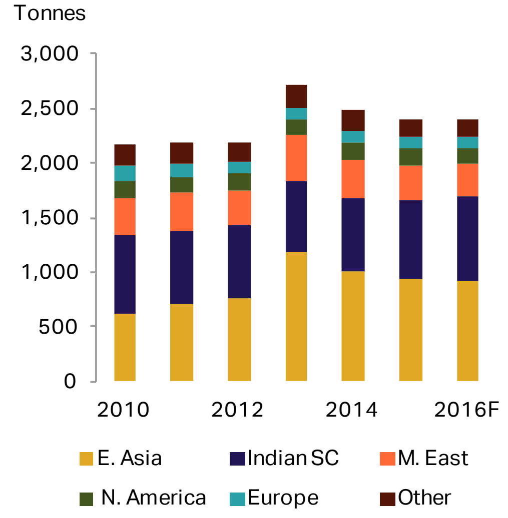
Turning to **recycling**, this is forecast to extend its losses this year, although the expected decline, at a mere 0.8%, will be the smallest since 2012. For the fifth year in a row, volumes in industrialised countries should weaken, largely reflecting much reduced levels of near-market jewellery stocks. In addition, despite a more positive outlook for gold prices, these are forecast to remain well below their 2012 peak, and so will fall short of levels needed to encourage a meaningful rise in scrap. By contrast, developing countries' volumes are projected to remain virtually flat this year as price-led gains in most markets, in particular China and India, are offset by losses centred on Turkey, where a repeat of an exceptional 2015 could only occur with radically higher local prices.

Global Supply Forecast



Source: Metals Focus, Bloomberg

Jewellery Consumption Forecast



Source: Metals Focus

Demand Outlook

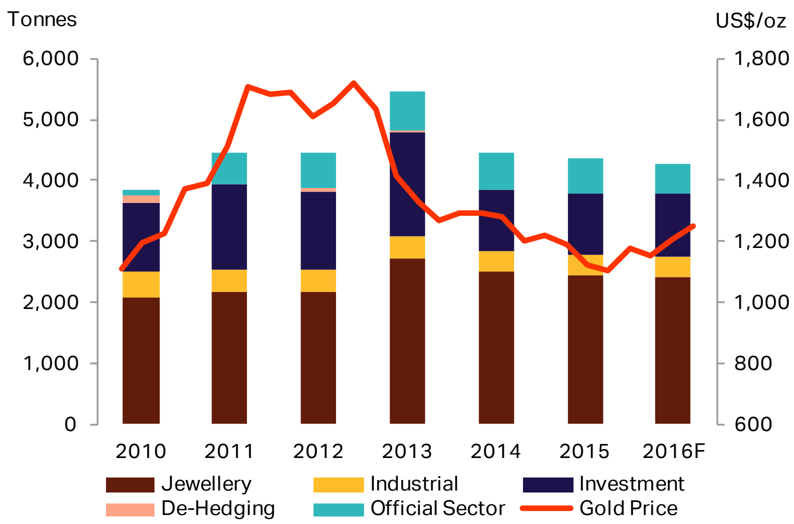
Jewellery fabrication is forecast to weaken further this year, falling 0.8% to 2,420t. China is expected to account for a good portion of these losses, as a slowing economy will both dampen consumer confidence and also limit the pace of store expansion into lower tier cities. Notable falls are also expected in the Middle East (except for Iran) on the back of falling incomes amid weak oil prices and ongoing geopolitical uncertainty. By contrast, India is expected to continue growing for the third year, with its jewellery market forecast to achieve volumes almost on a par with China. Apart from improving price expectations, Indian demand will benefit from a benign economic backdrop. Finally, US consumption is expected to grow at a similarly modest pace to last year, while Europe will continue to lag behind.

Industrial offtake is projected to slip by 4%. As in 2015, this will be mainly driven by the electronics sector where weak global GDP growth and substitution/thrifting remain key issues. Small losses are also expected in dental demand as its secular retreat continues and for decorative and other industrial offtake, due to such factors as the Chinese slowdown.

Physical investment is forecast to edge higher for a second year, although it will still remain 663t below the 2013 peak. The 2016 rise owes much to Chinese and Indian growth, as the price recovery revives interest. Chinese demand will also benefit from worries about further yuan devaluation and sagging confidence in equities. Early 2016 has seen buoyant western demand, but this may not be sustained over the rest of the year.

Finally, net **official sector** purchases this year are forecast to dip slightly to a still historically high 490t. We expect China and Russia to maintain a similar pace of acquisitions to 2015, as the arguments for reserve diversification remain valid. Excluding these two countries, however, net purchases are forecast to ease, due to a more cautious outlook for emerging market growth and the anticipated improvement in gold prices.

Global Demand Forecast



Source: Metals Focus, Bloomberg

Chapter 3

Mine Production and Producer Hedging

– Gold mine supply grew to another all-time high in 2015, rising by 1.8% to 3,211t, driven by strong gains in Mexico, Indonesia and Kazakhstan.

– Globally, all-in sustaining costs fell by 8%, to $897/oz. Total cash costs averaged $660/oz, following a 7% decline.

– For the second consecutive year, miners were net hedgers of gold, contributing an additional 9t to global supply.

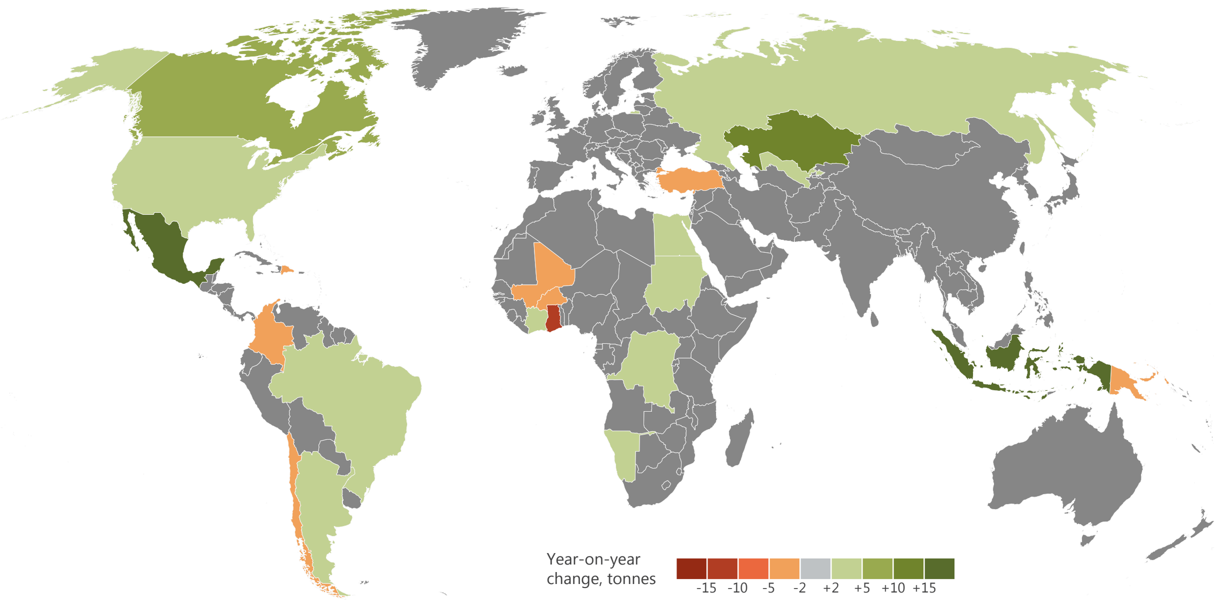
Gold Mine Production

Global mine production rose by 1.8% in 2015, to 3,211t, representing another record high. As a result, mined output globally has risen some 450t in just five years, despite average annual gold prices falling over the last three years. However, last year's total is expected to be the peak, as the marked cuts to capital expenditure in 2013 have brought about a reduction in the global pipeline of projects, required to lift output higher.

Although there were a number of prominent mine startups in 2015, it was in fact increases from mines that entered production in 2014 that had the greatest impact on lifting supply last year. The three largest, Cerro Negro (Argentina), Éléonore (Canada) and Otjikoto (Namibia), added a combined 22t. This is significantly more than was gained from the main three mines that entered production in 2015, with Inmaculada (Peru), Aurora (Guyana) and Cochenour (Canada) collectively adding just four tonnes over the year.

Furthermore, a quarter of mine supply's net growth last year was driven by gains in by-product gold production from copper mines, which collectively account for around 10% of mined gold supply globally. Most significantly, in Indonesia Batu Hijau's output rose ninefold, to 21t, while gold production at Grasberg rose three tonnes. Elsewhere, the continued ramp-up of Salobo (Brazil) and Oyu Tolgoi (Mongolia), which started production in 2012 and 2013 respectively, added a consolidated five tonnes.

Major Changes to Global Mine Production, 2015 versus 2014



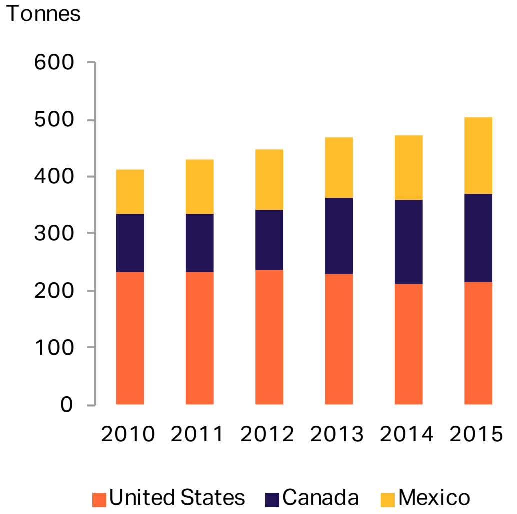
Source: Metals Focus

Top 20 Producing Countries

Tonnes	2014	2015	Y-o-Y
China	462.0	460.3	0%
Australia	274.0	273.8	0%
Russia	264.7	268.5	1%
United States	210.0	214.0	2%
Peru	171.1	170.5	0%
South Africa	168.6	167.5	-1%
Canada	151.2	157.2	4%
Mexico	112.7	133.2	18%
Indonesia	93.8	113.0	20%
Brazil	91.6	95.0	4%
Ghana	106.3	94.7	-11%
Uzbekistan	83.5	85.5	2%
Kazakhstan	49.2	63.7	29%
Argentina	60.0	63.5	6%
Papua New Guinea	60.7	58.4	-4%
Tanzania	50.8	51.7	2%
Mali	52.8	50.1	-5%
Colombia	47.0	44.0	-6%
Philippines	40.4	41.1	2%
Chile	44.5	41.1	-8%
Others	558.1	564.4	1%
Global Total	**3,153**	**3,211**	**1.8%**

Source: Metals Focus

North America



Source: Metals Focus

As highlighted by the lack of red ink on the world map, major country level production declines were confined to only one notable instance; that being Ghana. This followed the conclusion of underground mining activities at Obuasi, and a sharp fall at Ahafo due to a combination of factors including load shedding related to power shortages in Ghana. Also of importance, production in China, the world's largest producer, declined marginally last year. This ended a 15 year continuous uptrend in the country's output, as lower prices lead to a hiatus in a number of development projects, while some lower grade operations were also suspended.

North America

Canadian gold production increased for the fourth consecutive year, rising by 4%, to 157t. This was driven by a nine tonne gain from Quebec, while output from the country's largest gold producing province, Ontario, was unchanged. The majority of Quebec's increase was attributable to Éléonore which added eight tonnes after achieving commercial production in April. Elsewhere in the province, LaRonde and Canadian Malartic added a total of three tonnes. Countering this, noteworthy declines totalling four tonnes were recorded at Meadowbank, Red Lake and Porcupine, on the back of lower grades.

After two years of declines, production in the **United States** recovered by 2% in 2015, to 214t. This was due to Nevada (which accounts for 75% of US output) where higher grades from the open pits at Goldstrike, Cortez and Twin Creeks helped deliver a combined 10t gain. However, this was offset by a loss of three tonnes following the halt of mining operations at Hycroft in July (after the mine's owners filed for bankruptcy) and a four tonne drop at Bingham Canyon, where work is ongoing to mitigate the massive landslide that hit the mine in 2013.

Mexico posted the largest increase both regionally and globally, up 21t (18%) on 2014. Most notably, Peñasquito, the country's largest gold mine, recorded record payable production (an extra nine tonnes y-o-y), on the back of a 54% increase in head grade as mining progressed within the higher grade section of the open pit. Elsewhere, an increase of four tonnes was seen at Herradura which returned to full production after a suspension in 2014 and was further boosted by the commissioning of the new leaching plant. Elsewhere, with La India's and El Gallo's ramp-ups completed, an extra tonne was delivered by each. Offsetting these gains were one tonne losses at El Castillo and El Sauzal.

Central and South America

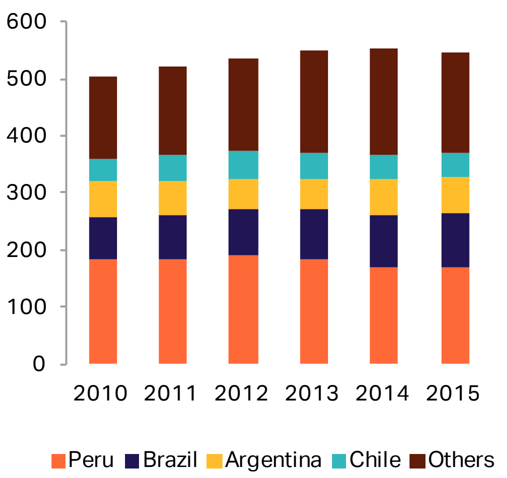
South American gold production declined by 1% in 2015, to 547t. Output from **Peru**, the region's top producer, was flat y-o-y, at 171t. The largest gold mine in the country, Yanacocha, produced 29t, a fall of 2t, or 5%, from 2014. The driver of this decline was a 20% drop in the head grade treated, which was partially offset by a 9% increase in tonnes processed as material stacked on the leach pad increased y-o-y. In contrast, **Brazilian** production increased by 4% in 2015, to 95t. The country's annual output has been steadily increasing and is now a third higher than in 2010. During

Top 20 Producing Companies

Tonnes	2014	2015	Y-o-Y
Barrick Gold	194.4	190.3	-2%
Newmont Mining	150.7	156.6	4%
Anglogold Ashanti	138.0	122.8	-11%
Goldcorp	89.3	107.8	21%
Kinross Gold	78.9	82.2	4%
Newcrest Mining	72.4	77.4	7%
Gold Fields	69.0	67.2	-3%
Navoi MMC[1]	61.0	61.5	1%
Polyus Gold International	52.8	54.8	4%
Agnico Eagle Mines	44.5	52.0	17%
Sibanye Gold	49.4	47.8	-3%
China National Gold Group	40.2	41.5	3%
Yamana Gold	37.3	39.7	6%
Freeport McMoRan	37.8	39.1	4%
Randgold Resources	35.7	37.7	6%
Zijin Mining	32.3	36.4	13%
Shandong Gold Group	35.4	36.0	2%
Harmony	35.2	33.3	-5%
Glencore	30.9	30.0	-3%
Nord Gold	30.6	29.5	-3%

[1] Estimate
Source: Company Reports, Metals Focus

Central & South America



Source: Metals Focus

2015, growth was driven by a 3t (+57% y-o-y) increase in by-product output from the Salobo copper mine. At the country's largest mine, Paracatu, production declined 8% to 15t due to a fall in the volume of ore processed. A 6% increase in **Argentina** was primarily driven by the continued ramp-up of the Cerro Negro mine, which produced an additional 11t last year having commenced operations in 2014. This helped offset declines at Alumbrera and Veladero.

Offsetting some of these gains regionally were declines in supply from a number of smaller gold producing countries. In **Chile**, output from two of the country's largest mines (El Peñón and Maricunga) declined by a consolidated 3t. Meanwhile, in the **Dominican Republic** the Pueblo Viejo mine recorded a 5t decline as high grade ore stocks were exhausted and levels of organic carbon in the feed inceased, negatively impacting recovery rates. Finally, **Colombian** output fell by three tonnes, as production from the country's largest gold producing department, Antioquia, fell by around 20% y-o-y.

Europe

Last year, production in Europe rose 2%, to 23t, following a one tonne increase in **Finland** which benefited from the first full year of production from the expanded Kittila mill. In **Sweden**, slight gains at Boliden's base metal Aitik and Garpenberg operations only partially offset a half tonne decline at Svartliden, which finished processing residual stockpiles.

Africa

Following a number of years of growth, regional output fell marginally in 2015, as healthy gains from a number of smaller countries were not enough to offset a large loss in **Ghana**. Reversing five years of growth, Africa's second largest producer saw output fall by 12t in 2015, the largest country level decline both regionally and globally. Production was principally hit by a six tonne loss at Obuasi, following the completion of underground mining activities in late-2014. Another loss was seen at Ahafo, where production fell three tonnes due to a combination of factors, including load shedding on the back of countrywide power shortages.

Meanwhile, other notable declines were recorded in Mali and Burkina Faso, both down three tonnes y-o-y. In **Mali**, output was impacted by planned lower grade mining at Sadiola, while flooding in the third quarter dented output at Loulo. In **Burkina Faso**, modest losses were recorded from the majority of the country's mines. Most notably, Taparko saw grades decline throughout the year as mining focused on waste stripping, while output at Mana was hindered by a five week mill shut down. Elsewhere, **Mauritania** recorded a decline of one tonne following a slight drop in recovery rates at Tasiast, while **Senegal** recorded a two tonne drop following the decision to defer mining of the high grade section of the pit at Sabodala for a year.

Turning to country level gains, the largest in Africa was recorded in the **Democratic Republic of the Congo**. Output rose by four tonnes due to the continued ramp-up of the Kibali mine, and the start of commercial

Gold Mine Production

Tonnes	2010	2011	2012	2013	2014	2015	Year on Year
North America							
United States	231.3	233.9	234.6	230.1	210.0	214.0	2%
Canada	102.1	102.0	106.4	131.4	151.2	157.2	4%
Mexico	78.3	93.9	106.9	106.0	112.7	133.2	18%
Sub-total	**411.7**	**429.8**	**447.9**	**467.5**	**473.9**	**504.4**	**6%**
Central & South America							
Peru	184.8	183.8	189.8	182.4	171.1	170.5	0%
Brazil	71.5	77.7	80.3	89.3	91.6	95.0	4%
Argentina	63.9	59.0	54.2	51.1	60.0	63.5	6%
Colombia	43.6	45.9	56.2	45.7	47.0	44.0	-6%
Chile	38.4	44.5	48.6	48.6	44.5	41.1	-8%
Dominican Republic	0.1	0.5	4.2	26.6	36.1	33.7	-7%
Venezuela	24.9	25.5	21.0	22.8	22.7	22.2	-2%
Suriname	20.4	20.1	20.0	18.5	18.4	17.6	-4%
Guyana	11.9	13.9	15.6	18.4	17.3	17.6	2%
Ecuador	15.2	15.6	16.0	15.9	15.3	15.2	-1%
Nicaragua	5.5	6.8	7.5	8.9	8.8	8.3	-5%
Other	23.3	26.2	21.3	20.5	19.6	18.7	-5%
Sub-total	**503.6**	**519.8**	**534.6**	**548.7**	**552.5**	**547.5**	**-1%**
Europe							
Finland	9.4	9.2	10.1	8.4	7.4	8.4	14%
Sweden	6.2	5.9	6.1	6.4	6.4	6.2	-4%
Other	4.7	5.5	7.7	9.0	8.4	8.0	-4%
Sub-total	**20.3**	**20.6**	**24.0**	**23.9**	**22.2**	**22.7**	**2%**
Africa							
South Africa	210.0	205.3	179.8	179.5	168.6	167.5	-1%
Ghana	94.3	96.8	105.9	105.8	106.3	94.7	-11%
Tanzania	47.5	54.4	56.3	52.0	50.8	51.7	2%
Mali	44.7	44.4	50.1	49.2	52.8	50.1	-5%
Dem. Rep. of the Congo	18.0	21.0	24.8	25.3	35.9	39.7	11%
Burkina Faso	25.4	34.5	31.9	35.9	39.2	36.5	-7%
Sudan	12.1	17.2	26.9	29.1	32.2	34.6	7%
Zimbabwe	17.1	19.0	22.7	23.0	23.5	24.8	5%
Guinea	24.8	24.7	24.8	24.9	23.6	23.5	0%
Ivory Coast	7.8	13.2	12.8	14.5	18.9	21.6	15%
Egypt	4.7	6.3	8.2	11.1	11.1	13.7	23%
Ethiopia	8.1	10.2	11.3	11.4	12.0	12.6	5%
Mauritania	9.0	8.8	8.2	9.9	10.1	9.0	-12%
Senegal	5.4	4.8	7.4	8.2	8.6	6.7	-22%
Namibia	2.7	2.1	2.4	2.0	2.2	6.3	184%
Other	26.6	38.7	37.5	30.5	24.4	23.3	-4%
Sub-total	**558.2**	**601.5**	**610.9**	**612.4**	**620.3**	**616.3**	**-1%**

Gold Mine Production

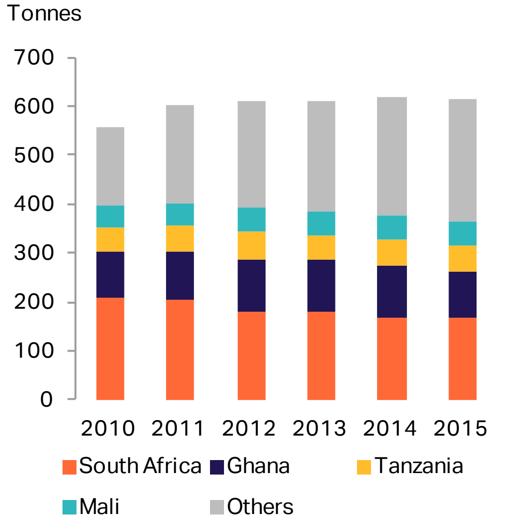
Tonnes	2010	2011	2012	2013	2014	2015	Year on Year
Commonwealth of Independent States							
Russia	203.1	211.6	229.3	248.5	264.7	268.5	1%
Uzbekistan	71.0	70.6	80.0	81.0	83.5	85.5	2%
Kazakhstan	30.3	36.8	40.0	42.4	49.2	63.7	29%
Kyrgyzstan	19.0	19.7	11.4	20.2	19.3	18.7	-3%
Other	5.7	5.9	5.9	7.1	7.2	8.8	23%
Sub-total	**329.0**	**344.7**	**366.6**	**399.2**	**423.9**	**445.3**	**5%**
Asia							
China	342.2	361.1	413.3	438.4	462.0	460.3	0%
Indonesia	134.6	108.5	82.6	90.7	93.8	113.0	20%
Philippines	40.8	38.1	38.8	39.7	40.4	41.1	2%
Mongolia	14.0	13.3	14.0	19.7	32.0	32.8	3%
Turkey	16.6	24.1	29.5	33.6	31.4	27.4	-13%
Iran	5.0	6.0	6.0	7.0	10.0	11.0	10%
Other	45.1	43.5	46.0	45.5	43.2	44.1	2%
Sub-total	**598.3**	**594.6**	**630.2**	**674.6**	**712.8**	**729.7**	**2%**
Oceania							
Australia	260.2	259.4	251.7	268.1	274.0	273.8	0%
Papua New Guinea	69.7	63.8	59.0	64.6	60.7	58.4	-4%
New Zealand	12.1	11.2	9.7	11.8	10.8	11.7	9%
Other	2.0	3.4	3.6	3.1	2.2	1.6	-27%
Sub-total	**343.9**	**337.9**	**324.0**	**347.7**	**347.7**	**345.5**	**-1%**
Global Total	**2,764.9**	**2,848.9**	**2,938.0**	**3,073.9**	**3,153.2**	**3,211.4**	**1.8%**

Source: Metals Focus

production at Twangiza and Namoya in the second half. Looking at the **Ivory Coast**, output was lifted by a one tonne increase at Bonikro, on the back of higher grades and milling rates. **Namibia** posted a four tonne gain, exclusively from the first full year of production from Otjikoto. Output in the continent's third largest producer, **Tanzania**, rose by a tonne after two years of declines. Planned higher grades at Geita, and a full year of additional tailing re-processing at Bulyanhulu, added a collective two tonnes. In **Egypt**, improved productivity at the Sukari plant led to a two tonne increase.

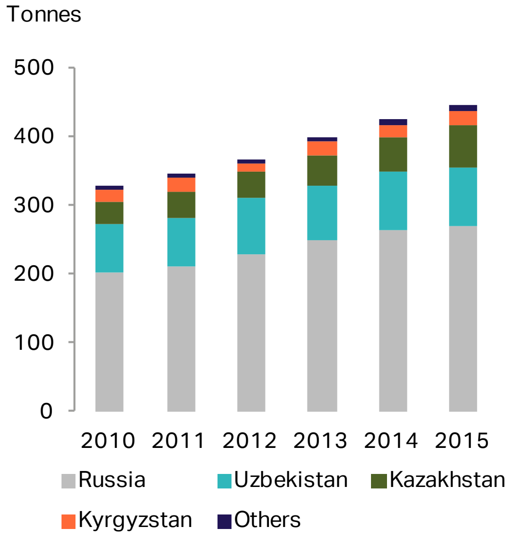
Looking to Africa's largest producing country, **South African** production remained flat y-o-y, at 168t, after declining significantly in 2014. Most of the country's larger gold mines posted steady declines, with the biggest losses being seen at Mponeng and Kloof on the back of safety related stoppages and plant maintenance respectively. However, South Africa benefited from higher by-product gold output from its platinum mines, after a five month strike in 2014, which hit that year's output.

Africa



Source: Metals Focus

CIS



Source: Metals Focus

Commonwealth of Independent States (CIS)

Mine supply in the CIS totalled 445t last year, an increase of 21t on 2014, as all the major producing countries, bar Kyrgyzstan, posted gains.

The region's largest producer, **Russia** increased output by four tonnes, following a strong final quarter. Miners there were helped by the increasing rouble gold price (which rose 20% in the second half versus the first half of 2015), while a mild start to the winter prolonged the operating window of some seasonal assets. Krasnoyarsk, Russia's largest gold producing region, with a fifth of the country's gold output, recorded a 4% gain y-o-y. Meanwhile, **Kazakhstan** continued its growth trend, posting a 15t increase y-o-y, the second largest of any country globally on the back of increased output from a number of burgeoning producers. Finally, in **Kyrgyzstan**, production fell for a second year, in line with output from the country's largest mine, Kumtor, which was impacted by an 8% decline in the average ore grade versus 2014.

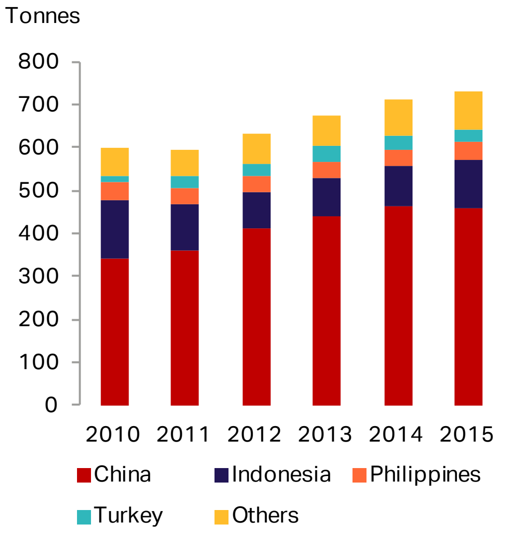
Asia

Although output in Asia continued to rise in 2015, last year's 2% gain marked a significant slowdown on the three previous years when output rose in excess of 5% per annum. Unsurprisingly, this trend is linked closely to the fortunes of the region's largest producer, **China**. Between 2000-14, Chinese production rose by a total of 290t, or an average 7% per annum. However, this 15-year uptrend ended in 2015, as output fell marginally, by 0.4%, to 460t. Lower prices led to some development stage assets being put on hold, while a number of lower grade operations were suspended. Similarly, weakness in the copper price brought with it a reduction in gold output from the country's base metal operations. That said, the effect of lower prices was mitigated by a number of cost reduction strategies, with some state owned entities maintaining profit targets by lowering salaries and increasing production. Further economies of scale were also gained from the consolidation of small producers.

Looking at production on a company basis, output from the country's top four gold producers all rose y-o-y, China National Gold Group, Shandong Gold Group and Shandong Zhaojin Mining all registered gains of between 1-3% versus 2014, resulting in a collective increase of two tonnes. Meanwhile, Zijin Mining's domestic production rose by 12%, or three tonnes, aided by numerous mine level gains within the company's portfolio.

Indonesia recorded a robust 20% gain in mine supply, following a very strong performance at the Batu Hijau copper mine. Gold output from the mine rose ninefold, to 21t, as operations benefited from a full year of mining higher grade ore from Phase 6 of the open pit. Gold production at Grasberg (also a primary copper mine and the world's second largest gold producing operation) rose by three tonnes, to 38t. This was achieved through higher ore volumes from the open pit and the start of mining from the Deep Mill Level Zone underground mine, which allowed mill throughput to increase by 38% y-o-y. This more than outweighed a 20% decline in the average gold grade.

Asia



Source: Metals Focus

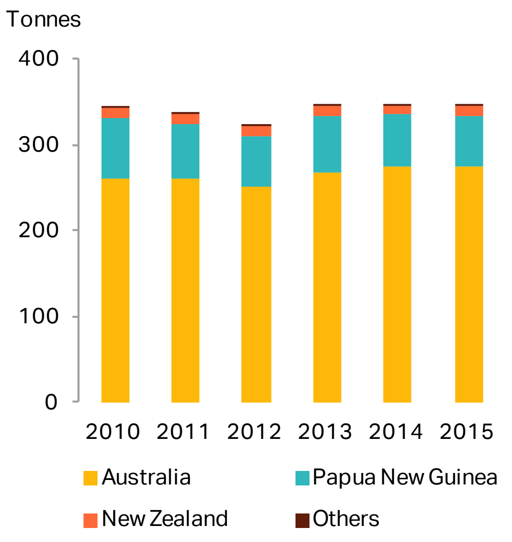
Mine supply from the **Philippines** was aided by higher output from the Co-O mine (following the completion of upgrade work to the L8 Shaft in January), and the continued ramp-up of Didipio, which entered production in late-2012. Following a strong gain in 2014, **Mongolian** output rose by a further tonne last year, as the ramp-up of the Oyu Tolgoi copper-gold mine continued. The operation only produced its first concentrate in 2013, and added two tonnes y-o-y. This more than offset a one tonne loss at Boroo, where milling of the residual stockpiles concluded in late-2014.

Output in **Turkey** fell by four tonnes last year. The processing of lower grade feed at Kişladağ and Çöpler resulted in a collective one tonne decline, while permitting issues impacted Koza Gold's output to a similar degree.

Oceania

With mine output of 274t during 2015, **Australia** remained the world's second largest producer. Strong performances from Newmont's, Boddington and Tanami mines added a combined six tonnes, as both operations processed higher grade ore and increased throughput. However, these gains were offset by numerous smaller declines. Most notably Sunrise Dam, Agnew, Prominent Hill and Telfer collectively accounted for a five tonne fall, while the closure of both Murchision and Burbanks led to half tonne losses each.

Oceania



Source: Metals Focus

New Zealand's output was boosted by a tonne, helped by higher grades at Waihi and Reefton, despite both operations approaching the end of their reserves. **Papua New Guinea's** production fell by just over two tonnes, as a five tonne increase at Lihir was not enough to counter strong declines at Ok Tedi, which was impacted by a prolonged drought. Meanwhile, Hidden Valley's output was curtailed by two tonnes following a 33 day safety stoppage in the third quarter.

2016 Gold Mine Supply Outlook

Following seven years of consecutive growth, global gold mine supply is expected to plateau in 2016, as the downturn in prices and subsequent slashing of project development budgets from 2013 start to take effect. As a result, there is no longer the volume of new capacity coming online to drive production higher. Instead, output is expected to level off as supply growth from new mines is countered by falls in production at ageing assets. Overall, we expect the supply of gold from mining operations globally to fall by around 0.5%.

On a country level, gains are expected to come from developing gold producing countries (Guyana, Suriname and Burkina Faso) together with Indonesia which is expected to benefit from a pick up in open pit grade at Grasberg. In contrast, production losses are expected from mature gold producers, including the US and Australia. Meanwhile a marked drop in grade at Oyu Tolgoi is expected to drive a sharp fall in production from Mongolia.

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Gold Production Costs

US$/oz	2014	2015	Y-o-Y
North America			
Total Cash	658	632	-4%
All-In Sustaining	998	897	-10%
Central & South America			
Total Cash	633	584	-8%
All-In Sustaining	933	891	-5%
Europe			
Total Cash	718	710	-1%
All-In Sustaining	1,147	1,083	-6%
Africa			
Total Cash	816	788	-3%
All-In Sustaining	1,040	997	-4%
CIS			
Total Cash	611	543	-11%
All-In Sustaining	841	761	-10%
Asia			
Total Cash	582	534	-8%
All-In Sustaining	848	784	-8%
Oceania			
Total Cash	770	666	-13%
All-In Sustaining	994	858	-14%
Global Total			
Total Cash	709	660	-7%
All-In Sustaining	976	897	-8%

Source: Metals Focus Gold Mine Cost Service

Gold Production Costs

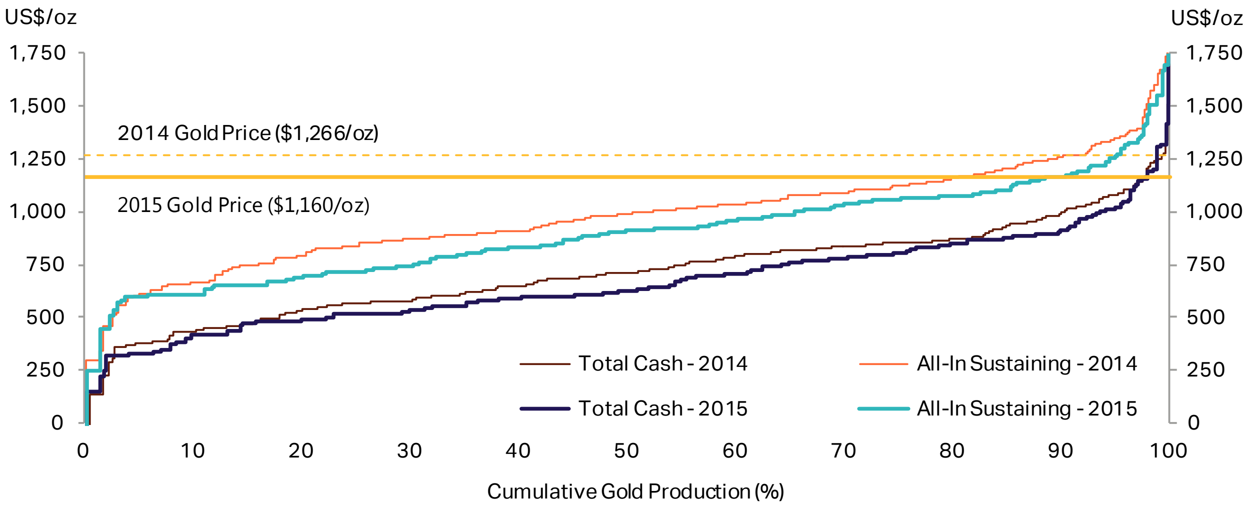
Gold prices were under pressure for most of 2015, reaching a low of $1,046/oz, which was the lowest level since 2010. As a result, mining companies continued to focus on cost cutting initiatives wherever possible. Both project-related and sustaining capital expenditure was cut once again, as were corporate costs.

The average total cash cost of production during 2015 fell by 7% to $660/oz, its lowest level since 2011. On an all-in sustaining basis, costs fell for a third consecutive year to $897/oz. This was an impressive 8% lower than 2014 and $216, or 19%, down from the 2012 high. However, with gold prices continuing to decline, the all-in sustaining margin contracted further, to $263/oz, down from $291/oz in 2014. As a result, just over 16% of the industry was cash flow negative on an all-in sustaining basis in 2015.

Last year, the main help for mining company costs was the strengthening US dollar, as operating expenses denominated in local currencies were effectively reduced. Looking at the major producing currencies, the average Australian and Canadian dollar exchange rate fell by 20% and 16%, respectively, while the Russian rouble saw the largest decline, down 59% y-o-y. The South African rand fell by 18% and the Peruvian sol a more modest 12% versus 2014.

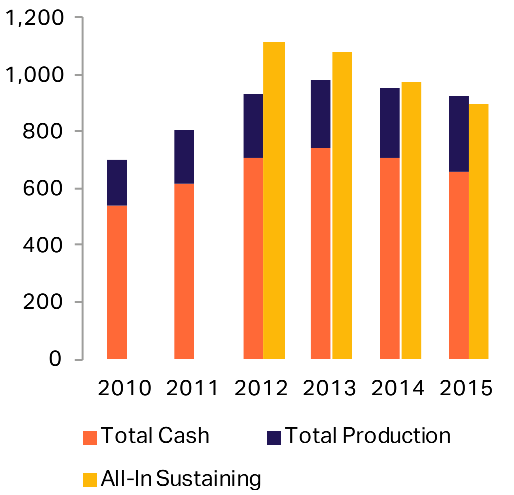
Mining companies also continued to benefit from lower energy prices. Crude oil for instance (Brent) was, on average, 38% lower y-o-y, and on an intra-year basis fell from $57/bbl to end the year at $37/bbl. Derivatives of oil such as diesel are used to power mining equipment and are also a common ingredient in explosives, which are among the largest consumable cost inputs in the industry. Furthermore, remote mines often rely on heavy fuel oil to generate electricity.

Gold Mine Production Costs



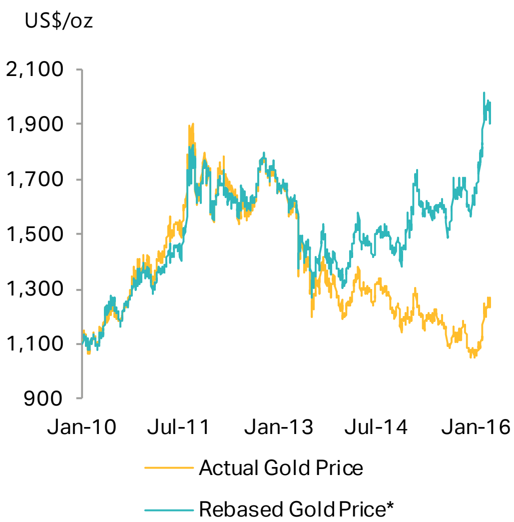
Source: Metals Focus Gold Mine Cost Service

Global Production Costs



Source: Metals Focus Gold Mine Cost Service

Gold Producers "local" Price*



* The blue line represents a rebased gold price, that has been adjusted for local currency movements from the world's largest 20 gold producing countries. Local currencies have been indexed from January 2010, and weighted by the countries' 2015 gold production volumes.

Source: Metals Focus, Bloomberg

Separately, lower metal prices over the year have in the main acted to drive costs higher, as the value of by-product credits such as copper, silver, lead and zinc prices fell 20%, 18%, 15% and 11% respectively. However, lower gold prices did result in a fall in royalty payments, which are usually calculated as a percentage of the spot price. The mean royalty rate paid dropped for a third year, down by $3/oz to average $39/oz; royalty rates peaked at $54/oz in 2012. One of the features of the gold bull market (which peaked in 2011) was the lowering of ore grades processed at mines, as previously uneconomically ore became viable. However, given the decline in prices, this trend has now reversed, and processed ore grades have risen by 4% since 2013, to an average of 1.43g/t.

Regional Performances

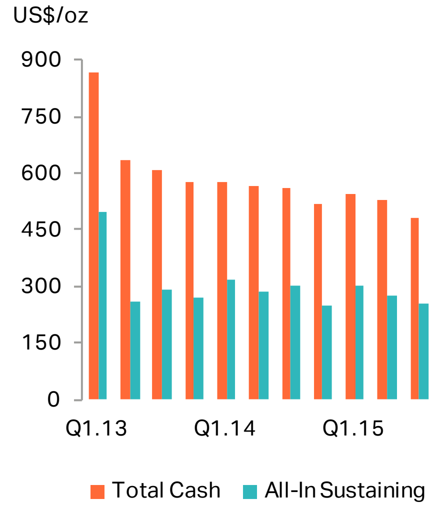
The **Commonwealth of Independent States** was once again the lowest cost region. During 2015, the average all-in sustaining cost of production came in at $761/oz, marking a 10% decline y-o-y, while total cash costs fell 11% to $543/oz. In the region's largest producer, Russia, costs benefited particularly from the depreciation of the rouble which was the worst performing major currency during 2015, falling by a considerable 59%. For example, Polyus Gold, whose costs are mainly denominated in roubles, was able to lower its total cash cost by 28% and all-in sustaining cost by 26% y-o-y. The company also cited gains from their optimisation initiatives.

In **North America**, costs declined to $632/oz (-4%) and to $897/oz (-10%), on a respective total cash and all-in sustaining cost metric. This was a reversal of the previous year which had seen costs rise by 5% on a total cash basis. In the United States, which accounts for just under half of the region's output, cash costs fell by 5% to $650/oz and all-in sustaining by 9% to $890/oz. America's two largest mines, Goldstrike and Cortez (jointly accounting for 36% of US production in 2015), saw costs decline by 9% to $522/oz and 2% to $486/oz on a total cash cost basis and an impressive 23% to $658/oz and 15% to $603/oz on an all-in sustaining basis. The large fall in all-in sustaining costs was due to a sharp cut in mine site sustaining capital expenditure, which fell by 55% at Goldstrike and 41% at Cortez compared with 2014.

Given that the Canadian dollar depreciated 16% against the US dollar, the y-o-y decline of 2% and 9% for total cash and all-in sustaining costs respectively was somewhat unimpressive. Having said that, Canada's costs have been declining for the last three years and were still the lowest since 2011. Its two largest operating mines, Canadian Malartic and Detour Lake, had a good year, achieving record production levels. Detour Lake increased processing throughput by 11%, while grades were static. As a result, total cash costs declined by 18% to $775/oz from $942/oz. Meanwhile, at Canadian Malartic total cash costs fell to $596/oz thanks to cheaper fuel and explosives and increased gold production.

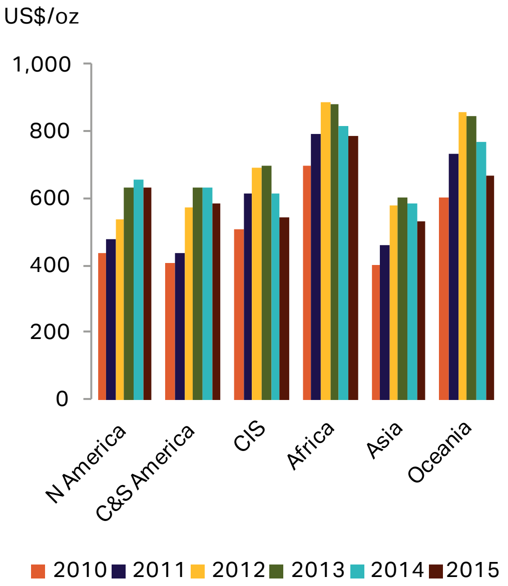
Mexico remained the lowest cost country in North America, and recorded falls of 6% and 14% for total cash and all-in sustaining costs respectively. A key driver was the depreciation of the Mexican peso, which fell by 19%

Global Production Cost Margin



Source: Metals Focus Gold Mine Cost Service

Regional Total Cash Costs



Source: Metals Focus Gold Mine Cost Service

against the dollar, basis annual averages. The largest gold producing mine, Peñasquito, had its best year yet as mining progressed into the high grade heart of the deposit. The average processed gold grade increased some 54%, while by-product output of silver, lead and zinc was also higher. This helped costs perform exceptionally well, falling 18% to $320/oz and 33% to $544/oz for total cash and all-in sustaining costs respectively.

Total cash costs in **Central & South America** fell 8% y-o-y, to average $584/oz, and were also down 5%, to $891/oz, on an all-in sustaining basis. Brazil was the standout performer as its heavily exposed commodity economy was hit adversely, with the real falling 41% against the US dollar. This helped miners in the country, who on average recorded cost falls of 16%, to $686/oz, on a total cash basis and by 14% using the all-in sustaining metric. Elsewhere, Peru also performed well and once again the currency was a factor with the neuvo sol falling by 12% y-o-y. The country's largest mine, Yanacocha, managed to lower costs despite the average grades of ore treated falling by 20%. Overall, costs dropped by 13% and 7% on a total cash and all-in sustaining cost basis, although in part this was helped by a 31% y-o-y fall in waste stripping. Chile, which has a high proportion of polymetallic mines, bucked the trend with total cash and all-in sustaining cost actually both rising by 13% to $679/oz and $1,088/oz respectively.

Costs in **Africa** declined for a third consecutive year to $788/oz (-3%) and $997/oz (-4%) on a total cash and all-in sustaining cost basis. However, the region remains the highest cost globally, topped by South Africa where total cash costs averaged $906/oz. The country has a large proportion of deep high cost underground mines, and although costs did decline, a 2% drop y-o-y is modest given the 18% depreciation of the rand. The most notable performance regionally came from Mali, where total cash costs declined 15% to $744/oz, thanks in part to a 20% fall in the local currency.

In **Oceania**, where Australia accounts for 80% of costed production, costs declined an impressive 13% and 14%, dropping to $666/oz on a total cash and $858/oz on an all-in sustaining cost basis. Individually, Australia saw costs fall by 15% on both metrics, as the Australian dollar fell by 20% y-o-y. On a mine-by-mine level, 46% of costed Australian production recorded total cash costs of under $600/oz in 2015.

2016 Gold Production Cost Outlook

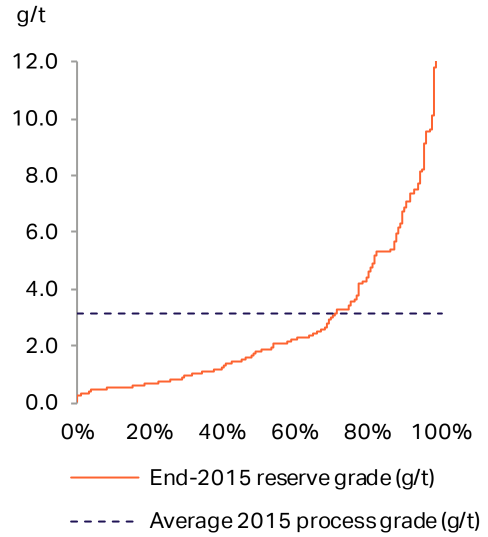
With the dollar having been so strong over 2015 and this strength persisting into the early part of 2016, without a dramatic turnaround, on an annual average basis most producer currencies should weaken further against the US dollar in 2016. This will once again help to lower operating expenses denominated in other local currencies, most notably wages and electricity. Brent crude which averaged $59/bbl in 2015, has averaged only $34/bbl up until mid-March, so large open pit operations and mines reliant on heavy fuel oil to produce power should continue to realise cost savings. By-product metals prices look likely to be lower during 2016, which will reduce credits further. Overall, we expect costs to decline again in 2016.

Global Reserves & Resources*

Tonnes	Reserves	Resources^
N America	11,000	30,840
C&S America	8,010	18,970
Europe	1,190	3,020
Africa	8,485	28,930
CIS	15,700	35,400
Asia	6,330	29,370
Oceania	5,040	16,020
Global Total	**55,800**	**162,600**

* Contained gold estimates based on available data
^ Mineral resources stated are inclusive of reserves
Source: Metals Focus

Primary Gold Reserve Grades*



* Reserve and average process grade weighted by contained gold content.
Source: Metals Focus

Gold Reserves & Resources

As of end-2015, we estimate that global gold mineral reserves stood at 55,800 tonnes (1,794Moz). Based on data from our mines and projects database, which consists of over a thousand assets, the average primary gold reserve grade at end-2015 stood at 1.17g/t. However, when excluding development projects, and just focusing on currently operating mines and those being commissioned, the mean reserve grade rises to 1.32g/t. This analysis excludes assets that are not primary gold mines, such as copper mines where gold is produced as a by-product.

Over 2015, we estimate that total gold reserves declined by 1,800t (58Moz). Interestingly, we recorded mining depletion from these mines of 2,500t (80Moz), meaning that mining companies would have actually increased reserves, had it not been for depletion. Using our database, the largest 50 gold mines, which currently produce a little under a third of global mine supply, have just under 11 years, on average, of reserve mine life remaining. These mines also have, on average, an additional nine years of mineral resources (exclusive of reserves), which have the potential to be recategorised into reserves.

Looking at primary gold mines currently under construction, these have a consolidated reserve base of 1,800t (55Moz), with an average grade of 1.62g/t, 13% higher than those mines currently in operation.

Capital Expenditure & Exploration

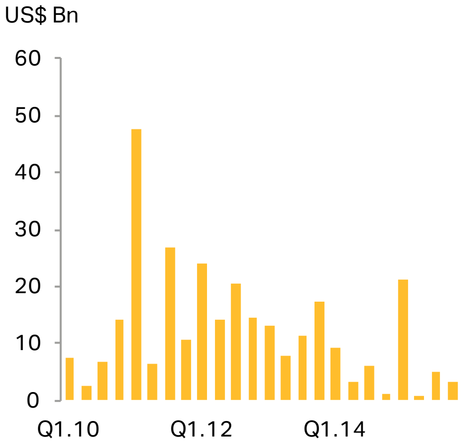
Last year saw expenditure on gold exploration improve marginally, with both increases in drilling activity and the number of new resource announcements. Conversely, capital spending by companies fell again; as declining metal prices eroded operating margins further, companies have increasingly used stricter criteria in the deployment of capital investment. In the main, this has resulted in a sharp cut in non-essential sustaining capital expenditure, and the slowing or mothballing of many projects.

Capital Expenditure

Total capital investment by companies included within the HUI Index fell 19% last year, to $21.6Bn, and is now 58% below the 2012 peak. Mining company share prices did not fare any better, with the HUI Index itself falling from 164 at the start of the year to a low of 104 in November.

Using Metals Focus' Gold Peer Group Analysis, which tracks an array of financial, cost and production metrics from 12 of the largest gold mining companies globally, we are able to gain more granularity on where the cuts to capital expenditure (capex) have taken place. Overall, the analysis has shown that total capex for the peer group peaked at $23.2Bn in 2012. Of this some $12.5Bn (54%) was project capex, with the remainder representing sustaining investment. Although sustaining capex has been heavily cut, falling 45% from $10.1Bn in 2012, to $5.6Bn last year, it is project spending that has been hardest hit. Since its peak in 2012, project capex has been cut by 83% to $2.2Bn in 2015.

New Gold Discoveries*



* Total value of initial gold resource announcements, includes associated by-product metals.
Source: SNL Metals & Mining

Exploration Activity

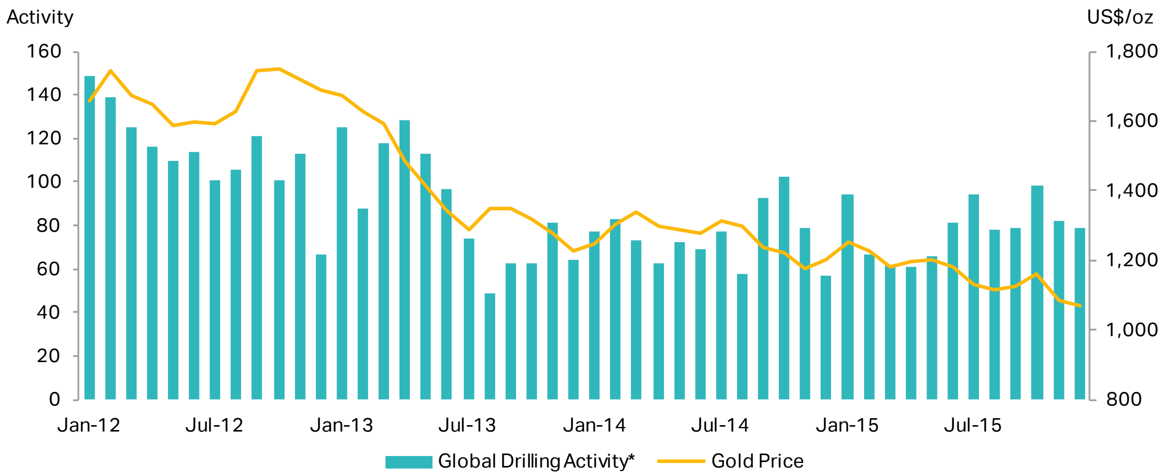
Based on data from SNL Metals & Mining, the exploration sector is starting to improve in terms of gold drilling activity. In Q4 2015, a total of 258 individual prospects were being drilled, up 8% y-o-y, representing the highest level since Q2 2013.

On a regional basis, activity was dominated by North America, with Canada seeing 79 gold prospects being drilled, which alone accounted for 31% of the global total in Q4 2015. This represented a 7% rise y-o-y, which came on the back of a 30% gain the year before. To the south, exploration on individual properties in the US actually declined by 18% y-o-y, to 23 properties. Elsewhere, the number of projects drilled in Mexico has remained flat after a sharp drop in 2014.

The second most active region for prospect drilling in Q4 2015 was Oceania. Australia alone accounted for 30% of the global total, as drilling reports increase 53% y-o-y. Looking at Africa, exploration activity has been cut more sharply than in other regions. In Q4 2012, Africa accounted for 17% of global activity; in the same period in 2013, its share had fallen to 14%, and in the final quarter of last year hit 6%. This is despite Africa being the world's second largest gold producing region and, in our view, this sharp drop reflects the added complications of exploring in Africa, which include less infrastructure, greater risks and costs of projects.

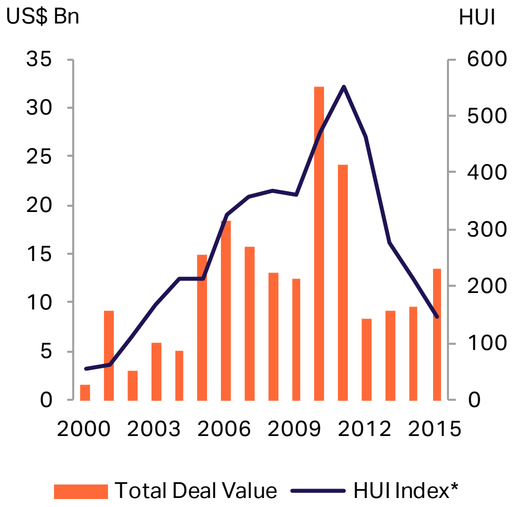
Another area of consideration is new resource announcements, as the lack of activity since mid-2013 has had a significant impact on the project pipeline. The volume of initial gold resources in Q4 2015 totalled 435t (4.3Moz), although this was up 23% q-o-q (helped by the first release from the Kili Teke copper-gold project in PNG), it was a decline of 59% from 325t (10.5Moz) in Q4 2014. While this all reflects a bleak picture, it is worth considering that, although there are fewer projects being developed, those that are moving forward should possess more robust project economics.

Global Gold Drilling Activity*



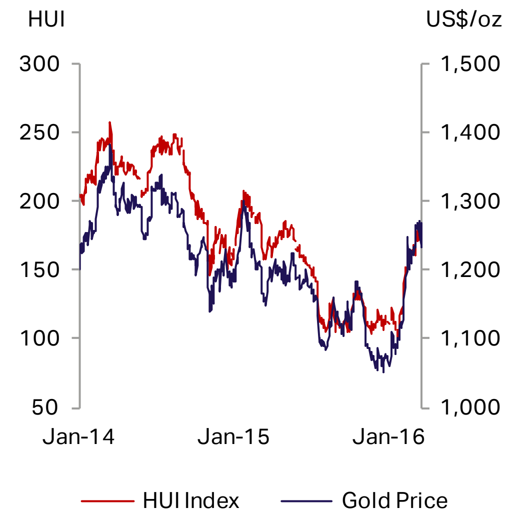
* Number of projects reporting drilling activity during the period
Source: SNL Metals & Mining

Value of Completed Deals



* Annual average price
Source: Bloomberg, Metals Focus

HUI Index and Gold



Source: Bloomberg

Corporate Activity

2015 saw a jump in merger and acquisition activity, with a total of US$13.4Bn of deals being completed. This represented a 39% increase in value terms on the previous year, and was the highest since 2011.

However, the valuations of precious metals companies continued to fall in 2015 and, as a result, the HUI Index average of 146 last year was its lowest level since 2002. Interesting, if the gold mining deal book is adjusted for these changes in company valuations, then last year's total was in fact the highest since 2001, the year Barrick Gold merged with Homestake Mining and Newmont acquired Franco-Nevada and Normandy Mining.

The largest deal of 2015 was the US$5.8Bn takeover of Polyus Gold by Wandle Holdings. Polyus produced 55t during 2015, making it the largest producer in Russia, and ninth biggest globally. Barrick Gold continued with its focus on debt reduction last year, and as a result was responsible for instigating a significant portion of the deals in 2015, as the seller. Through the year, the company announced asset sales worth US$3.2Bn. The largest single deal took place in July and was the sale of a 50% share in the Zaldívar copper mine in Chile to Antofagasta for US$1.0Bn. The deal also included the formation of a partnership to develop the mine. In May, Barrick agreed to sell the Cowal mine in Australia to Evolution Mining in a deal worth US$550M, and also announced the formation of a strategic partnership with Zijin Mining. The first step to this deal involved Zijin acquiring 50% of the parent company that owns 95% of Porgera in Papua New Guinea in a deal worth US$298M. Barrick also sold 100% of Bald Mountain and a 50% stake of Ruby Hill to Kinross Gold for $610M.

Two other deals took place with a valuation of over a billion dollars during 2015. In April, Alamos Gold completed its merger of equals with AuRico Gold in a deal worth US$1. 5Bn; the combined company produced 12t during 2015. Also in April, Tahoe Resources completed the takeover of Rio Alto in an all share agreement which valued Rio Alto at US$1.1Bn. Rio Alto's primary property was La Arena, a copper-gold mine in Peru that produced 7t of gold during 2015. Tahoe has subsequently announced (in February 2016) that they have entered into an agreement to purchase Lake Shore Gold in an all share deal worth C$945M.

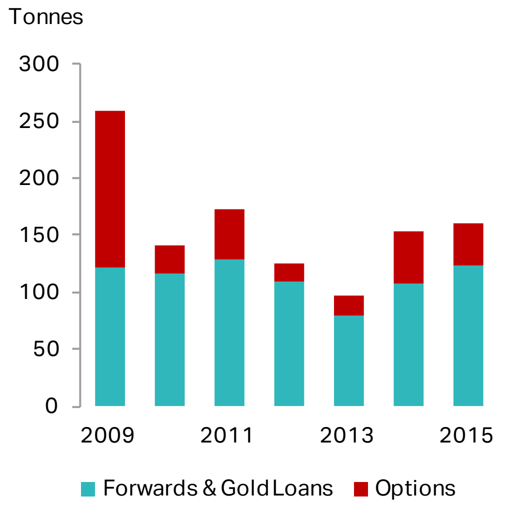
Meanwhile, Newmont Mining purchased the Cripple Creek & Victor gold mine in Colorado from AngloGold Ashanti for US$820M. The mine is expected to produce between 11t and 12t of gold per year in 2016 and 2017 at an all-in sustaining cost of between $825-$875/oz. Newmont also completed the sale of the Waihi mine in October for US$101M to OceanaGold; the mine is forecast to produce 4t at an all-in sustaining cost of $700-750/oz during 2016. Evolution Mining has been one of the most active in the M&A arena in recent years. Last year they acquired the Cowal mine for US$550M, La Mancha's Australian operations in an all share deal worth US$214M and by year-end had largely completed the takeover of Phoenix Gold in a deal worth US$41M.

Hedge Book Composition*

Tonnes	2014	2015	Y-o-Y
Forwards	107.9	123.8	15%
Options	96.1	89.4	-7%
Total	**204.0**	**213.2**	**5%**

* Delta adjusted position at end-period
Source: Metals Focus

Hedge Book Evolution*



* Delta adjusted position at end-period
Source: Metals Focus

Producer Hedging

For a second year, miners were net hedgers, collectively selling forward nine tonnes of gold. This represented just 0.3% of global mine production in 2015, and is a marked reduction on the 106t of net hedging in 2014.

Following the prominent return of producer hedging in 2014, the hedge book started the year in excess of 200t, its highest level since 2010. Although the price rally in January 2015 did attract some additional hedging activity, the fact that prices generally drifted lower throughout the year provided miners with little opportunity to establish meaningful long-term hedge contracts. However, some companies did use mini-rallies to maintain rolling positions. As such, the first half of 2015 saw 19t of net producer de-hedging.

Gold's recovery from the July lows brought with it another flourish of hedging activity in the third quarter. The dip below $1,100 gave producers a glimpse of how bleak things could be and, at the same time, highlighted the benefits that a well executed hedging strategy brought to some companies. Furthermore, the weakening of a number of key producer currencies, largely brought about by the general slide in commodities prices, meant that in a number of local currencies gold was nearing or making new highs. As such, it was not surprising that the majority of hedging activity in 2015 was undertaken by miners in Australia and Russia, as these producers moved to lock-in healthy profit margins.

The year-on-year gain was exclusively driven by a 16t increase in the volume of forward sales, which at year-end comprised 58% of the global delta adjusted hedge book. Of note, Metals X entered into a gold hedge covering 8t, or 20%, of projected production out to 2018, including output from its Central Murchison Gold Project. Evolution Mining continued to add to its hedge position during the year, and also acquired seven tonnes of contracts through the acquisition of La Mancha Resources' Mangari project, resulting in their hedge book rising 12t versus end-2014. Elsewhere, Doray Minerals, Saracen Minerals, Hochschild and Perseus Mining all added to their hedge positions during 2015, which, combined, resulted in a further nine tonne gain. Deliveries into existing positions resulted in the options portion of the hedge book contracting by seven tonnes y-o-y. Most significantly, after establishing a sizeable hedge position in late-2014, Fresnillo delivered into collar contracts covering eight tonnes of production during the year. Polyus, the other major options holder, re-structured the first two tranches of their contracts during the second half of the year, while also taking out a third, leaving its position largely unchanged versus end-2014.

Miners are again expected to be net hedgers of gold in 2016, representing a third consecutive year of activity on the supply side of the balance. That said, we expect volumes to remain relatively constrained, and do not see this indicative of a major change in sentiment by the mining industry. In general, this activity appears to be by companies using hedging to safeguard revenue against capital investments and ageing assets.

Chapter 4

Recycling

– Global recycling in 2015 fell for the fourth year in succession, by 6% to 1,127t. Excluding Turkey, the decline was 11%.

– A 1% drop is forecast for recycling despite expectations of firmer gold prices. Far higher prices are therefore needed to see jewellery stocks mobilised, given the erosion of near market inventories.

Introduction

Against a backdrop of an 8% decline in dollar gold prices last year, global gold recycling fell by 6% to 1,127t. This may appear reasonable, but it hides some marked regional variations. Of particular note was the rise in the Middle East's scrap of 3%. This was primarily driven by a 35% jump in Turkey (for the second year now, the world's largest recycling market), where volumes were fuelled by a slump in the value of the lira. A weaker euro also meant that Eurozone gold prices rose by 10% in 2015. However, the erosion of near market jewellery stocks saw European recycling fall by 5% last year. The niche of industrial scrap is not thought to have changed significantly last year as still declining yields countered the rise in gross volumes collected and refined. However, gains for industrial scrap could start to emerge from this year through further growth in gross volumes, a possible end to the slide in scrapped products' precious metal content and a yield boost from improving product segregation.

Europe

European scrap in 2015 fell by 5% to 229t, marking the fourth consecutive year of losses from the 2011 peak of 414t. A fall might surprise given last year's rise in the euro gold price of 10% to €34/g. That a dip occurred was due to a combination of a diminished pool of near market stocks, low levels of distress selling and consumer perceptions of prices as unexceptional, given that levels in 2011 and 2012 over €40/g were not too distant a memory. This is not to say that price had no impact. Firstly, the pace of scrap's fall was far less than the 22% declines seen in both 2013 and 2014. Secondly, there was a strong quarter-on-quarter rise in scrap in January-March when prices rallied over €35/g from around €30/g in late 2014.

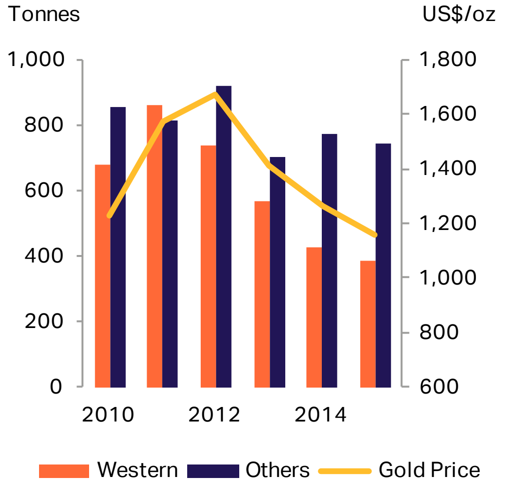
This interpretation is significant for our 2016 outlook; there has been a price driven flurry of interest of late and this could again translate into a quarter-on-quarter rise in volumes. However, another modest decline is more probable for the full year due to the above-mentioned issues of reduced stocks, limited distress selling and below peak prices.

These ongoing losses and lower margins are causing continued hardship for scrap collectors. This means company-level stories act as a poor guide to overall recycling as they can veer between bankruptcy and market share gains derived from others' exit. Cashflow considerations in these tough conditions also mean very few have the luxury of postponing sale to a refinery in the hope of better future prices.

North America

The 15% drop in **US** recycling for 2015 meant that jewellery melt (which dominates the total) has witnessed an uninterrupted decline over the past four years, averaging a steep 27% per annum. As a result, between 2011-15, the US has seen by far the largest decline in recycling, of 221t. This

Global Recycling



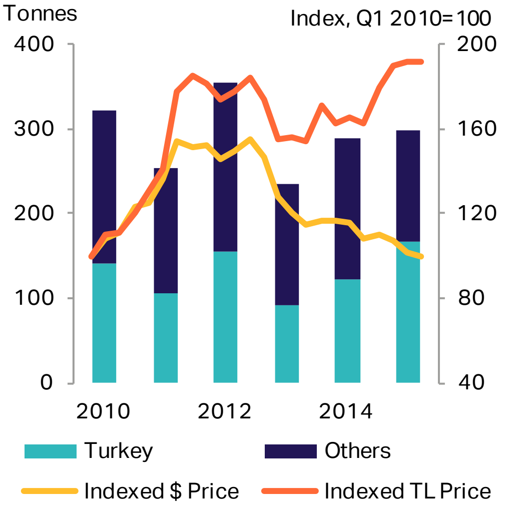
Source: Metals Focus, Bloomberg

Global Recycling Forecast

Tonnes	2015	2016F	Y-o-Y
Europe	229	215	-6%
CIS	38	34	-10%
North America	122	120	-1%
C & S America	32	34	5%
Middle East	299	261	-13%
Indian Sub-Continent	102	124	22%
East Asia	240	263	10%
Africa	64	65	2%
Oceania	2	2	-11%
Global Total	**1,127**	**1,118**	**-1%**

Source: Metals Focus

Middle East Recycling



Source: Metals Focus, Bloomberg

has cut the US share of global recycling from a peak of 18% in 2011 to 8% last year. The erosion of near market jewellery stocks, weaker prices and a modest economic recovery have accounted for this marked decline.

In a shrinking market, with little sign so far of erosion in refining capacity, margins have remained under pressure. In contrast, there has been some consolidation among collectors and aggregators. Looking ahead, the erosion of near market material will be the key factor in preventing recycling volumes from enjoying a sharp recovery unless there is a substantial and protracted rise in gold prices (which does not form part of our base case forecast).

Middle East

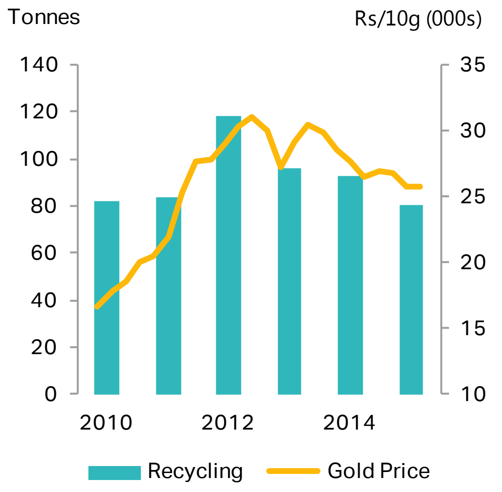
Middle East jewellery scrap rose by 3% last year to 299t, even though dollar gold prices were 8% lower. This was due to a 35% jump in Turkey, which was the only country in the Middle East to see volumes rise in 2015. The exclusion of Turkey, therefore, offers a quite different view of Middle East recycling, with scrap supply elsewhere in the region falling by 20%. Turning to this year, excluding Turkey, we expect our forecast of somewhat stronger gold prices to help deliver a 9% rise in scrap volumes. However, including Turkey, Middle East recycling is expected to drop by 13% in 2016, such is the scale of the expected decline in Turkish scrap supply.

Turkey saw strong growth in scrap in 2014 as local prices rose but the response was even more pronounced last year as the sharp depreciation of the Turkish lira saw local prices post record highs. This meant a stellar year for recycling, with 2015 volumes up 35% to 166t. The year had begun buoyantly as further depreciation of the lira helped local prices surge by 15% to surpass the TL100/g threshold. The level of selling back by consumers that emerged helped create a $5-10/oz discount to the London market. This meant that first quarter 2015 scrap saw a hefty lift of 21% y-o-y to 85t, even though January-March 2014 had seen recycling hit a healthy 70t. As a result, the country's significant refining capacity was at times unable to process the volume of jewellery and coin that was returned to the market. This in turn saw significant quantities shipped overseas, either without being processed at all or as crudely melted bars.

The remainder of 2015 was comparatively quiet, with average quarterly volumes not that much higher than the average for the subdued 2013. A hefty fall of almost 50 tonnes is forecast for 2016 as local contacts feel yet higher lira prices would be needed for scrap to get close to 2015's exceptional levels.

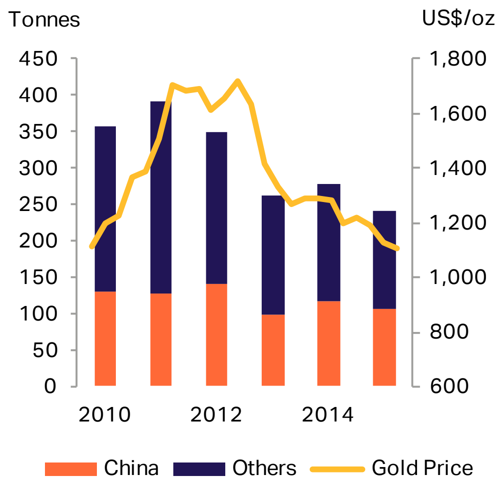
The policy by **Egypt's** central bank to limit monthly bank deposits severely restricted gold imports in 2015. As a result, local premiums spiked to $90/oz, and held at around $50 through to year-end. Despite this, scrap fell by 8% as people held onto their gold as security. High premiums also encouraged unofficial scrap inflows from neighbouring countries, including Libya and Sudan. This meant that the total supply from imported plus domestic scrap within Egypt rose by 30% last year.

Indian Recycling



Source: Metals Focus, Bloomberg

East Asian Recycling



Source: Metals Focus, Bloomberg

Indian Sub-Continent

Indian scrap fell for the third year in a row, by 13% to 80t, principally because of a rise in the exchange of old for new jewellery pieces, with consumers paying only the labour charge (this exchange is not included in our recycling series). Exchange typically increases during the festive and marriage seasons, but the drop in gold prices saw this exchange rise as lower rupee prices discouraged the selling back of old jewellery for cash. However, the fall in scrap would have been much higher were it not for gold loan defaults and rural liquidations, both the result of the poor monsoon. Turning to this year, recycling should benefit from the government's gold monetisation scheme, under which there are concerted efforts by refineries and banks to bring gold out from under the mattress.

East Asia

East Asian scrap fell 13% in 2015 to 240t and in doing so erased 2014's slight rise. All major markets registered declines last year, an unsurprising development given the backdrop of soft gold prices, even allowing for some countries' currency weakness. Most south-east Asian countries, for example, saw significant devaluations against the dollar but local gold prices tended to move sideways during the year as a whole and were on average lower. Recycling this year in East Asia is forecast to respond positively to expected price gains, although the anticipated 10% rise would still leave volumes almost 130 tonnes below their 2011 peak.

After a strong gain in 2014, recycling in **China** fell by 9% last year. This reflected the weakness of gold prices and their low volatility. It was also due to local consumers' reluctance to sell back gold holdings, given the questionable outlook for the renminbi. In spite of the consolidation seen in the local jewellery industry, we did not see a marked rise in trade scrap. This is due to the modest overall level of inventories held by the supply chain, the preference of wholesalers to sell at a discount rather than bear a refining cost and a reluctance to demonstrate financial difficulties.

Limited price incentives were behind the 24% and 29% respective declines in **Thai** and **Indonesian** scrap. We should caution that our 2015 estimates for both markets may underestimate the true volumes somewhat. Our field research suggests that there was a rise in official and unofficial second hand and refurbished jewellery exports. We cannot rule out the possibility that some of this material was ultimately scrapped abroad, for instance in India, to take advantage of the Free Trade Agreement. The weak price also discouraged **Vietnamese** recycling, in spite of healthy pay-out rates being offered, as locals would rather hold their gold than crystallise losses.

In **Japan**, recent field research has confirmed that we had previously underestimated local recycling volumes and we have therefore revised our historical numbers up significantly. As far as the trend is concerned, a falling price over most of the year saw volumes decline once again. **South Korean** scrap, meanwhile, bucked the trend seen in other East Asian markets, rising in fact at the margin, although this was more a reflection of the exceptionally low base in 2014.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Recycling

Tonnes	2010	2011	2012	2013	2014	2015	Year on Year
Europe							
Italy	95.0	118.5	120.4	104.5	86.0	82.9	-4%
UK	65.0	77.0	71.0	51.0	35.5	33.0	-7%
Germany	41.2	44.5	40.0	31.1	23.8	24.7	4%
Other	135.1	174.0	162.9	121.9	95.5	87.9	-8%
Sub-total	**336.3**	**414.0**	**394.3**	**308.5**	**240.8**	**228.5**	**-5%**
CIS							
Russia	12.6	9.3	8.5	28.0	32.2	35.4	10%
Other	3.1	2.3	2.1	7.0	2.7	2.5	-7%
Sub-total	**15.7**	**11.7**	**10.6**	**35.0**	**34.9**	**38.0**	**9%**
North America							
United States	229.5	306.0	224.6	160.5	104.3	84.8	-19%
Other	62.0	74.0	49.8	46.6	39.5	36.7	-7%
Sub-total	**291.5**	**380.0**	**274.4**	**207.1**	**143.8**	**121.5**	**-15%**
Middle East							
Turkey	139.9	104.9	155.5	92.0	122.6	165.9	35%
Iran	63.0	45.0	66.3	43.3	57.4	38.2	-33%
Egypt	30.6	44.9	40.8	34.4	32.2	29.6	-8%
Saudi Arabia	50.7	35.5	39.0	23.0	29.4	24.8	-16%
Other	36.4	22.7	52.4	40.9	47.4	40.3	-15%
Sub-total	**320.6**	**253.0**	**354.0**	**233.5**	**288.9**	**298.8**	**3%**
Indian Sub-Continent							
India	82.0	83.6	118.0	95.8	92.5	80.2	-13%
Other	24.9	30.5	22.7	19.8	22.7	21.4	-6%
Sub-total	**106.9**	**114.0**	**140.7**	**115.6**	**115.2**	**101.6**	**-12%**
East Asia							
China	129.3	127.3	140.0	98.0	117.6	107.0	-9%
Japan	32.5	68.0	48.6	35.0	38.7	31.4	-19%
Thailand	33.0	38.0	28.0	27.0	27.5	21.0	-24%
Indonesia	48.0	42.0	30.0	25.0	22.5	15.9	-29%
Other	114.5	117.5	103.7	76.7	71.4	65.0	-9%
Sub-total	**357.2**	**392.8**	**350.3**	**261.7**	**277.7**	**240.2**	**-13%**
Other Regions							
C&S America	47.0	58.7	66.1	46.2	39.8	32.3	-19%
Africa	51.3	43.2	63.3	54.5	58.0	63.8	10%
Oceania	5.2	6.6	5.3	4.2	3.0	2.3	-23%
Sub-total	**103.5**	**108.6**	**134.6**	**104.9**	**100.8**	**98.4**	**-2%**
Global Total	**1,531.7**	**1,674.0**	**1,658.9**	**1,266.3**	**1,202.1**	**1,127.0**	**-6.3%**

Source: Metals Focus

Chapter 5

Jewellery

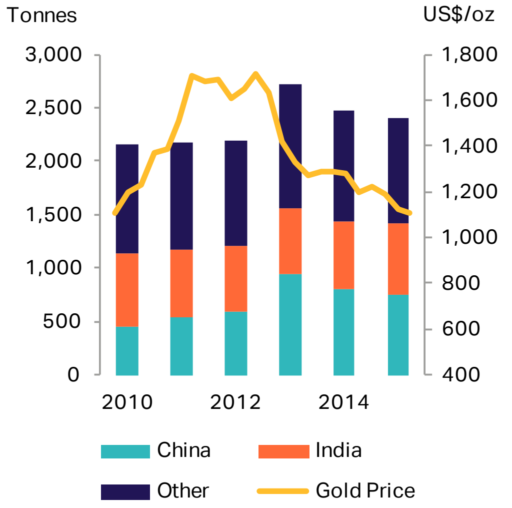
- Jewellery consumption fell by 3.5% to 2,397t. Weak currencies, low oil prices and worsening economic prospects hit China, Russia and Turkey. India saw 6% growth, while western demand was broadly stable.
- Consumption in 2016 is forecast to be effectively unchanged on last year as price-related losses in most countries offset growth across the Indian Sub-Continent.

Introduction

Jewellery consumption in 2015 saw a second year of losses, although the 3% dip was far smaller than 2014's drop of 9%. This continued slide was chiefly down to China, whose 7% slip accounted for almost 40% of all declines last year. That outcome for China was chiefly down to deteriorating consumer sentiment as GDP growth slowed, unlike the prior year when matching an exceptional 2013 was a tough call. The other major falls in 2015 were those for Russia, Turkey and most Persian Gulf countries, which were due to such factors as falling oil prices and currency weakness. These losses also explained much of the 2% dip in western jewellery fabrication via their impact on European watch and jewellery exports.

That result stood in contrast to the 1% rise in western consumption, but more different was India, where consumption grew by a solid 6% thanks in the main to bullish price expectations and a still strong economy. We are forecasting further growth for India this year and another drop for China and so it will be interesting to see which actually finishes 2016 in pole position. That mix helps explain our forecast of an almost unchanged global total for jewellery demand this year.

Gold Jewellery Consumption



Source: Metals Focus, Bloomberg

Europe

European jewellery **fabrication** slid 3% last year to 200t. Switzerland saw the largest decline, as losses in watches, mainly following the downturn in sales to China, outweighed another good year for top-end jewellery. That segment also performed well in Italy but proved insufficient to counter mass-market losses, with the country's fabrication down 2% to 122t. This drop was chiefly due to a 19% slump in shipments to Italy's largest export market, the UAE. On top of causes such as weak oil prices, Dubai's re-exports to North Africa were also hit by security concerns. It is of note that, while total Italian jewellery exports last year fell by 3%, shipments to all markets excluding the UAE rose by 3%. Exports of jewellery for sale within Russia and Turkey also fell heavily, although total shipments to Turkey rose thanks to higher re-exports to other Middle East markets.

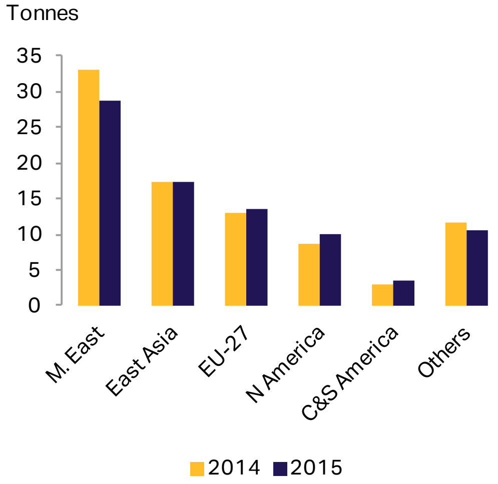
Not all was gloomy, with shipments to Latin America for example climbing very strongly. However, while consumption there rose, much of this increase was down to growing re-exports to the US. Higher re-exports of Italian output to the US were also seen from elsewhere in the world. Total Italian shipments to the US therefore increased more strongly than the rise in direct flows to that market of 9% (an increase already larger than US consumption's growth). Exports to China were also buoyant in the first half of 2015, but slowed later in the year as its consumption faltered, leaving full year Italian volumes roughly unchanged on 2014. Ongoing weakness in China and the Middle East, plus a possible end to western "over-importing", largely explain our forecast of another fall for Italian fabrication in 2016.

Jewellery Consumption Forecast

Tonnes	2015	2016F	Y-o-Y
Europe	106	106	0%
CIS	53	58	10%
North America	150	154	3%
C & S America	49	46	-6%
Middle East	329	298	-10%
Indian Sub-Continent.	710	771	9%
East Asia	946	918	-3%
Africa	45	42	-8%
Oceania	8	7	-13%
Global Total	**2,397**	**2,400**	**0.1%**

Source: Metals Focus

Italian Gold Jewellery Exports



Source: Metals Focus

Europe's jewellery **consumption** fell 1% in 2015 to 106t due to such factors as ongoing rivalry from other consumer goods, branded silver and costume jewellery. These issues also hit North America, although consumption grew there. Other explanations are therefore needed for Europe's dip, and these centre on economic uncertainty and a 10% rise in the average euro gold price. A slightly different outcome was seen in the UK (now Europe's largest market); sales here rose by 1% against a backdrop of a 1% fall in sterling gold prices and GDP growth of 2.2% (versus the Eurozone's 1.6%). Many European countries saw jewellery imports continue to outpace consumption; Italian exports to the EU, for example, grew by 4% in 2015. We believe this apparent over-importing does not imply market share loss for local fabricators, but instead further refilling of a barely stocked supply pipeline, often as retailers who had abandoned gold return to the metal.

The slump in **Russian** gold jewellery demand last year was of little surprise, given the impact of sanctions and the collapse in the rouble, which saw local gold prices surge. Both manufacturing and imports were hit hard. In terms of the latter, Turkey (a key supplier of finished jewellery to Russia) saw its shipments both to Russia and also to those countries used as a transshipment point onto Russia (such as Lithuania) effectively halve last year, to an estimated 5t.

North America

In 2015, **US** gold jewellery consumption rose by 3% to 120t. On a positive note, this marked the second successive year of rising demand, and so appeared to cement last year's turnaround, following an extended downturn. However, this should not be taken as a sign of renewed optimism in the gold jewellery market. The still uneven economic recovery is reflected in a forecast gain for 2016 of just 3%. Although this will mark the third year of improved retail sales, in absolute terms it remains a shadow of retail volumes a decade ago.

The uncertainty affecting the jewellery market may appear surprising, given the rise in the country's gold jewellery imports last year. In value terms, shipments rose by over 4% to US$5.3bn. More impressive though was the gain in fine gold terms, of 14%. At first sight, this outcome may appear at odds with just a 3% rise for US gold jewellery consumption.

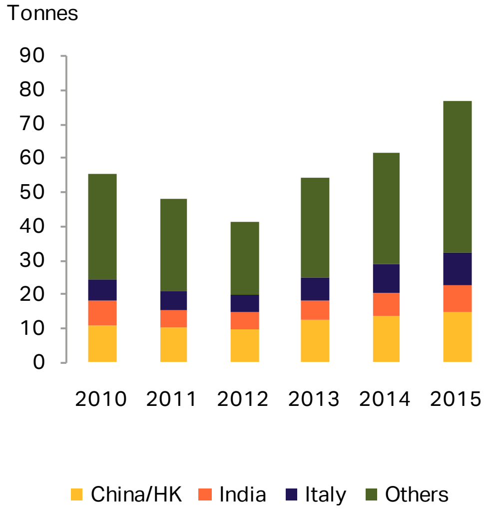
The key reason for the stronger import profile has been the return of some major retailers to the gold market. During the late 2000s, against a backdrop of elevated gold prices, some retailers were unable to offer gold at low, but still key, retail prices. As a result, some effectively exited the market, switching to silver or non-precious metals, such as steel. Nevertheless, this strategy created its own challenges, not least that it required high unit sales (on often relatively low value items) to make up for the lost gold revenue. However, the subsequent fall in gold prices has seen retail margins improve notably. This in turn has encouraged some retailers to gradually shift back in favour of gold, which explains the far stronger performance of jewellery imports than the increase in retail sales in 2015.

Jewellery Consumption

Tonnes	2010	2011	2012	2013	2014	2015	Year on Year
Europe							
UK	20.3	20.0	19.4	21.3	25.7	26.0	1%
Italy	31.3	26.1	22.5	20.3	18.7	18.0	-4%
Other	85.7	75.7	66.8	65.2	63.5	62.4	-2%
Sub-total	**137.3**	**121.8**	**108.7**	**106.7**	**107.9**	**106.4**	**-1%**
CIS							
Russia	61.4	63.9	66.7	80.3	67.0	41.1	-39%
Other	12.0	9.7	13.3	15.0	13.1	11.6	-12%
Sub-total	**73.3**	**73.6**	**79.9**	**95.3**	**80.1**	**52.6**	**-34%**
North America							
United States	126.5	121.6	117.9	112.7	116.6	119.6	3%
Other	30.8	29.9	27.3	29.5	29.7	30.8	4%
Sub-total	**157.3**	**151.5**	**145.2**	**142.3**	**146.3**	**150.4**	**3%**
Middle East							
Saudi Arabia	60.2	53.3	50.0	66.8	68.4	71.0	4%
UAE	51.4	53.5	49.1	64.2	56.0	51.4	-8%
Turkey	70.9	79.0	68.3	80.0	68.1	49.0	-28%
Egypt	50.5	34.4	43.3	45.6	45.1	38.2	-15%
Iran	63.8	59.5	50.3	66.0	39.3	37.2	-5%
Other	44.2	60.0	66.4	98.5	85.6	82.5	-4%
Sub-total	**340.9**	**339.7**	**327.4**	**421.2**	**362.5**	**329.3**	**-9%**
Indian Sub-Continent							
India	683.3	620.9	621.3	615.7	632.2	668.5	6%
Other	36.4	47.6	42.1	41.1	38.6	41.4	7%
Sub-total	**719.7**	**668.5**	**663.4**	**656.8**	**670.7**	**709.8**	**6%**
East Asia							
China	452.4	543.0	589.2	948.7	806.8	753.4	-7%
Hong Kong	36.1	51.8	54.7	85.6	60.0	51.4	-14%
Indonesia	37.1	32.2	33.3	40.7	36.5	38.9	7%
Japan	18.0	14.9	15.8	16.7	16.4	16.6	2%
Other	78.0	76.4	71.9	88.0	84.5	85.9	2%
Sub-total	**621.5**	**718.4**	**764.9**	**1,179.6**	**1,004.2**	**946.2**	**-6%**
Other Regions							
C&S America	56.9	52.3	52.6	52.6	49.8	48.6	-2%
Africa	51.0	48.7	48.4	54.2	53.8	45.5	-16%
Oceania	8.3	6.8	5.2	5.7	7.5	8.3	10%
Sub-total	**116.2**	**107.8**	**106.2**	**112.5**	**111.2**	**102.3**	**-8%**
Global Total	**2,166.2**	**2,181.4**	**2,195.8**	**2,714.4**	**2,482.8**	**2,397.0**	**-3.5%**

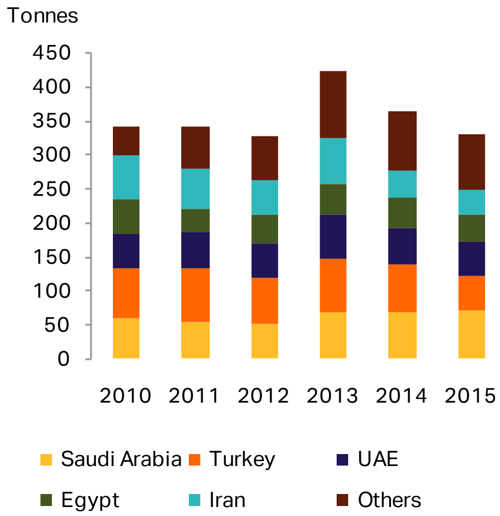
Source: Metals Focus

US Gold Jewellery Imports



Source: U.S. Department of Commerce, Bureau of Census

Middle East Gold Jewellery Consumption



Source: Metals Focus, Bloomberg

Despite the growth in the number of outlets selling gold jewellery, retail sales improved only modestly, a reflection of the still relatively uncertain economic backdrop. The guarded optimism among the trade also impacted the level of stocking ahead of Thanksgiving and Christmas. Even so, fourth quarter sales still generally underperformed. As a result, early 2016 has seen unseasonal levels of retail destocking. In spite of this, gold prices remain low enough to deliver strong retail margins. This in turn will encourage the trade to promote gold jewellery and so help generate sales growth in 2016, in spite of the hesitant economic recovery and the uncertainty that can accompany a presidential election.

Central and South America

Jewellery consumption across the region fell by just 2% last year, although this hides some varied performances. In particular, **Brazilian** demand fell by 11% in 2015, the result of a sharp fall in GDP growth. However, this was offset by gains in several other (albeit far smaller) jewellery markets. In addition, with jewellery fabrication modest outside of Brazil, the rise in consumption was satisfied by higher jewellery imports, notably from Italy.

Middle East

Middle East jewellery consumption weakened by 9% last year, with jewellery fabrication realising a similar fall (-8%). The declines were widespread, but most significant were the losses in Turkey, as a collapse in its currency saw local gold prices surge, and in Egypt, due to significant liquidity constraints. Among the Gulf Co-operation Council (GCC) countries, only Saudi Arabian consumption rose, thanks largely to higher government spending. However, jewellery demand elsewhere was hit by low energy prices and rising living costs. Turning to this year, we expect the impact of higher gold prices, exacerbated by depressed oil prices, to lead to a similar fall in jewellery consumption and fabrication, of around 10%.

Looking first at **Turkey**, jewellery consumption slumped by 28% last year to just 49t, the main culprit being the upward trend in local (Turkish lira or TL) gold prices. By late 2014, the lira price had already risen to TL82/g; by end-January 2015 it had surpassed TL100, a rise of 25% in just two months. Although dollar prices weakened in July, a downturn in the TL meant that local prices fell to a far lesser extent than in many other markets. The lira then continued to depreciate, with the local gold price touching TL114 in early September, followed by a new record high in early 2016 of TL120 (signalling another challenging year for gold demand).

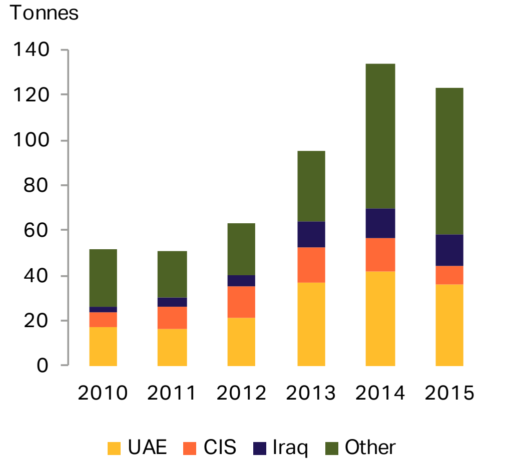
The weak TL also reflected other issues that hit consumer sentiment, including heightened political tensions (with two parliamentary elections last year), a growing number of terrorist attacks, an emerging crisis with Russia, a deteriorating economy and rising unemployment. On top of this, consumer demand was affected by changes to the credit card instalment system. As a result, not a single quarter achieved a y-o-y gain in jewellery demand. However, the decline in jewellery fabrication was somewhat smaller, at around 16%. This was due to overseas shipments falling by “just” 10%. Although Turkish exports to the UAE, its largest market (much

Jewellery Fabrication

Tonnes	2010	2011	2012	2013	2014	2015	Year on Year
Europe							
Italy	119.0	96.8	92.2	114.2	124.1	121.8	-2%
Switzerland	22.8	28.1	34.2	35.1	35.8	33.0	-8%
Other	58.4	53.2	47.2	44.6	45.2	44.8	-1%
Sub-total	**200.2**	**178.1**	**173.6**	**194.0**	**205.1**	**199.5**	**-3%**
CIS							
Russia	34.3	33.8	37.7	61.9	53.2	31.7	-40%
Other	1.6	1.5	2.3	3.4	2.4	1.6	-31%
Sub-total	**35.9**	**35.3**	**40.0**	**65.3**	**55.6**	**33.3**	**-40%**
North America							
United States	55.4	50.4	56.0	62.0	63.1	61.7	-2%
Other	24.4	24.0	20.5	23.0	23.7	24.6	4%
Sub-total	**79.8**	**74.4**	**76.5**	**85.0**	**86.8**	**86.3**	**-1%**
Middle East							
Turkey	105.2	111.3	114.6	146.3	140.4	117.4	-16%
Saudi Arabia	64.8	55.9	60.4	72.4	63.3	67.9	7%
UAE	29.8	30.5	32.2	39.1	40.2	36.5	-9%
Egypt	39.2	29.0	39.8	42.3	38.7	33.9	-13%
Iran	56.2	50.5	46.8	57.0	25.3	27.1	7%
Other	31.1	34.8	32.2	38.2	37.7	36.8	-2%
Sub-total	**326.3**	**312.0**	**326.1**	**395.3**	**345.6**	**319.6**	**-8%**
Indian Sub-Continent							
India	699.5	702.1	656.9	638.9	681.8	730.2	7%
Other	34.5	42.4	34.7	33.1	30.7	30.5	-1%
Sub-total	**733.9**	**744.5**	**691.7**	**672.0**	**712.5**	**760.7**	**7%**
East Asia							
China	487.3	609.1	670.0	1,080.0	868.6	820.7	-6%
Malaysia	44.0	44.5	43.2	57.6	52.8	48.9	-7%
Indonesia	49.5	40.6	36.0	43.3	45.7	45.6	0%
Thailand	23.5	22.5	20.9	26.3	24.5	21.9	-11%
Other	61.4	57.8	53.3	62.9	62.2	64.3	3%
Sub-total	**665.7**	**774.5**	**823.4**	**1,270.1**	**1,053.8**	**1,001.4**	**-5%**
Other Regions							
C&S America	29.4	24.9	29.8	27.9	25.4	23.1	-9%
Africa	21.1	19.6	18.3	17.3	16.3	13.4	-18%
Oceania	1.3	1.0	1.1	1.0	1.4	1.4	-1%
Sub-total	**51.8**	**45.6**	**49.2**	**46.2**	**43.1**	**37.9**	**-12%**
Global Total	**2,093.6**	**2,164.4**	**2,180.4**	**2,727.9**	**2,502.6**	**2,438.7**	**-2.6%**

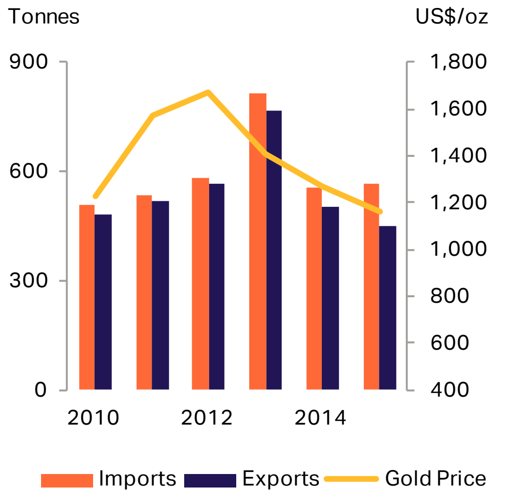
Source: Metals Focus

Turkish Gold Jewellery Exports*



*Gross volumes; Source: Metals Focus

Dubai Gold Bullion Imports/ Exports



Source: Metals Focus, Bloomberg

of which was re-exported across the region), fell by around 15%, improved deliveries to the US, East Asia, Israel and Europe helped lessen the decline.

Turning to this year, given the continued strength in lira gold prices, rising unemployment, falling tourism revenues and heightened terrorism, we believe jewellery consumption will drop by around 15%. Jewellery fabrication is also forecast to suffer because of the expected decline in local demand and subdued exports to the Middle East, Russia and Europe.

Egypt also continued to suffer, the result of a weak economy and its currency crisis. Jewellery offtake was negatively impacted by crippling limits imposed by the central bank on gold imports to help preserve dollars, which in turn led to a jump in premiums and increased unofficial flows from neighbouring countries. Consumption and fabrication fell, by 15% and 13% respectively. Looking ahead, falling tourism revenues (in light of the downing of a Russian passenger plane over Sinai) and declining financial support from the likes of Saudi Arabia and the UAE (with their own financial issues) point to a similarly difficult outlook for 2016.

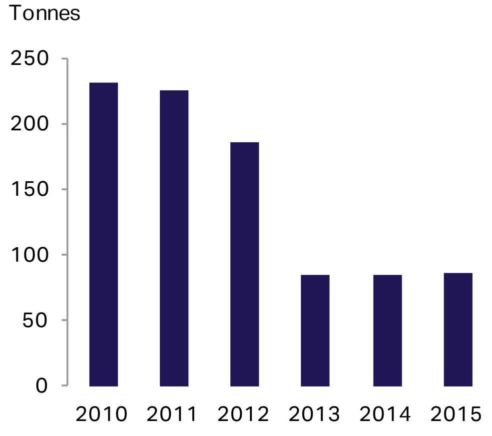
Saudi Arabian jewellery consumption rose by 4% last year, as it benefited from the deferment of subsidy cuts (in contrast to other GCC countries) and an increase in payments to government workers. Gold jewellery fabrication saw a 7% increase, helped by the start-up of new factories. This in turn contributed to a 16% drop in jewellery imports, while exports shrank by 19%, impacted by weak demand from across much of the region.

Turning to this year, Saudi Arabian jewellery demand is already showing signs of a downturn. Weak oil prices have kept government finances under pressure, while a record current account deficit is gradually depleting foreign reserves. In addition, fuel subsidies were reduced in December, with more cuts to subsidies appearing likely. Furthermore, the conflict in the Yemen has drained resources and also threatens instability in neighbouring territories. As such, this year both jewellery fabrication and consumption in the Kingdom are expected to post some of the sharpest declines across the Middle East.

UAE gold jewellery consumption dropped by 8% to 51t in 2015, the main reasons for this being low oil prices, falling tourist numbers and poor consumer sentiment. Subsidies were cut, while corporate loans were difficult to obtain. In addition, ongoing discussions concerning the introduction of VAT further undermined consumer sentiment. It was therefore of little surprise to see jewellery fabrication, imports and exports all weaken in 2015. A similar performance is slated for this year and the key drivers should continue to be the poor economic climate and rising unemployment.

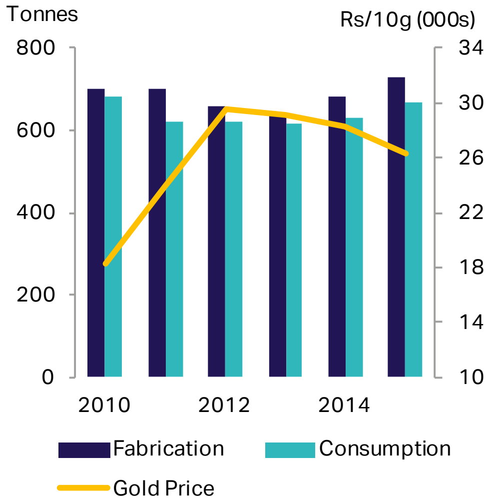
Following an exceptionally challenging 2014 (marked by a 40% slump in jewellery consumption), **Iran** last year saw a much improved outcome, with just a 5% drop. Following a soft first six months, the end of sanctions and weaker gold prices helped lift the second half's performance. Even so, the

Iranian Gold Bullion Imports



Source: Metals Focus, Bloomberg

Indian Gold Jewellery Fabrication/Consumption



Source: Metals Focus, Bloomberg

slump in oil prices forced the government to lift VAT to 9% in March 2015 from an already high 8% (importantly, VAT is levied on the entire value of a piece of jewellery). However, a relatively positive outlook and depleted stocks saw fabrication grow by 7% last year.

In light of the sanctions being lifted and the impact this should have on foreign investment, we remain optimistic for 2016. As a result, jewellery consumption is expected to rise by around 10%, with fabrication jumping by 25% as depleted trade stocks are replenished. However, this is largely contingent on the speed of the economic recovery, the impact of which could also be partially offset by the trend towards higher gold prices.

Indian Sub-Continent

Indian gold jewellery consumption grew by 6% last year to 668t. While 2014 will be remembered in India for the changing import regime and high premiums, last year attention firmly shifted to the impact of crop damages (the result both of unseasonal rainfall and, subsequently, deficient monsoons) and a gold market facing an unprecedented discount.

It was impressive that jewellery consumption grew last year, given that some two-thirds of demand comes from rural India. Key to this was the weakness in rupee gold prices, which led to bargain hunting. Turning to the impact of the monsoon on jewellery demand, even though seasonal rains were a noteworthy 14% below the long-term norm, the fall in crop yields had a less dramatic impact on both the economy and, specifically, on rural India. This owed much to a more pro-active approach taken by the government towards the agricultural sector. Improved irrigation facilities, for example, have reduced the dependency on the monsoon and so helped limit the potential damage. Finally, the growing urbanisation of rural India (which has helped lessen the dependency on agricultural employment) also helped to offset the impact of a weak monsoon on gold demand.

As for the structure of jewellery consumption, three broad themes stood out. First, over the last few years, branded jewellery chains, both regional and national, have made significant inroads into Tier 2 and Tier 3 towns, having previously been largely restricted to large cities. Second, in recent years, rising gold prices have led to a change in buying patterns, such that both independent and chain stores now offer an increasing assortment of lightweight jewellery (increasingly popular for daily wear). Third, although still in its infancy, 2015 saw the growing acceptance (by consumers) of web-based jewellery retailers, especially during the festive period.

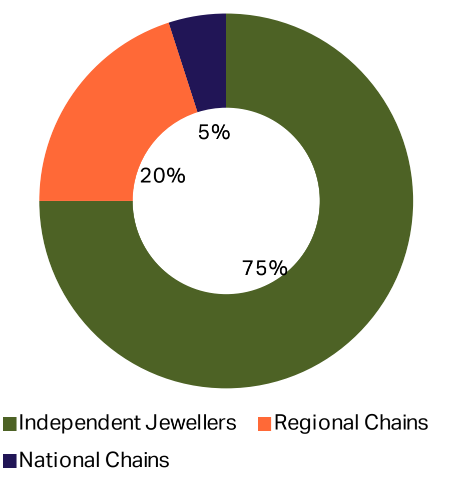
The improvement in demand and the change in import policies (given the removal of the 80:20 restrictions on bullion imports) led to India importing more than 930t of gold in 2015 compared to 755t the year before. Even so, the headline increase in imports of 24% does not tell the whole story about Indian imports. In particular, refined gold imports (of typically 995 purity kilobars) remained largely unchanged over the last two years. Instead, the surge in imports was driven by the rise in doré shipments. These exceeded 200t in 2015 (on a fine gold basis) compared to 56t in 2014, a reflection of

Indian Gold Bullion Imports

Tonnes	2014	2015	Y-o-Y
Official bullion imports	699	710	2%
Doré imports	56	229	309%
Total official imports	**755**	**939**	**24%**
Official "semis" imports	14	8	-41%
Unofficial bullion imports	225	119	-47%
Gross bullion imports	**994**	**1,066**	**7%**
Bullion exports	8	57	613%
Round tripping	88	94	7%
Net Bullion Imports	**898**	**915**	**1.9%**

Source: Metals Focus

Indian Retail Gold Jewellery Landscape*, 2015



* Share of retail gold sales volume
Source: Metals Focus

the import duty differential and the government's positive stance towards India's refining industry. Understanding the differential and also how it varies across the country helps explain the rise in doré imports last year.

Prior to the February 2016 government budget, refineries based in Domestic Tariff Areas (DTAs) were liable to pay a countervailing duty (CVD), as well as an excise duty, whereas those in Excise Free Zones (EFZs) paid only the CVD. To explain the different approaches, the headline import duty differential between refined gold and doré was around 2% (10% basic custom duty or BCD for refined gold and 8% CVD for doré). As a result, banks or nominated agencies, permitted to import refined gold, could do so at a 10% duty. In contrast, refineries were able to import doré at 8%.

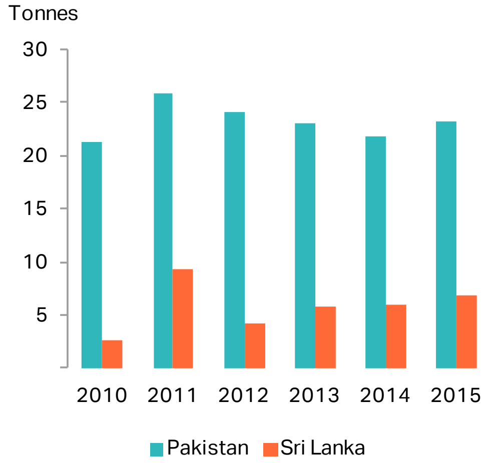
Taking a step back, all products manufactured in India attract excise duty, which for gold was 9%. However, the government allowed this to be offset against the import duty and so DTA-based refineries paid 9% as the import duty, as well as the excise, affording them a 1% differential. In contrast, refineries in EFZs were exempt from the excise duty and so only paid the 8% import duty, thus maintaining a 2% gap. This helped the local refining sector to aggressively source doré. However, this year's budget reduced the differential for refineries in EFZs to 1.25% and in DTAs to 0.5%; this may make it prohibitive for smaller refineries to now source doré.

Further analysis of the 939t of official Indian gold imports revealed that nearly 183t of gold landed in India for export purposes, thus leaving 756t of official imports for domestic uses, compared to 650t in 2014. Further to this, there was a surge in medallion exports to the UAE last year (medallions involve the lowest permitted value added for export purposes), which surpassed 150t, although this was largely due to round tripping.

Overall, round tripping is estimated to have risen to exceed 90t in 2015, as trading houses tried to achieve turnover targets set by the government to help retain their star status. In contrast, unofficial inflows fell significantly in 2015. These flows are a function of the import duty and local premiums and, with premiums falling to single digits and, on occasion, turning negative, this discouraged unofficial imports into India. In addition, increased vigilance at airports helped stem this flow. Overall, therefore, total net Indian bullion imports were 1.9% higher last year, at 915t.

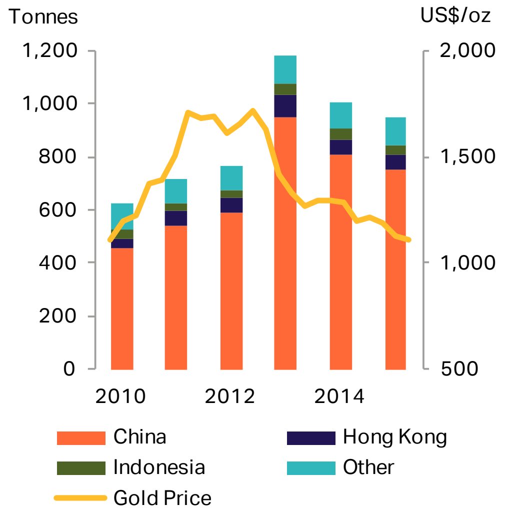
Turning to jewellery fabrication, in spite of a drop in jewellery exports, Indian fabrication last year increased broadly in line with consumption. This reflected the improvement in the domestic market, together with a stock build-up, principally at the retail level (reflecting the aforementioned store expansions). A successful India International Jewellery Show in August also added to a sense of optimism across the manufacturing sector. However, 2015 was a challenging year for Indian exporters, given the slowdown in some key overseas markets, notably the Middle East and south-east Asia. As a result, Indian exports fell by more than 30% in 2015. However, this also reflected an unusually high total in 2014, partly the result of the 80:20 regime (which helped drive jewellery exports).

Pakistan and Sri Lanka Gold Jewellery Consumption



Source: Metals Focus, Bloomberg

East Asian Gold Jewellery Consumption



Source: Metals Focus, Bloomberg

Looking ahead, given that Indian economic growth is expected to exceed 7.5% this year, together with the potential for a better monsoon and the implementation of a new pay commission for government employees, Indian consumption should receive a further boost this year. We therefore estimate that jewellery consumption will reach 727t, with jewellery fabrication touching 774t, despite forecast price gains.

Sri Lankan jewellery fabrication fell by around 18% in 2015 to 6t, while jewellery consumption rose by 14%. The drop in jewellery fabrication was largely due to a change in government policy. The Sri Lankan authorities imposed a uniform tax on imported jewellery and bullion, which led to the local trade importing jewellery. This in turn led to a drop in jewellery fabrication. Another reason for the decline in fabrication was the reduction in tourism, which accounts for around 30% of Sri Lankan jewellery sales.

After two consecutive years of declining gold consumption, **Pakistani** demand rose by around 6% in 2015. A healthier economic climate, combined with improved political stability and low gold prices helped support demand. The growth in consumption was satisfied by rising jewellery fabrication and increased inflows of official and hand-carried merchandise. (Dubai remains the primary hub of gold sourced for Pakistan, both officially and unofficially.)

East Asia

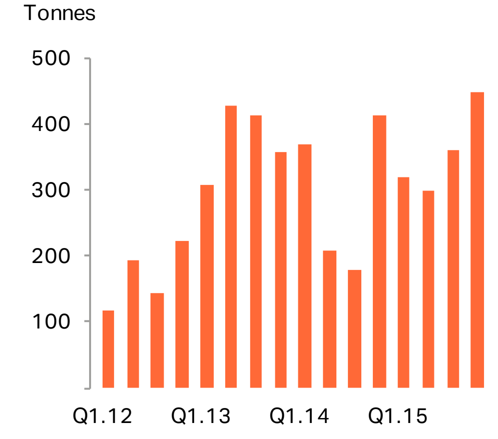
East Asian jewellery consumption and fabrication fell by 6% and 5% respectively last year, with countries in the region posting mixed performances. The dominant Chinese market as well as a handful of others experienced declines, whereas the likes of Indonesia and Vietnam registered healthy gains.

Chinese jewellery consumption suffered its second consecutive decline last year. Crucially, whereas the 2014 fall had been rather a return to normal market conditions following on from the "frenzy" of 2013, signs of genuine market weakness were evident last year. Overall, consumption fell by 7%, while fabrication fell by a marginally more muted 6%. The difference reflected the modest inventory increases seen over the year, as a result of a changing product mix and slower turnover, which stood in contrast to the destocking seen in 2014. This was in large part offset by the drop in exports to the more troubled Hong Kong market.

The slowdown in the Chinese economy and, importantly, its impact on consumer sentiment had a profound effect on the public's appetite for discretionary spending in general, particularly in the second half of the year. Related to this, the wealth destruction caused by falling equity prices over the summer and the decline in property prices (outside some of the major cities) also hurt jewellery sales.

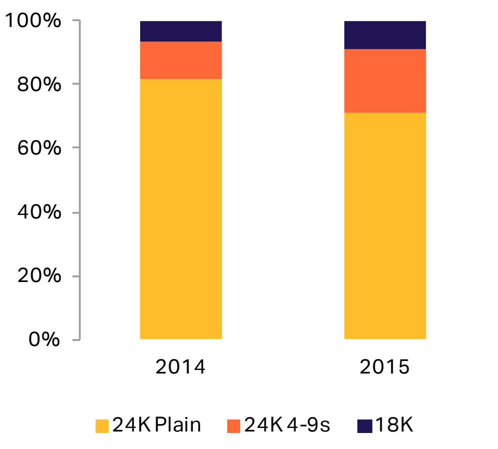
Gold's price performance and its bearish outlook, given US interest rate expectations, were other key factors weighing on demand. 24K jewellery continues to comfortably account for the largest share of the Chinese

Net Chinese Gold Bullion Imports



Source: Metals Focus

Consumption Shares of Chinese Jewellery Segments by Weight



Source: Metals Focus

market by weight and bearish price expectations discouraged quasi-investment purchases of such pieces.

Changing consumer preferences also played their part. Within jewellery, the continued rise of 18K meant a growing portion of sales were both lighter and contained 25% less gold. A continued shift in consumption to non-jewellery alternatives, notably travel, branded and consumer goods, also weighed on demand. Finally, problems faced by the industry, notably the collapse of margins and reduced credit availability, restricted wholesalers and retailers' ability to promote their products, ultimately putting further strain on consumption.

With all this in mind and also given the sombre mood seen among many jewellery manufacturers and wholesalers in Shenzhen over much of the year, the limited extent of the declines in volume may seem surprising. Looking beyond the headline figures, however, a year of dramatically diverging trends among market segments and players is revealed. Specifically, plain 24K jewellery sales suffered a double-digit decline. In contrast and partly offsetting this fall, demand for both 4-9s and 18K jewellery grew impressively for a second consecutive year.

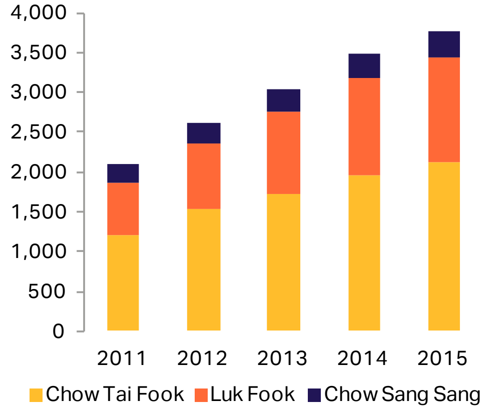
On the one hand, the market share shift was fuelled by a supply chain hungry to reclaim some of the margin it had lost as a result of the deluge of manufacturing capacity. On the other, it was driven by consumers looking for unique and special jewellery (whether in terms of purity or design) to match their status, evolving tastes and outfits. It is worth adding here that the share of the recently developed 9K market in China was negligible in 2015, although the number of manufacturers that entered this space grew.

Riding the rise of demand for 4-9s gold jewellery in 3rd and 4th tier cities, some local brands identified with the product, making it their unique selling point to expand their retail network in these areas. Heavy advertising campaigns on CCTV (CNY Variety Show) were used to boost brand awareness and this in turn helped speed up the retail network expansion. All this added further fuel to the already buoyant market for this product, ultimately boosting the growth of 4-9s consumption in 2015.

Consumption in the 18K segment maintained strong momentum throughout last year. Many new players entered the manufacturing and wholesaling sectors. A number of regional wholesalers established new showrooms in 3rd and 4th tier cities to explore the new product concept given the weak state of the 24K plain gold market. In addition, existing wholesalers and retailers were seen restructuring their product portfolio, giving more weight to 18K gold jewellery. As a result, fabrication outpaced consumption in 2015 for the 18K segment, owing to inventory building in the first half of the year. The pace of growth slowed a little during the traditionally low season in the winter.

The continued fall of plain 24K gold jewellery consumption left many players focusing on this space in dire straits. Oversupply was a constant

Hong Kong Retailers - Number of Branches on the Mainland



Source: Company reports/presentations

feature of this segment last year and this continued to weigh on labour charges, that fell to levels as low as RMB 1.5-2.5/g at times. Operating margins were naturally tight or even negative. Market consolidation continued and more medium to small manufacturers and wholesalers closed down. Their business was absorbed by those able to deliver advanced or higher quality products (notably those that could move their focus to 4-9s or 18K), better services and stronger financial backing.

Another factor that affected the plain 24K sector was the debt crisis that emerged in the second quarter. As a result of a number of bad loans and the common practice of partner companies acting as guarantors for each other, the availability of credit to jewellery companies was significantly curtailed over the financial period. Although later in the year the bad debt issues were alleviated, financial concerns continued to trouble the sector. Wholesalers operated under tighter credit limits and controls to reduce risk and this ultimately contributed to lower sales volumes.

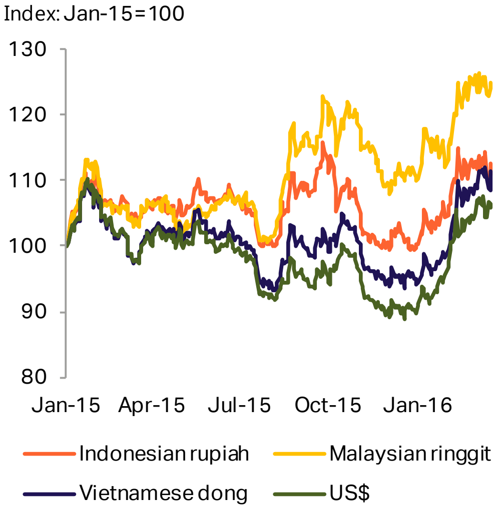
Competition was keen also among retailers. Major brands slowed down their network expansion but were largely able to defend their market share by leveraging on their brand advantage, premium products and service reliability. Elsewhere, some local brands gained market share by promoting 4-9s gold jewellery. Overall, there was no significant change in the number of jewellery stores compared to 2014. Naturally, given the overall decline in sales in 2015, same store sales were on average lower.

2015 saw e-commerce become increasingly popular within the jewellery industry. In order to reach the younger generation and explore new distribution channels, major brands have established proprietary e-platforms or e-shops at popular platforms. These efforts seem to be yielding results and mitigating the wider decline in sales. For example, the leading jewellery store, Cai Bai Jewellery, achieved sales of ¥120 million through its newly established e-shop in 2015.

Looking ahead to this year, the outlook for jewellery demand is mixed. The first quarter of the year has been poor, with Chinese New Year sales having disappointed. Moreover, our contacts in the jewellery industry maintain a conservative attitude towards the rest of the year. Another decline in consumption and fabrication seems likely.

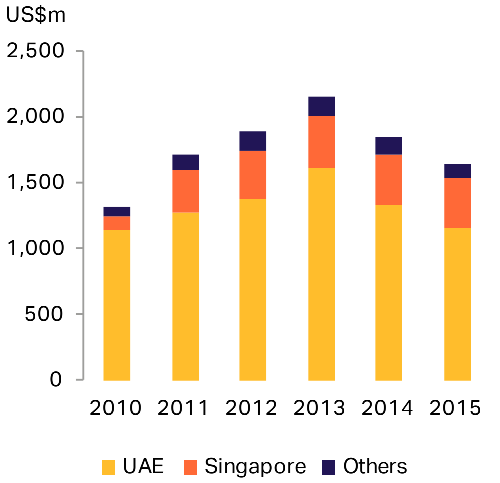
Not everything is gloomy, however. Metals Focus stands firm by the view that a crisis in China will be averted and that the economy will stabilise (albeit at a lower than previously forecast GDP growth rate). Such stability should help sentiment and limit the scope for declines in demand. Moreover, should our constructive price forecasts prove correct, improved consumer sentiment towards gold should support the troubled plain 24K segment. Meanwhile, both the 18K and 4-9s segments should continue to grow. Overall, although we would expect demand to contract, the percentage loss may prove smaller than the one seen last year.

Indexed Local South East Asian & US$ Gold Prices



Source: Bloomberg

Malaysian Gold Jewellery Exports



Source: GTIS

Due to its reliance on purchases from mainland China tourists, 2015 was a challenging year for jewellery consumption in **Hong Kong**. Partly due to competition from other destinations, many with increasingly attractive exchange rates, as well as political turmoil in the Special Administrative Region, there was a decline in the number of mainland visitors to Hong Kong. Coupled with a fall in jewellery purchases by those that did come, this resulted in a 14% drop in consumption.

Indonesian jewellery consumption rose by 7% to 39t while jewellery fabrication was unchanged in 2015. The difference reflected slowing Indian exports, after the criteria for duty refunds under a Free Trade Agreement between the two countries were tightened in June. Locally, as the rupiah's depreciation offset the weakness of the gold price, and given local tastes favouring bigger pieces, consumption of lower carat jewellery articles was boosted. We estimate that these now have a greater than 50% share of domestic sales. Local jewellery demand should rise further this year, as the economy should pick up in 2016, due to government stimulus measures to boost GDP growth.

Thai jewellery consumption dropped by just 1% in 2015. The limited extent of the decline reflects the very low base in 2014, when a political crisis had weighed on demand. Traditional jewellery pieces benefited from the low gold prices in the local market and to an extent also by increased buying in border cities. In contrast, sales of high-end jewellery were slow, reflecting concerns about the global economy and uncertainty over the gold price outlook. Fabrication demand fell by a stronger 11%, due to hefty losses in exports to the Middle East and also some European markets.

Malaysian gold jewellery consumption suffered the double blows of the introduction of a goods and services tax (GST) and the devaluation of the ringgit. As a result, fabrication and consumption fell by 7% and 18% respectively. In April, a 6% GST was introduced on gold jewellery and this weighed on consumption throughout the rest of the year. Meanwhile, at its weakest the ringgit had fallen by over 20% compared to its end-2014 level.

Vietnamese fabrication and consumption rose by 24% and 25% respectively last year, driven by strong demand for 4-9s packaged rings. These were purchased for investment purposes at far lower premiums than official bars. Jewellery demand should continue growing at a solid pace in 2016, given optimism about the local economy. However, calls for import restrictions to be eased do pose a risk for the 4-9s ring segment, as such a move could result in a collapse in bar premiums and a rotation away from these products to bullion bars.

Given the low base of 2014, when a rise in the local consumption tax had depressed demand, and rising numbers of Chinese tourists, the mere 2% increase in **Japanese** consumption was disappointing. Concerns about the local economy and the weak currency keeping prices relatively high for most of the year capped demand. Quasi-investment purchases of plain chain, however, continued to outperform.

Chapter 6

Industrial Fabrication

– Global industrial demand fell by 4% last year, driven by a 5% decline in electronics offtake.

– Every key electronics market saw gold fabrication weaken in 2015, with the losses concentrated in East Asia.

– Dentistry suffered from small, but widespread losses, while decorative & other industrial demand edged lower, despite modest gains in India and Italy.

Electronics Fabrication

Electronics fabrication resumed a clear downward trend in 2015, after near stability in 2014, with demand last year down by 5% to 264t. Declines emerged in all the major fabricating countries, with the heaviest losses seen in East Asia. Further risks also lie ahead for 2016, with demand forecast to fall by a further 3% (leaving offtake 71t below 2010's volume).

Perhaps the key reason for 2015's losses was the slowdown in global GDP growth and the impact that this had on relevant consumer good sales. There was ample evidence in publicly available data for this. For instance, global semiconductor billings at $355bn were down slightly. The important smartphone market also showed less vigour; global shipments grew by 10%, compared with 28% in 2014 and over 40% in the prior two years. The significance of the GDP factor is shown in the losses for electronics demand being concentrated in the second half of 2015, when the slowdown in growth, particularly in China, became more apparent. Looking ahead, 2016 appears on course to see this trend continue. Semiconductor sales, for example, have had a sluggish start and smartphone sales growth is forecast to slow to single digits.

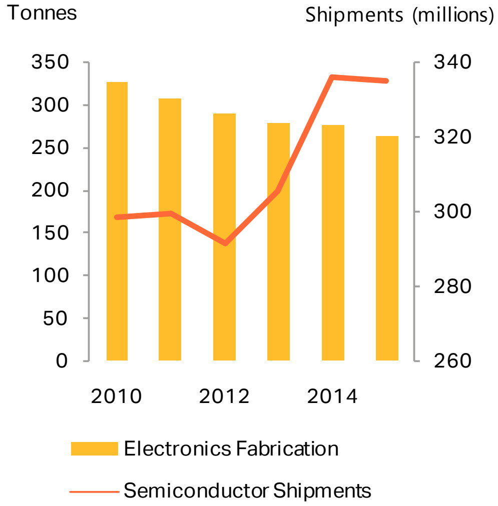
A second factor contributing to losses was ongoing substitution and thrifting. However, this appeared to be less prevalent than in recent years, with some technological thresholds acting as a constraint to further losses and as lower gold prices reduced some of the cost pressure. That said, there is little sign of the secular substitution/thrifting trends ending, especially within gold bonding wire. Another sustaining factor that has been reported by some concerns OEMs now engineering electronic goods for a shorter lifespan, which allows them to use less precious metals.

Electronics Fabrication

Tonnes	2010	2011	2012	2013	2014	2015	Year on Year
Japan	115.6	104.1	93.7	89.0	84.5	83.2	-2%
China/HK	56.4	63.2	67.9	62.9	64.0	62.6	-2%
United States	70.5	61.3	55.7	53.2	56.3	54.6	-3%
South Korea	31.9	28.6	26.5	25.2	24.0	20.5	-14%
Switzerland	19.3	18.2	13.7	14.5	11.5	10.6	-8%
Germany	12.5	12.1	12.1	10.8	10.5	10.3	-1%
Singapore	8.2	8.4	8.2	9.3	11.3	8.6	-24%
Taiwan	3.0	2.8	2.5	4.6	6.0	5.1	-15%
Others	9.0	9.2	9.2	9.5	9.7	8.7	-11%
Global Total	**326.3**	**307.9**	**289.4**	**278.8**	**277.7**	**264.1**	**-4.9%**

Source: Metals Focus

Electronics Fabrication



Source: Metals Focus, SIA

The world's largest fabricator, **Japan**, saw demand dip by only 2%, thanks to market share gains and strong sales to a buoyant local car industry. Japan was also a clear example of a market where the fall for bonding wire outpaced other areas such as deposition materials. **Chinese** demand also fared better than most, declining by a marginal 2%, as flexible printed circuit board-related demand from local-brand smartphones and consolidation in the LED industry cushioned the drop. In contrast, **South Korean** offtake fell by a hefty 14%, due to heavy losses in bonding wire and poor smartphone and tablet sales. Yet weaker was demand in **Taiwan** and **Singapore**, which dropped by 15% and 24% respectively, reflecting low utilisation of semiconductor production capacity.

A small decline in **US** electronics offtake in 2015 reflected the challenging backdrop facing the wider US manufacturing sector. However, one sector performing well was the automotive sector, where gold contacts are typically used in safety-related devices, such as airbags. **European** fabrication also fell, due to such factors as thrifting and, for some, a drop in exports. The drop was small though as the continent's fabrication of bonding wire is slight and local end-use of deposition materials was firm.

Decorative and Other Industrial Fabrication

Despite gains for the two largest fabricators, India and Italy, decorative & other industrial fabrication dipped by 1% to 51t in 2015 through such factors as a drop in sales of gold plated jewellery in both western and emerging markets. Stuttering sales of luxury branded goods in China are forecast to generate a slightly larger fall of 2% for global offtake this year.

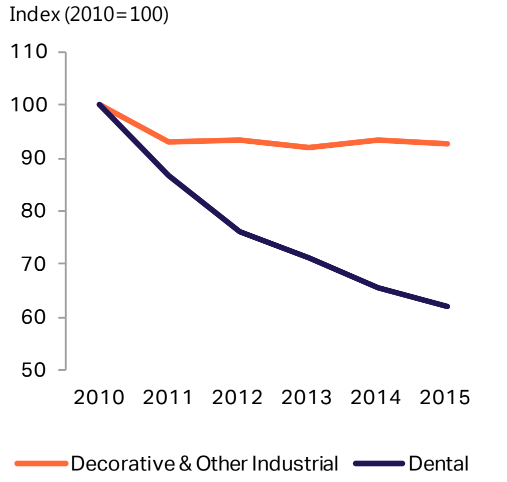
European offtake in 2015 rose by 4% to 14t, chiefly through higher sales of gold-plated luxury accessories and the decision by some of their producers to move upmarket, requiring thicker coatings. Plating salts' end-use in costume jewellery and the niche of bathroom fittings also rose. Demand turned quieter in late 2015 due to slowing sales of branded goods to China which has continued into this year, helping explain the

Decorative and Other Industrial Fabrication

Tonnes	2010	2011	2012	2013	2014	2015	Year on Year
India	15.1	11.2	10.8	10.5	10.1	10.4	3%
Italy	4.6	5.0	5.4	5.9	6.8	7.2	6%
China	5.8	6.5	7.0	6.5	6.7	6.5	-2%
Japan	6.1	5.5	4.9	4.7	4.4	4.4	-2%
Germany	3.0	3.2	3.1	3.1	3.2	3.3	3%
United States	3.2	2.8	2.5	2.5	2.4	2.3	-4%
Others	16.9	16.7	17.3	17.0	17.3	16.5	-5%
Global Total	**54.6**	**50.7**	**51.0**	**50.1**	**51.0**	**50.6**	**-0.7%**

Source: Metals Focus

Dental and Other Industrial & Decorative Fabrication



Source: Metals Focus

Industrial Fabrication Forecast

Tonnes	2015	2016F	Y-o-Y
Electronics	264	256	-3%
Decorative & Oth. Ind.	51	50	-2%
Dental	19	18	-5%
Global Total	**334**	**323**	**-3%**

Source: Metals Focus

forecast 3% dip in offtake for 2016. The total fabrication of gold potassium cyanide (GPC) in 2015 did not enjoy the earlier noted 4% overall rise. This is because the portion of GPC that is consumed in the electro-forming of jewellery is classified as part of jewellery fabrication, and this fell heavily.

India's decorative and other industrial gold demand has held broadly steady over the past few years at around 10t. This reflects often contrasting trends in two of the largest demand segments, gold plated jewellery and jari thread, each of which are highly sensitive to gold prices. Gold plated jewellery, or "one gram gold" as it is known locally, had enjoyed dramatic growth as gold prices rallied. However, the sharp drop in prices in 2015 saw a slowdown in demand. In contrast, the sari industry, where jari thread is used, has faced a long-term drop in demand due to a shift to lower cost alternatives. This trend is likely to continue in 2016, although rising gold prices should augur well for the gold plated jewellery sector.

Dental Fabrication

The secular decline in dental demand continued in 2015, with the global total receding by 5% to just under 19t. The drop would have been stronger, were it not for near stable demand in Japan, the largest dental market for gold; if we exclude that country, offtake fell by 7%. This matters as it underpins concerns that offtake could wither to trivial levels, rather than stabilise at lower volumes, with still notable end-use by a conservative core of dentists and patients. There is certainly little sign of stabilisation in our 2016 forecast, with demand (including Japan) slated to drop by 5%.

As noted above, the 2015 result for **Japan** differed in that offtake fell by a mere 1%. We believe that the limited extent of the decline was due to the government subsidy offered to dentists at times being higher than the actual cost of dental alloys, mainly due to periods of palladium price weakness. A further, if modest, drop in **US** dental gold demand last year suggested that dental laboratories still preferred to shift away from high-gold alloys to non-precious alternatives and, to an extent, palladium-rich alloys. It therefore appears that a rising share of US-manufactured gold alloys went overseas, especially to East Asia.

Dental Fabrication

Tonnes	2010	2011	2012	2013	2014	2015	Year on Year
Japan	9.1	8.2	7.4	7.0	6.8	6.7	-1%
United States	8.1	7.0	6.4	6.1	5.9	5.5	-7%
Germany	5.1	4.0	3.4	3.2	2.9	2.6	-8%
South Korea	4.4	3.9	3.0	2.6	1.9	1.7	-7%
Others	3.7	3.3	2.9	2.7	2.5	2.3	-7%
Global Total	**30.4**	**26.4**	**23.1**	**21.6**	**19.9**	**18.9**	**-5.3%**

Source: Metals Focus

Chapter 7

Official Sector

- Net official sector purchases dropped by 3% to 566t in 2015.
- Last year's buying was essentially dominated by China and Russia.
- We expect to see a further decline in net buying from the official sector this year.

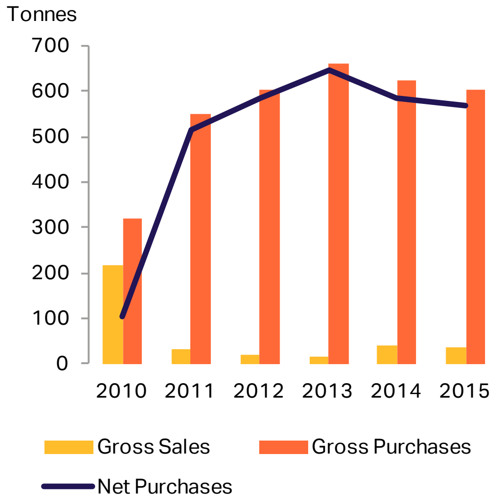
Official Sector Purchases & Sales

Publicly available data and our own field research suggest that the official sector bought 566t of gold in 2015 on a net basis, down by 3% year on year. In spite of the fall, it is worth stressing that last year's total remained elevated by historical standards.

Consistent with the trend in recent years, the official sector buying was almost exclusively driven by emerging market countries, the result of ongoing efforts to diversify away from their largely US dollar-denominated reserves. Indeed, for most central banks that had raised gold holdings in recent years, in spite of these purchases, their gold holdings remained low, at least in percentage terms, especially compared to western countries. A secondary consideration has been the impact of heightened geopolitical tensions in recent years, which cannot be ignored.

Last year's elevated level of net buying was also a result of a continued lack of interest in strategic sales from signatories of the Central Bank Gold Agreement (CBGA). Since the start of the fourth Agreement in September 2014, total sales from the group through to end-2015 amounted to a mere three tonnes, all of which were related to German official coin programmes.

Official Sector Purchases & Sales



Source: Metals Focus

Looking at major buyers in 2015, while there were hardly any new central banks, the decision by the People's Bank of China (PBOC) to update its official gold reserves to some extent did surprise the market. On 17th July, the PBOC made an unexpected announcement of a 57% or 604t increase in its gold holdings. Prior to that, published Chinese official gold reserves had remained unchanged since April 2009. Interestingly, this revelation offered little comfort to gold, with prices weakening further after the announcement had been made. This is in stark contrast to April 2009 when the news that the PBOC had almost doubled its gold reserves provided a powerful boost to the yellow metal.

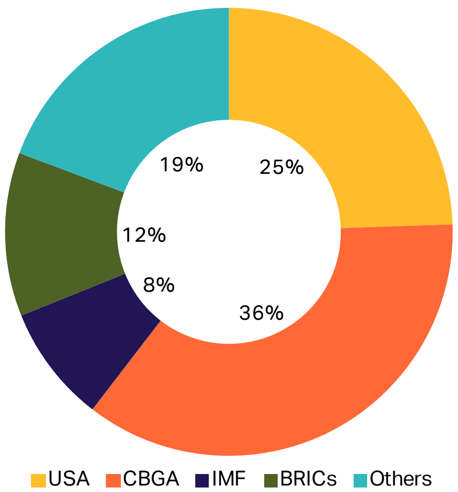
Of course, vast changes in the macroeconomic landscape in recent years need to be taken into account. Importantly, the fact that the PBOC had been quietly accumulating gold is perhaps not a surprise to most market observers, including Metals Focus. Indeed, as outlined in Gold Focus 2015 and other reports, our estimates for official sector purchases for 2010-2014 have been consistently higher than the declared activity implied by IMF statistics, with an allowance of steady acquisitions by the Chinese central bank being a key contributor. This also explains why no revision has been made to our historical estimate in light of the PBOC's newly published reserves. If anything, some market players would have expected that Chinese purchases since 2009 would have comfortably exceeded the announced 604t rise. Indeed, we believe that the low-field figure was in fact interpreted as a negative for gold by some investors, contributing to liquidations over the summer last year.

Official Gold Reserves*

	Gold Reserves (Tonnes)	Gold's Share of Total Reserves
United States	8,134	72%
Germany	3,381	66%
IMF	2,814	n.a.
Italy	2,452	64%
France	2,436	60%
China	1,762	2%
Russia	1,415	13%
Switzerland	1,040	6%
Japan	765	2%
Netherlands	612	55%
Global Total	**33,239**	

* End-2015
Source: IMF, Metals Focus

World Official Gold Reserves



Source: IMF, respective central banks

Gross Purchases

Our estimate shows that gross purchases slipped by 4% to 601t in 2015, the bulk of which was accounted for by China and Russia.

Starting with **China**, although the PBOC did not provide details of their gold acquisitions, it is reasonable to assume that these purchases were smoothed out from 2009 to June 2015. Following the July announcement, the Chinese central bank added another 104t of gold in the second half of 2015. In our view, the shift to more timely reporting reflects an increasing desire to promote the Chinese yuan as an international reserve currency, especially after the IMF agreed to include the yuan in the SDR currency basket. At end-2015, Chinese official gold holdings stood at 1,762t, accounting for a mere 1.8% of their total reserves.

Turning to **Russia**, following an acceleration of gold acquisitions in 2014 amid rising geopolitical tensions, the country maintained a strong pace of purchases during 2015. With regular buying in the local market, official Russian gold reserves grew by 206t during 2015 to 1,415t. Indeed, the continued rise in local mine production, high levels of scrap and faltering demand resulted in a growing surplus in the domestic market last year, which clearly bodes well for the central bank's gold buying programme.

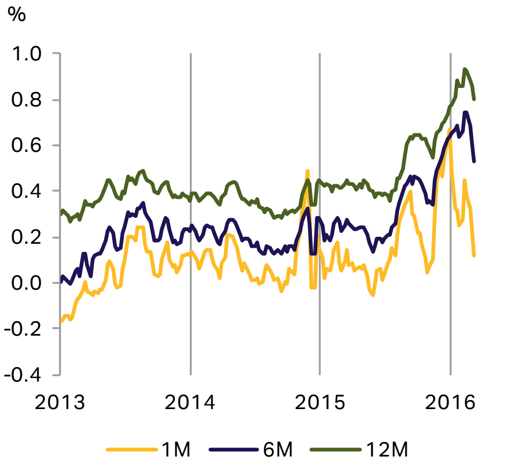
Excluding China and Russia, declared purchases totalled just over 70t last year and were dominated by CIS and Asian countries. Within the former group, **Kazakhstan** was the largest buyer, adding 30t of gold via regular acquisitions of local mine output. **Jordan** and the **United Arab Emirates** raised their gold reserves by 22t and 7t respectively. The balance of reported purchases was accounted for by small additions, typically less than 5t, from the likes of **Malaysia**, **Tajikistan** and **Ukraine**.

Finally, with China starting to disclose its purchases on a regular basis, undeclared buying contributed to a far smaller portion of the gross figure last year. Moreover, most of these purchases were accounted for by developing countries. Meanwhile, anecdotal information suggests that such purchases were slightly higher in the second half of 2015, when some central banks took advantage of falling prices to build up their reserves.

Gross Sales

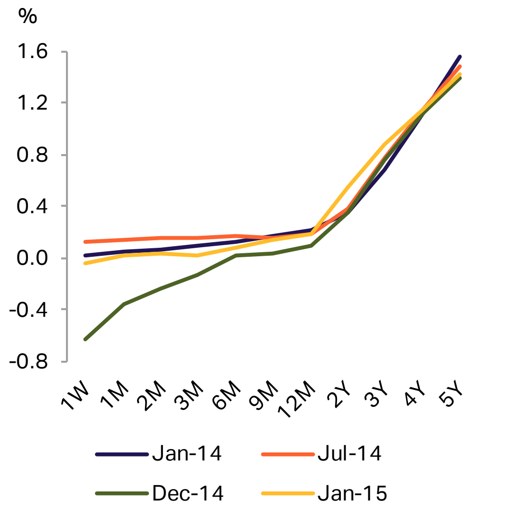
Gross official sector sales remained low, falling by 12% to 36t last year. Developing countries accounted for the majority of the global total, of which many seem to have been driven by opportunistic sales during periods of price strength. A currency rout was another reason behind certain sales, as gold was liquidated in order to shore up foreign exchange reserves. Looking at the country-by-country breakdown, **Laos** was the largest seller last year, reducing its gold holdings by almost 9t in early 2015. Meanwhile, **Colombia** and **El Salvador** sold 7t and 5t respectively in 2015. The rest of sales from emerging markets were comprised of modest reductions (up to two tonnes) from a number of countries, including **Mexico**, **Mongolia** and **Sri Lanka**.

Indicative Gold Leasing Rates



Source: Bloomberg

Gold Forward Curves



Source: Bloomberg

Turning to developed countries, sales remained subdued last year, with disposals almost entirely related to sovereign coin programmes. For instance, for the fifth year in a row, **Germany** was the only country within the CBGA group to offload gold holdings in 2015, selling three tonnes for its euro commemorative coin programme.

2016 Official Sector Outlook

Looking ahead, official sector purchases are likely to remain strong, with volumes forecast to reach just shy of 500t on a net basis in 2016. This is largely premised on the assumption that the two major buyers, China and Russia, will continue their steady purchases for the foreseeable future. Already the first two months of the year have seen China and Russia add roughly 22t and 18t respectively to their gold reserves. Going forward, taking into account their substantial US Treasury holdings and the impact of rising geopolitical tensions, the argument for portfolio diversification for both countries remains little changed. Elsewhere, modest purchases from other developing countries are also expected, albeit at a somewhat slower pace, as a result of the forecast recovery in gold prices and a gloomy economic outlook for many emerging markets.

On the other hand, consistent with the trend seen in the last few years, gross sales are anticipated to remain low this year. In essence, this reflects a lack of desire among European countries to embark upon new strategic sales programmes, in light of the continued poor economic situation in much of the region. Turning to countries outside of Europe, ongoing currency depreciation for certain emerging economies may well encourage some distress selling (or far more likely swaps).

Official Sector Lending

2015 saw official sector lending activity pick up somewhat, with anecdotal reports suggesting a number of central banks responding to periods of rising lease rates. However, overall outstanding official gold loan and swap positions remained historically low. Moreover, it is our understanding that lending activity was centred at the shorter end of the curve. Finally, a number of historically big lenders that provided significant liquidity to fuel the rise in producer hedging in the 1990s remain absent from the market. There were also swaps by central banks seeking to raise US dollar liquidity. The most notable example was that of Venezuela, which reports suggested had entered such positions. Indeed, the country's reported gold reserves did decline over the course of the year, in line with this activity.

Given the emergence of some producer hedging activity in the forward market and also the backdrop of rising investor short positions, it was not surprising to see lease rates rise during periods of last year. More importantly, growing financing requirements, following the Chinese stock market rout and the US interest rate hike, explain a more pronounced rise in leasing rates towards end-2015, particularly at the shorter end of the curve. Similar moves may well be repeated in the foreseeable future. However, given ample official sector holdings that are not mobilised, any such increases should be limited and generally short-lived.

Chapter 8

Investment

– Expectations of US monetary policy and its impact on the dollar remained the largest headwind for gold investment.

– Physical investment recovered by 1.3%, following a hefty decline in 2014.

– By contrast, institutional investors maintained a bearish tone, resulting in net selling in ETFs, futures and OTC markets.

Introduction

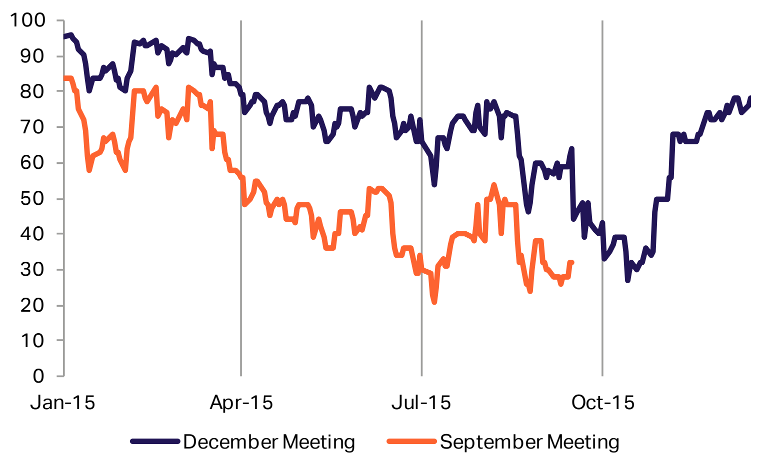
Given the exuberance of early 2016, the disdain that investors had towards gold over the better part of 2015 now seems like a distant memory. However, rewind back to December last year and the gold price stood at near six-year lows, ETF positions were at their lowest since early 2009 and bond markets were pricing in another US rate hike in March. Even as recently as the first week of 2016, short positions on the Comex stood at a nominal 600t and the net long virtually disappeared. Indeed, for the most part of last year, investors maintained a bearish view towards gold.

The single most important headwind to gold investment last year was the outlook for US monetary policy, in turn relating to a strong and improving outlook for the US economy. For most of 2015, the consensus was that, after more than six years of virtually zero policy rates, the Fed would start hiking rates at some point during the year. Importantly, this would happen against a backdrop of looser policy elsewhere.

The expectation for US policy tightening was seen as a negative for gold for two key reasons. First, the rise in the essentially risk-free rate of return that comes with higher interest rates raises the opportunity cost of holding gold. After all, the metal is seen as a zero or even negative-yielding asset, given the environment of low gold lease rates and, during most of last year, low options volatilities. Related to this point, the US rate hike expectations also pushed up longer-term US bond yields in the first half of the year, thus boosting the return of another low risk alternative to holding gold.

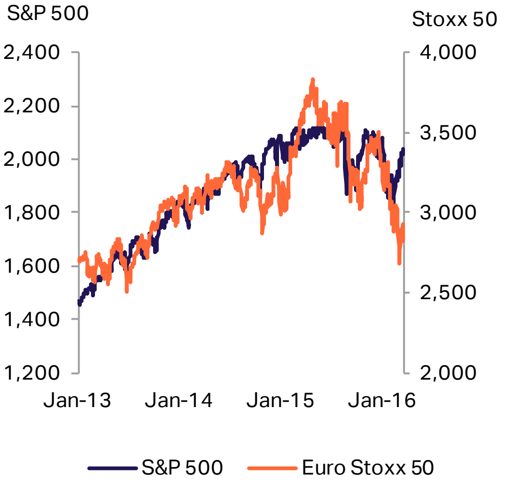
The second, and in our view more important, implication of the changing policy expectations for gold was its impact on the US dollar. The expected

Probability of a Rate Hike By FOMC Meeting*



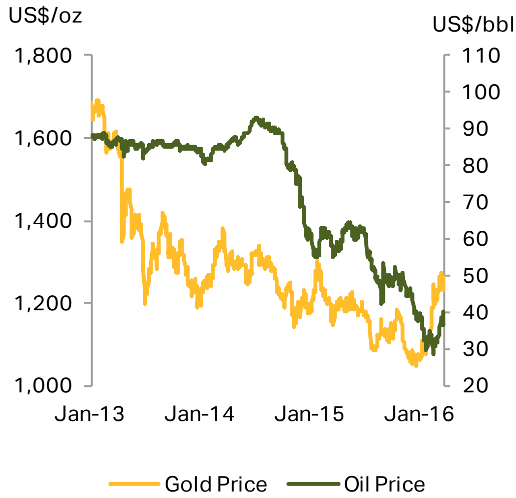
*Percentage probability inferred by bond prices
Source: Bloomberg

Key Equity Indices



Source: Bloomberg

Gold & WTI Oil Prices



Source: Bloomberg

divergence of US monetary policy against those of its key trading partners extended the dollar rally during the first quarter and helped the dollar remain high over the rest of 2015. Moreover, many investors saw further upside in the medium-term as likely. The traditional negative correlation between the dollar and gold made this another obstacle for the metal.

Western investors' continued focus on equity markets was another factor that weighed on gold investment. Arguably this behaviour was at odds with US equity market performance last year, when share prices plateaued after rallying more or less consistently for the previous six years. In spite of this fact and concerns among investors, noted during our field research, that equities were overvalued, most were reluctant to move out of stocks. Given the improving outlook for the US economy and the fact that price-earnings ratios still had a long way to go to reach historical peaks, the contrarian arguments were hard to act on. Even in the aftermath of the summer stock market correction (triggered by the fall in Chinese equities), investors promptly came back to equity markets and bought the dip.

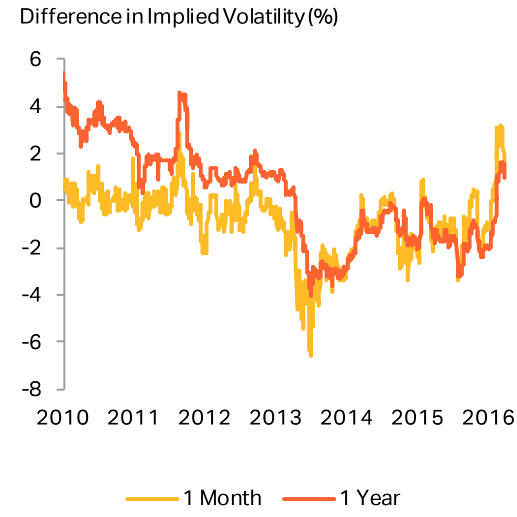
One final headwind for gold came from the continued decline of commodity prices. Energy and industrial commodities, in particular, were under pressure throughout the year, with the GSCI index for instance losing over one-fifth of its value over 2015. Related to this environment but also owing to lacklustre economic performance in all bar a handful of major economies around the world, inflation and its expectations remained low throughout the year, limiting interest in gold's inflation hedging properties.

There were periods of strength for investment last year, but these were brief and interest was opportunistic in nature. For example, gold did benefit from concerns over Greece's possible Eurozone exit and its implications for the monetary union more generally. The global equity market correction in the summer and, even more so, the surprise lack of a move by the Fed in September also boosted demand temporarily.

Perhaps a more meaningful "silver lining" to an altogether disappointing year was the fact that most market players gradually accepted the thesis that the price was probably close to its bottom and that earlier calls of a sub-$1,000 norm were likely exaggerated. This is perhaps why short selling activity was generally restrained, with the exception of temporary bouts of aggressive selling on Comex.

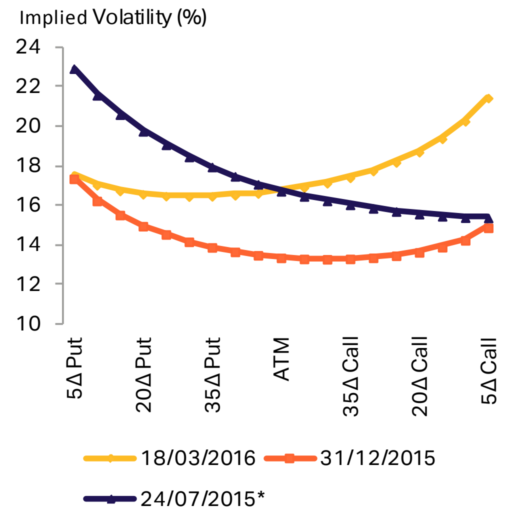
Moving to the physical market, global retail investment in bullion was up at the margin in 2015, totalling 1,021t. The total comprised 741t of bar sales (up 2% yoy) and 280t of coin sales (virtually unchanged yoy). Looking at the regional breakdown, dramatic variations in performance were seen last year. Key western markets saw substantial gains, led by an over 50% rise in US demand, reflecting a low base in 2014 and a strong response to lower prices in the second half. However, demand in most Asian and Middle East markets was down. China was a noteworthy exception, where concerns about the outlook for the renminbi, an attractive gold price, weak equity prices and a low base for 2014 resulted in a 22% jump.

Gold 25-Delta Risk Reversals*



*See footnote of same chart on page 12 for a detailed explanation of risk reversals.
Source: Bloomberg

Gold Volatility Smiles



*The lowest point for gold risk-reversals last year
Source: Bloomberg

2016 Investment Outlook

As we approach the end of the first quarter at the time of writing, there are clear indications that the gold investment landscape, at least from the point of view of professional investors, has changed decidedly compared to last year. An adjustment of US monetary policy expectations, concerns about the rising number of negative policy rates, worries about the outlook for the global economy and weaker equity markets have all profoundly changed investors' attitudes towards the metal.

Supporting this view are the nearly 300t increase in ETF holdings, the rebound in net positions in Comex and the dramatic swing in the options risk reversals. Looking beyond the headline data, anecdotal evidence interestingly points to non-traditional participants in the gold market, such as macro funds, being active in the first quarter.

Elsewhere, the consensus forecast for the US economic growth and hence the Fed's rate hikes has shifted in favour of gold. In line with our long-held view, the market consensus at present is that the pace of US rate increases will be slow, with a likely upper bound of 1% by year-end for the Fed. Similarly, while a rebound from current levels seems likely for the dollar, we continue to forecast that this will probably be limited.

All this gives us reason to be optimistic about the prospects for investment demand over the rest of the year. We believe that inflows into the metal will continue, as more and more fund managers are convinced by its medium-term prospects. Eventually, the wealth management and high net worth "bid" should also re-emerge. In this regard, higher call volatilities should help, by offering yield opportunities for gold holders who can sell calls against their core position. As a reference, at the time of writing, a call expiring in 41 days with a strike $50/oz above current levels was priced at $13/oz, amounting to an approximate 9% annualised return.

This is not to say that the ride will be smooth. Following the hefty inflows of the past three months, there is scope for liquidations, particularly as our field research points to some of the recent buying being tactical rather than strategic in nature. However, the extent of any further price fall should be limited and the December lows are unlikely to be revisited.

Moving to physical demand, our projections see another marginal increase taking place in 2016. On the one hand, China and India are both forecast to enjoy double-digit increases. The former is mainly due to a continued desire by local investors to hold hard assets, as they fear further renminbi depreciation. The latter reflects increasingly bullish price expectations, resulting in investors chasing the price higher. These gains are expected to be largely offset by lower sales in Europe, as concerns about the future of the Eurozone eventually ease, and a price-related swing to disinvestment in Japan.

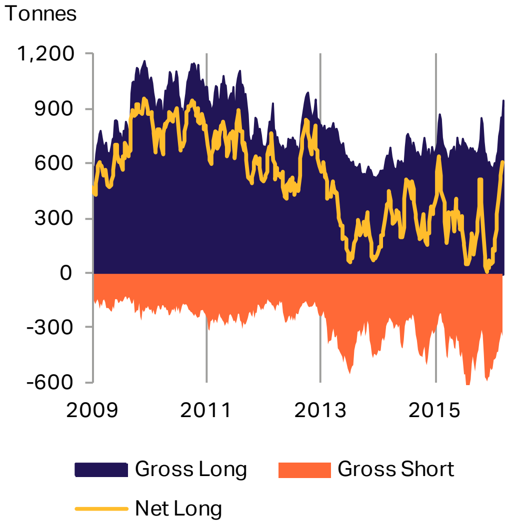
Annual Turnover on Major Commodity Exchanges

Tonnes	2014	2015	Y-o-Y
Comex	126,027	130,132	3%
SGE Spot*	5,121	7,912	54%
SGE T+D*	8,665	11,297	30%
SHFE*	48,267	50,634	5%
Tocom	8,745	7,928	-9%
MCX	3,972	3,947	-1%

*N.B. Volumes on both the SGE and SHFE record each transaction twice, from the point of view of the buyer and the seller. As such, to compare the above volume figures with other exchanges, such as the Comex, one needs to divide them by two.

Source: Bloomberg, respective exchanges

Comex Futures Net Positions



Source: CFTC

Institutional Investor Activity

Institutional investors maintained a bearish tone towards gold during most of 2015. As discussed earlier in this chapter, expectations of the start of rate increases in the US and the strength of the dollar remained the key headwinds for gold investment. The yellow metal's appeal was further reduced by the threat of deflation and the weakness of commodity prices in general. As such, liquidations from existing longs continued over much of the year, as evidenced by further reductions in ETF holdings and a general fall in net investor long positions on Comex. On the other hand, despite a weak price and a US rate hike being largely factored in by the market, there was an apparent lack of commitment to build new strategic positions among mainstream investors.

Commodity Exchanges

Last year, total turnover on non-Chinese commodity exchanges remained weak, while the two Chinese exchanges continued to hit all-time highs. While recent years have witnessed a rise in investor interest on Asian trading platforms, turnover continued to be dominated by Comex, which contributed 74% of the total for those exchanges listed opposite.

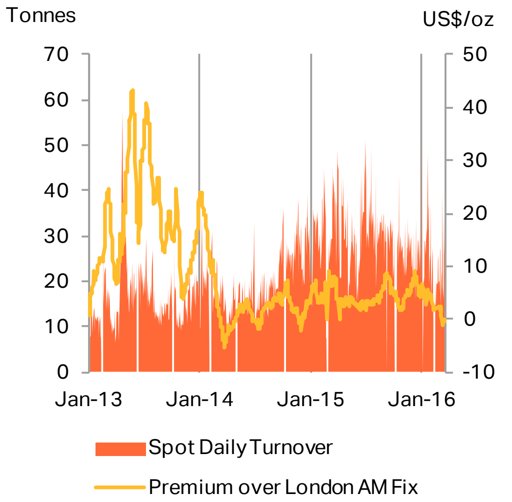
Starting with **Comex**, total turnover grew 3% in 2015, but three points are worth noting. First, this recovery was from a low base in 2014 and last year's total was still the second lowest in six years. Second, consistent with the trend in recent years, the futures market continued to benefit from a shift away from OTC trading amid tougher regulations. Finally, with an 8% fall in gold prices, this means that investor participation in gold trading in value terms shrank further last year.

Apart from the macroeconomic factors cited above, investors' lacklustre interest was further undermined by low price volatility, especially during the February-June period when gold traded within a narrow $100 range.

For much of the year, investor activity was primarily driven by fluctuations in expectations of the timing and the extent of the first interest rate hike in the US. For instance, the sharp rise in net long positions in early 2015 to a two-year high of 641t by end-January (which later turned out to be the high for the year) was stimulated by weak US economic data. However, as fears about a slowdown in the US economy quickly receded, so did investor interest. Later in the year, with growing expectations about the first rate rise, it is not surprising that net longs slumped to a mere 9t (the lowest since 2001), just two weeks before the December FOMC meeting. Finally, it is of note that investor activity on Comex was dominated by the short side last year. By contrast, gross long positions remained relatively steady.

Looking at the **Shanghai Gold Exchange** (SGE), the combined turnover of the two spot traded contracts on its domestic board jumped by over 54% last year to hit a new record. This marks a contrast to our estimate for the underlying physical market where Chinese demand weakened. In our view, the continued rise in SGE volumes was partly driven by the further expansion of the gold lending market, at least in the first half of 2015. In

SGE Turnover & Premium



Source: Shanghai Gold Exchange

addition, anecdotal information suggests that the growing participation by local commercial banks in the inter-banking trading system on the SGE may well have helped to boost volumes. As for the premiums on the SGE, in spite of significantly higher volumes, premiums remained relatively low, averaging $4.60/oz last year.

Turning to the SGE International Board (which was launched in September 2014), after a quiet start, spot trading picked up strongly in the first half of last year, with daily volumes at times even exceeding those on the domestic board. To a large extent, this increase was facilitated by favourable policies after the SGE temporarily removed trading fees for contracts listed on the International Board. As fees were reimposed in the second half of 2015, volumes soon dried up. Finally, it is worth mentioning that the SGE is planning to launch a new yuan-denominated gold pricing fix this year, in a move aimed at giving China more influence over pricing.

On the **Shanghai Futures Exchange** (SHFE), total turnover rose 5% to a new all-time high in 2015, which means the pace slowed significantly compared to that seen in the previous two years. This lower rate of growth can be attributed to a more cautious price outlook and gold's rangebound trading for an extended period. Meanwhile, the stock market rally in the first half of the year clearly reduced gold's appeal. Although the local stock market suffered a sizeable correction over the summer, heavy losses, particularly for leveraged players, saw many investors adopt a more cautious approach towards engaging in any new trading.

On the **Tocom**, total volumes of its standard gold contract continued to weaken, falling 9% to a 15-year low last year and less than a half of the level seen in 2011. In essence, this reflects the ongoing shift away from futures trading over the last decade or so among Japanese investors, after volumes peaked in the early 2000s.

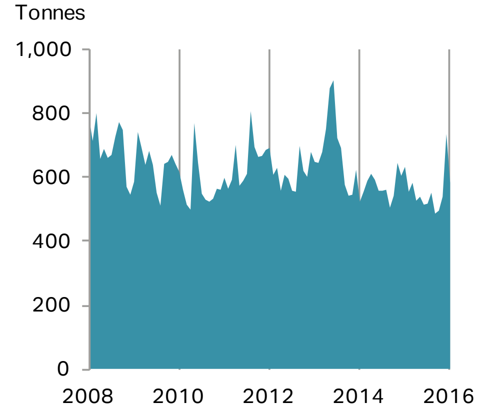
On the **MCX**, gold futures turnover edged slightly lower last year. This followed a sizeable fall in 2014, with the total remaining well below its recent high seen in 2013. Leaving aside bearish price expectations, the lack of a material improvement partly reflects a general shift from gold to equities in terms of capital allocations, particularly for urban investors, since the new Indian government was elected. In addition, investor interest was further restrained by the introduction of the commodity transaction tax on all non-agricultural commodities traded on the exchanges in 2013.

Finally, it is worth noting that, while the last few years have witnessed a rise in new products offered to Asian investors, volumes so far have remained relatively modest in absolute terms.

Over-the-Counter Market

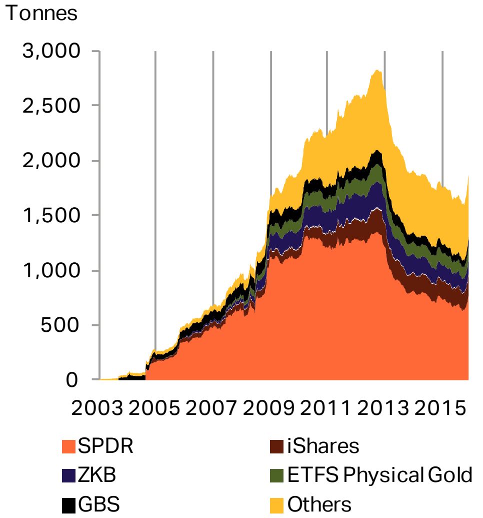
Investor activity in gold in the OTC market remained generally low during 2015. This is evidenced by the fall in the LBMA clearing statistics, where the average daily transfer fell by 2% year-on-year to 555t. In line with trends seen in ETFs and Comex, headwinds, including the US rate increase,

London Bullion Market Clearing - Average Daily Transfer



Source: London Bullion Market Association

Gold ETF Holdings



Source: Respective Fund Issuers, Bloomberg, World Gold Council

the strength of the dollar, confidence in equity performance and a lack of inflation pressure, were the key driving forces behind investors' lack of interest in gold. As a result, the private wealth management segment, most managed products as well as client recommendations maintained a very low or even zero allocation to gold. On the other hand, despite the massive investor washout since 2013, there were still "reluctant" longs waiting for higher prices to exit the market. Selling from such players continued to act as a cap on gold prices during 2015.

Apart from an unfavourable macroeconomic backdrop, a growing preference for more transparent trading platforms contributed to the fall in OTC activity. The only exception is China where trading volumes under the interbank trading system on the SGE more than doubled last year.

Exchange Traded Funds

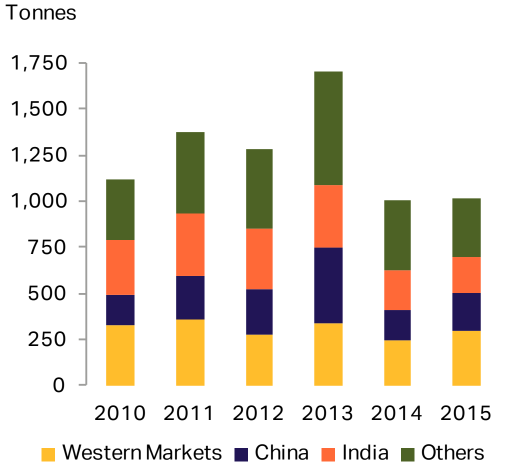
For the third year in a row, gold ETFs recorded net outflows during 2015, falling by 134t or 8% to 1,604t by end-2015, their lowest level since March 2009. In value terms, this fall was far greater, at 19% or $12.7bn.

Similar to other arenas of gold investment, growing prospects for divergent monetary policies between the United States and other major advanced economies and a relatively sanguine attitude towards equity markets remained the chief drivers behind these investment outflows. Even though global stock markets suffered sharp corrections in August in response to the disappointing economic news from emerging markets and high financial market volatility in China, this failed to stimulate a meaningful recovery in investor interest in gold ETFs. After all, in spite of growing market vulnerabilities, a new global crisis clearly did not represent market consensus. Indeed, as expectations of the first US rate hike grew further (and were eventual confirmed in December), investment outflows resumed later in the year. That said, as the first rate hike had been largely "priced in", the scale of redemptions turned out to be smaller than seen in 2013-2014.

Looking at individual ETF performances, outflows were the norm for the majority of funds last year. Unsurprisingly, given its leading position, SPDR Gold Shares recorded the largest decline, falling by 67t in 2015. However, its share of the global total remained little changed year-on-year, at 40% by end-2015. The only notable exception was ETFs listed in Germany, where their combined holdings in fact jumped by 10% to 101t. It is interesting to note that these inflows were concentrated in the first half of 2015 in response to growing worries about the potential Greek exit of the euro.

Early 2016 has seen a return of strong investment inflows. With the year-to-date increase already exceeding 300t at the time of writing, gold ETF holdings are on track to achieve their largest quarterly gain since the first quarter of 2009. While we are sceptical that this momentum could be sustained for the rest of the year, further modest gains are still expected, with the full year increase projected to reach 400t.

Global Physical Investment



Source: Metals Focus

Physical Investment Forecast

Tonnes	2015	2016F	Y-o-Y
Europe	222	211	-5%
CIS	4	3	-15%
North America	78	80	2%
C & S America	2	2	-17%
Middle East	87	80	-8%
Indian Sub-Continent	214	243	14%
East Asia	396	401	1%
Africa	12	11	-8%
Oceania	5	5	-5%
Global Total	**1,021**	**1,036**	**2%**

Source: Metals Focus

Physical Investment

Following a hefty decline in 2014, physical investment recovered by a modest 1% to 1,021t last year. This improvement can be largely attributed to healthy gains in western countries and China. Taking each in turn, European sales benefited from a growing desire for safe haven assets amid heightened fears about the Greek debt issue and worries about the euro. By contrast, the sharp rebound in US investment was largely stimulated by the price slump in the summer. Looking at China, following an uninspiring start, investor appetite for gold improved later in the year, as falling metal prices, the equity market rout and soft economic readings all raised the yellow metal's appeal. That said, not all was positive, as demand in the Middle East suffered heavy losses last year, especially in Turkey. Finally, a modest fall was also recorded in India, where investor interest was undermined by negative price expectations, the strength of local equity prices and the government's clampdown on the informal economy.

Europe

European physical investment recovered by 13% to 222t in 2015. **Germany** contributed the largest increase last year, rising by15% to 116t, although the total still remained comfortably below the elevated level seen in 2013. Last year's gains were partly attributable to a rising appetite for hard assets amid the new round of QE by the ECB coupled with an intensifying Greek debt crisis mid-year. While easing worries about a Greek exit of the euro resulted in a slowdown in physical sales over August-October, volumes soon picked up, notably in the final weeks of 2015, thanks to a sharp fall in gold prices and heavy marketing campaigns by major bullion dealers. Turning to **Switzerland**, growth there was far smaller than that seen in Germany. In essence, this reflects a more stable economic backdrop for the country. Even though the unexpected decision by the Swiss National Bank to scrap the euro cap led to massive exchange rate volatilities in early 2015, investor confidence in the local equity market managed to recover. Moreover, the under-performance of gold prices in Swiss franc terms compared to the euro price seems to have restrained investor interest. Healthy growth was also recorded in most other European markets, and in particular Austria and the United Kingdom.

North America

The jump in **US** physical investment in 2015 appeared impressive, but two points are worth noting. First, last year's investment was flattered by a poor performance the year before. As a result, physical demand in 2015 barely recovered to 2013 levels. Second, looking at retail purchases on a quarterly basis reveals that first half activity last year remained subdued, with investors discouraged by gold's generally low trading range. However, in keeping with several other markets, the US saw a burst of activity in the third quarter as gold prices weakened. As a result third quarter demand accounted for almost half of the full year total. This aside, one common theme in 2014 and 2015 was high-net-worth liquidations in the early part of last year, motivated by a combination of low price expectations and profit taking. Even so, there was no copy of this selling back by retail investors, where holdings of small bars and coins have been far stickier.

Physical Investment

Tonnes	2010	2011	2012	2013	2014	2015	Year on Year
Europe							
Germany	102.3	118.5	107.6	134.0	101.3	116.0	15%
Switzerland	56.8	69.1	51.8	60.5	47.7	49.2	3%
Austria	12.3	14.3	10.4	13.1	10.2	12.2	19%
UK	16.9	14.5	11.9	11.1	7.6	9.4	23%
France	1.4	6.1	2.5	2.0	1.0	1.6	65%
Others	39.9	49.3	37.6	38.9	28.6	33.7	18%
Sub-total	**229.6**	**271.7**	**221.8**	**259.6**	**196.4**	**222.1**	**13%**
North America							
United States	92.6	79.4	51.3	76.3	47.7	73.2	53%
Others	7.9	9.9	7.1	8.4	5.9	5.1	-15%
Sub-total	**100.5**	**89.3**	**58.4**	**84.7**	**53.7**	**78.3**	**46%**
Middle East							
Iran	44.9	57.7	58.8	64.7	36.1	30.1	-17%
Turkey	42.9	70.6	47.9	104.4	48.6	23.1	-52%
Saudi Arabia	14.8	18.1	17.2	18.4	15.6	15.2	-3%
UAE	2.3	3.3	9.6	14.2	9.9	8.7	-12%
Others	6.1	8.6	7.0	12.2	11.5	9.6	-16%
Sub-total	**111.1**	**158.4**	**140.6**	**213.9**	**121.7**	**86.7**	**-29%**
Indian Sub-Continent							
India	296.4	334.4	322.3	339.4	206.9	195.8	-5%
Others	15.4	22.5	16.8	24.2	17.6	18.4	4%
Sub-total	**311.8**	**356.9**	**339.2**	**363.5**	**224.5**	**214.2**	**-5%**
East Asia							
China	167.4	236.3	249.5	407.4	166.4	203.3	22%
Thailand	70.6	110.9	100.3	138.1	96.4	78.0	-19%
Vietnam	73.9	94.4	77.2	88.3	54.2	47.8	-12%
Indonesia	26.1	31.2	28.9	47.9	26.9	20.1	-25%
Japan	-35.5	-59.7	-11.4	2.6	-2.7	16.2	na
Others	24.7	28	28.4	39.2	34.6	30.6	-11%
Sub-total	**327.1**	**441.0**	**472.8**	**723.6**	**375.7**	**396.0**	**5%**
Other Regions							
CIS	11.9	19.6	14.6	21.2	9.5	4.1	-57%
C&S America	2.2	2.3	1.9	2.3	2.1	2.3	6%
Africa	8.2	12.0	14.8	13.4	12.4	12.4	0%
Oceania	16.2	28.6	18.5	17.8	11.8	4.9	-58%
Sub-total	**38.5**	**62.6**	**49.9**	**54.6**	**35.8**	**23.7**	**-34%**
Global Total	**1,118.5**	**1,379.9**	**1,282.7**	**1,699.9**	**1,007.7**	**1,020.9**	**1.3%**

Source: Metals Focus

Middle East

In 2015, retail investment across the Middle East fell for the second year in succession, led by the region's two largest markets, Turkey and Iran. For 2016, we expect to see an 8% drop, but losses will be more evenly spread.

Looking first at **Turkey**, retail investment has slumped over the past two years, falling from 2013's record 104t to 23t last year, its weakest showing in our series. The key reason has been the sharp depreciation of the Turkish lira, which encouraged investor liquidations. The only time last year when retail purchases emerged was in July, when local prices fell, but this proved to be short-lived. Aside from this, demand remained sluggish. At one point, the downturn was so severe that in September official coin minting collapsed to just 23kg. Turning to 2016, the lira has so far remained weak. This, along with expectations of higher dollar gold prices, means there appears little prospect of seeing a recovery in investment.

Physical investment in **Iran** was also very weak, falling by 17% to 30t. Although the depreciation of the rial slowed, the effects of the embargo and the ongoing recession (as a result of the sanctions) dampened enthusiasm created by the nuclear deal. However, from the beginning of 2016, the Iranian rial has already appreciated by nearly 7%. Even so, the sharp rise in dollar gold prices has so far contributed to subdued demand, with local investors looking for a price correction. Nevertheless, our outlook for 2016 is relatively optimistic, with a forecast rise of 5%; this will therefore see Iran emerge as the one growth market in the Middle East.

Physical Investment - Bars and Coins

Tonnes	2010	2011	2012	2013	2014	2015	Year on Year
Bar Investment							
Europe	173.5	207.0	175.4	192.1	146.4	163.9	12%
North America	14.5	16.7	11.3	18.9	15.6	20.8	33%
Middle East	27.9	38.6	37.2	48.9	36.8	30.0	-18%
Indian Sub-Cont.	217.7	249.1	242.7	260.6	158.7	151.3	-5%
East Asia	292.2	397.6	416.7	681.6	346.9	364.8	5%
Other	25.2	44.8	30.1	36.2	22.1	10.2	-54%
Global Total	**751.0**	**953.8**	**913.5**	**1,238.2**	**726.5**	**741.0**	**2.0%**
Coin Investment							
Europe	56.1	64.7	46.4	67.5	49.9	58.2	16%
North America	86.0	72.6	47.1	65.8	38.0	57.5	51%
Middle East	83.2	119.8	103.4	165.0	84.9	56.7	-33%
Indian Sub-Cont.	94.0	107.8	96.4	102.9	65.8	62.9	-5%
East Asia	34.9	43.4	56.1	42.0	28.7	31.2	9%
Other	13.3	17.8	19.8	18.4	13.7	13.5	-2%
Global Total	**367.5**	**426.1**	**369.2**	**461.7**	**281.2**	**279.9**	**-0.5%**

Source: Metals Focus

Medallions & Other Non-Official Coin Fabrication

Tonnes	2014	2015	Y-o-Y
India	62.4	59.5	-5%
Others	13.8	12.2	-11%
Global Total	**76.2**	**71.7**	**-5.9%**

Source: Metals Focus

Stock Markets in China & India

Source: Bloomberg

Indian Sub-Continent

In 2015, **Indian** retail investment fell for the second year, by 5% to 196t, its lowest level since the start of the decade. Three factors accounted for much of the decline: bearish price expectations, a shift of capital in favour of equities and the government's clampdown on black money.

Taking each in turn, the impact of weak gold prices on increasingly bearish expectations was one of the main factors contributing to soft demand. The poor sentiment towards gold was further exacerbated by growing reports in the local media of a possible fall in prices to below $1,000. The second factor, contributing to the decline, was the rotation in favour of equities, especially in urban locations. This owed much to the resurgence in the country's stock markets, following the change of government in 2014. This hit retail gold investment hard, given the preference in the major cities (for those choosing to invest in gold) for small gold bars, as opposed to jewellery, which is favoured by rural consumers as an investment vehicle. As a result, even though investor demand benefited from strong sales during the festive period of Akshaya Trithiya and Diwali, purchases were more geared towards jewellery, rather than bars.

Third, the government's clampdown on unofficial economic activity over the last few years has played a significant role in large investors staying away from the gold market. A small number have also switched to silver, as reflected in the country's record bullion imports. Turning to this year, we expect to see a revival in physical gold investment. A key driver will be the upturn in gold prices, which is likely to bolster price expectations and therefore encourage the return of investors to the gold market.

East Asia

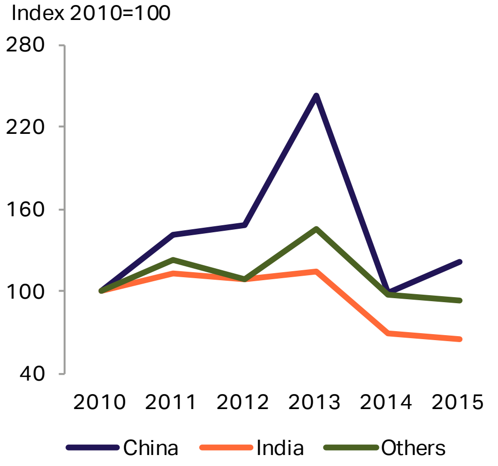
East Asian investment demand was up by 5% last year, reaching 396t. The increase was the result of gains in only three countries, namely China, Japan and South Korea, with all other markets suffering declines.

At first glance, the 22% increase in **Chinese** retail investment to 203t may appear impressive, particularly against the backdrop of falling volumes across most other Asian markets. It is important to note, however, that this growth is from a very low base in 2014. Putting the 203t figure in a historical perspective, it was still 50% lower than 2013's volumes.

2015 was a year of two very different halves for Chinese investment. Over the first six months of the year, a bearish price outlook coupled with extraordinary gains in equity prices limited investor interest in gold, resulting in a mere 3% y-o-y increase. Conditions turned in the second half, when a combination of a lower gold price, a surprise renminbi devaluation and an equity price collapse fuelled an impressive 49% jump in volumes.

Last year was interesting as it saw an emergency of widespread safe haven type gold buying in China. Over the last decade or so, Chinese investors had been drawn to gold looking for capital appreciation rather than safety. In the past nine months or so, concerns over further local currency

Physical Investment Index



Source: Metals Focus

devaluation and, to a lesser extent, weak equity prices have seen local investors turn to gold's wealth preservation properties.

Japanese investment also changed dramatically over the course of the year. Early on, the tax inclusive local price reaching a new all-time high resulted in hefty net selling. This was followed by a few quiet months, due to a limited price incentive for either sales or purchases and to investors focusing on local equities. The market turned lively again in the second half of the year, when falling prices fuelled a return of net demand. This took the overall figure to 16t, the highest net investment figure in over ten years.

Thai physical investment in 2015 suffered another double-digit fall, which in tonnage terms offset much of China and Japan's gains. A weakening local currency and bearish outlook for gold were the principal drivers of the fall and the August bombing in Bangkok also hurt demand in the second half. Interestingly, demand in cities close to the country's borders was healthy, boosted by foreign buyers. **Vietnamese** investment fell by 12%, due to continued import restrictions and the resulting high premiums coupled with currency devaluation. The limited extent of the decline reflects an already depressed level in 2014. Moreover, when including purchases of packaged 4-9s rings, sold as a lower-premium alternative to official bars, the decline was yet smaller.

Turning to **Indonesia** and **Malaysia,** retail investment fell by 25% and 17% respectively last year, as demand in both countries was undermined by a sharp depreciation of the local currency. Finally, promotions from Korea Exchange Inc. such as favourable prices and low transaction costs coupled with tax incentives fuelled a 21% rise in **Korean** investment.

Official Coin Fabrication

Tonnes	2010	2011	2012	2013	2014	2015	Year on Year
United States	44.5	36.5	27.5	34.1	21.9	31.8	45%
Canada	35.0	36.2	23.9	35.5	22.1	29.7	35%
Iran	42.8	54.9	56.0	61.6	34.3	28.7	-17%
South Africa	20.0	23.7	23.7	27.5	21.5	27.7	29%
Austria	17.9	21.1	12.4	20.3	15.0	23.5	56%
China	16.6	20.8	25.3	25.0	12.8	22.8	78%
Turkey	35.7	58.8	39.9	90.5	40.5	19.7	-51%
Australia	14.8	26.2	17.0	16.2	11.6	9.9	-14%
UK	3.4	4.6	4.0	3.8	2.8	3.9	42%
Germany	5.8	4.7	4.9	4.2	3.0	3.2	8%
Russia	5.1	5.1	5.1	5.9	2.7	1.6	-40%
Mexico	1.1	1.2	0.8	2.2	1.9	0.5	-74%
Others	15.7	16.0	13.5	15.1	13.4	10.1	-24%
Global Total	**258.3**	**309.9**	**253.9**	**341.9**	**203.4**	**213.2**	**4.8%**

N.B. The sum of official coin, medallion and other non-official coin fabrication may not be equal to coin investment due to inventory changes.
Source: Metals Focus

Chapter 9

Above-Ground Stocks

– Above-ground stocks grew 1.8% to approximately 180,000t by end-2015.

– Total stocks of fabricated products, dominated by jewellery, rose by 1,645t last year.

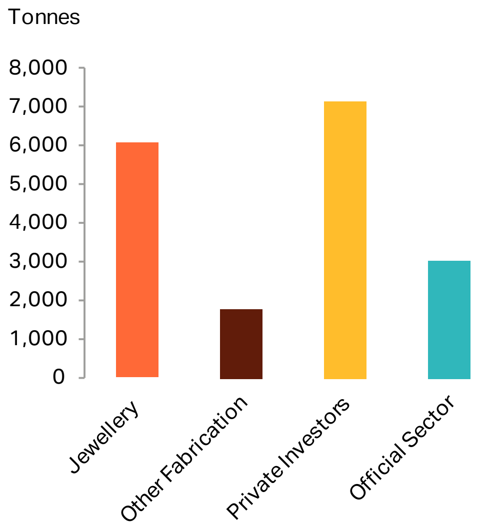
– Private investors added 1,009t on a net basis, while official sector stocks rose by 566t during 2015.

Gold is unlike all other commodities in that nearly all of what the earth has given up over various millennia still remains with us in one form or another. Very little gold is ever truly consumed or forever lost. This is a function of its exceptional physical characteristics and tremendous scarcity, both of which mean that this noble metal has always commanded a very high price.

Cumulative historical **mine production**, minus a tiny allowance for 'lost' metal, represents the starting point for any analysis of above-ground gold stocks. Around 180,000t of gold has been mined from antiquity through to the present day, with some 99,000t being produced in 1968-2015 alone. Last year's 3,195t of mine production therefore represented an increase of only 1.8% to the above-ground stock of gold.

Above-ground stocks fall into two broad categories: fabricated products (chiefly jewellery) and bullion (bars and coins). Fabricated products include jewellery (carat and costume), dental materials and a wide range of industrial products, especially electronics goods, and gold-plated decorative items. In terms of volume, however, carat jewellery (almost all of which ranges from 8k through to 24k) is dominant, accounting for close to half the entire above-ground gold stock.

Changes in Above-Ground Stocks by Sector, 2010-15



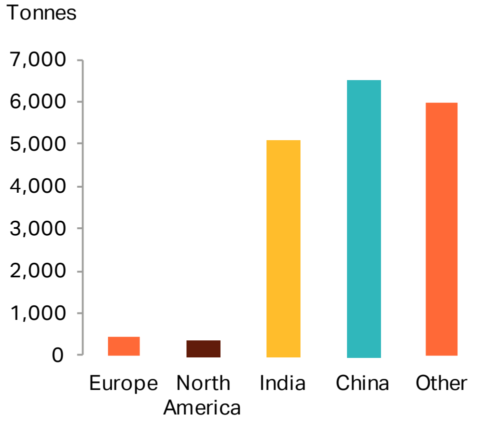
Source: Metals Focus. Private investors cover physical investment and the market balance.

The bulk of the global stock of **jewellery** has been accumulated in the past 50 years. Prior to this, the mass market for carat gold products was little developed and consumption of fine jewellery was largely an elite affair. From the 1960s onwards, this picture changed due to the mix of ever-higher global consumer spending power and favourable demographics combined with technological developments allowing for large-scale manufacture, distribution and sale of affordable jewellery. While some old jewellery is melted every year, rarely and only in a select few countries has the volume of such scrap exceeded annual demand for new jewellery. As such, the global inventory of jewellery continues to grow, with a further net 1,300t or so being added to the public's holdings in 2015.

Stocks of **other fabricated products** are generally much less close to the market in terms of their ease of mobilisation but often will still be recycled at the end of a product's (or human's) life cycle. This is true for a fair share of electronics and dental gold. In contrast, the small amount of metal contained in electroplated industrial or decorative products that become obsolete or unwanted can rarely be recovered economically. Indeed, this would represent one of the few examples of gold truly being consumed and lost to the market.

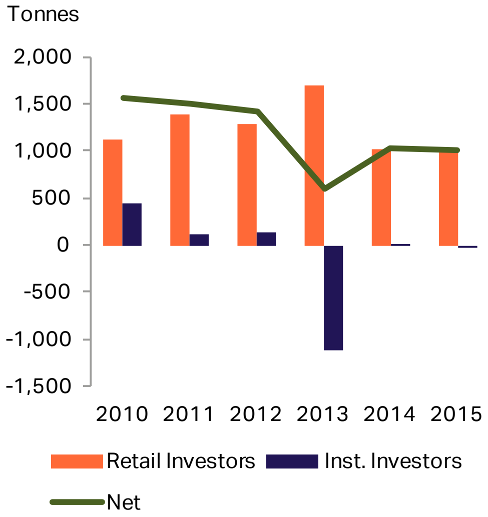
As noted above, the other broad category of above-ground stocks is bullion. This can in turn be disaggregated by, firstly, its physical form and, secondly, its ownership. Bullion is hoarded in two main forms: bars and coins. The tonnage in bars is far greater than that of coins, in good

Changes in Above-Ground Stocks by Region*, 2010-15



Source: Metals Focus.
* Jewellery consumption plus retail investment and net official sector purchases less jewellery scrap.

Annual Changes in Investment Stocks



Source: Metals Focus

measure because of the large number of ingots that exist in 400oz and kilo weights, as opposed to coins where the bulk of the stock is in 1oz pieces.

The presence of a sizeable number of 'heavy' bars owes much to the historically different ownership of bars and coins. In the past, most gold bar was hoarded by central banks in the form of 400oz ingots, with private sector investment demand concentrated in (formerly) circulating and bullion coins. While investors in the last few decades have increasingly favoured cast and minted bars over coins, the share of the latter in private sector bullion stocks is still much larger than in central bank reserves, where coins account for only a tiny proportion of gold holdings.

Official sector stocks are to a large extent a legacy of the Gold Standard and Gold Exchange Standard eras when central banks required gold to back currencies and to settle international payments. The breakdown of the Bretton Woods fixed exchange rate regime during 1968-71 saw a major re-distribution of gold holdings and some net decline in official stocks. Once gold had lost its official role in the international financial system, it was perhaps inevitable that its place in central bank reserves would begin to be questioned. However, it was only from the late 1980s through to the mid-2000s that this resulted in substantial gold sales on a net basis by the world's central banks. Moreover, since then, and especially in the wake of the global financial crisis, gold has been rehabilitated as an official reserve asset. This is clear from our data that shows a swing from net sales to net purchases of gold from 2011 onwards. Indeed, over the last six years, the official sector has added around 3,000t to its gold holdings, which today stand at over 33,000t.

In contrast, **private sector bullion** holdings have steadily risen over the last couple of generations and now roughly matches in size official gold stocks. These gains have been driven by factors such as growing financial wealth, market liberalisation and the development of new gold investment products and distribution channels. Indeed, even during periods of low and falling prices, fresh bullion purchases have offset disinvestment by others, at least on an annual basis. A recent example of this was 2013 when heavy western selling of ETFs (which dropped by 916t) and other holdings was outweighed by a surge in retail demand for physical bullion (to a hefty 1,700t), especially in China and some other East Asian countries.

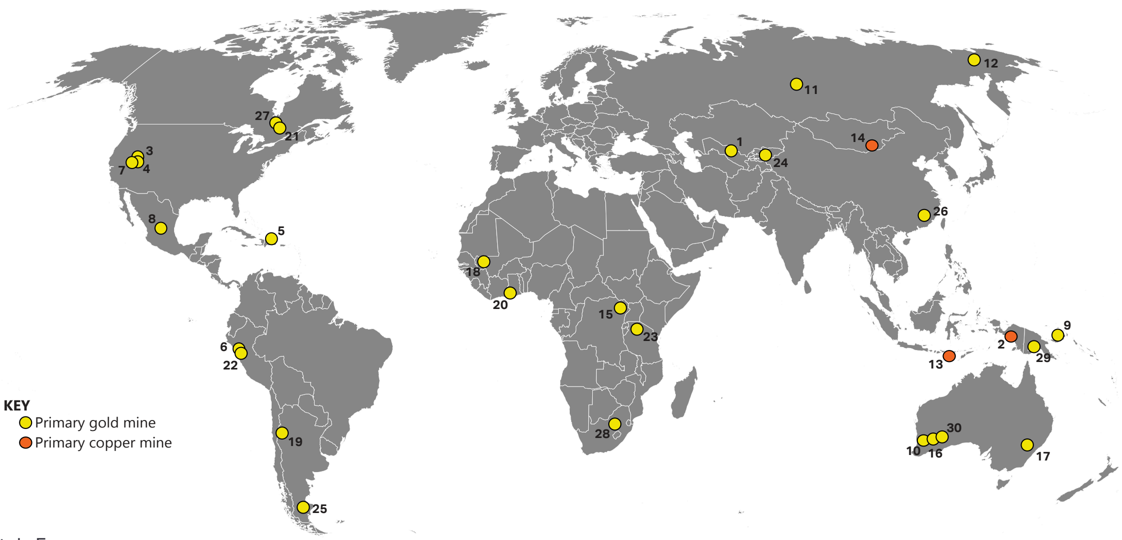
Indeed, the above implied shift in the location of private bullion stocks from West to East has been far more pronounced than for official gold holdings. As regards the latter, even though it has fallen in recent years, the US and Europe's share of global central bank gold reserves is still over 60%. When it comes to investors' gold bullion stocks, however, the majority of growth in these has occurred in Asia. For instance, from 2010-15, ETFs, which are dominated by western investors, saw a net outflow of 268t. More notably, cumulative retail investment in this same period in Asia exceeded 5,300t, easily eclipsing the 1,866t recorded in Europe and North America. It is also possible that, during this period, Asia's share of all retail stocks came close to or perhaps even rose to just over 50%.

Appendices

Appendix 1 - Top 30 Gold Producing Mines

Rank	Mine	Country	Ownership	Tonnes		
				2014	2015	Y-o-Y
1	Muruntau[1]	Uzbekistan	Government of the Republic of Uzbekistan (100%)	61.0	61.0	0%
2	Grasberg	Indonesia	Freeport McMoRan (90.64%) / Gov. of Indonesia (9.36%)[2]	38.8	42.3	9%
3	Goldstrike	United States	Barrick Gold (100%)	28.1	32.8	17%
4	Cortez	United States	Barrick Gold (100%)	28.1	31.1	11%
5	Pueblo Viejo	Dominican Rep.	Barrick Gold (60%) / Goldcorp (40%)	34.5	29.7	-14%
6	Yanacocha	Peru	Newmont Mining (51.35%) / Buenaventura (43.65%) / IFC (5%)	30.2	28.6	-5%
7	Carlin	United States	Newmont Mining (100%)	28.2	27.6	-2%
8	Peñasquito[3]	Mexico	Goldcorp (100%)	17.7	26.8	52%
9	Lihir	Papua New Guinea	Newcrest Mining (100%)	20.3	25.0	23%
10	Boddington	Australia	Newmont Mining (100%)	21.6	24.7	14%
11	Olimpiada	Russia	Polyus Gold (100%)	22.6	23.1	2%
12	Kupol	Russia	Kinross Gold (100%)	21.4	21.6	1%
13	Batu Hijau	Indonesia	Newmont Mining (31.5%) / Sumitomo Corp. (24.5%)[4]	2.4	21.0	789%
14	Oyu Tolgoi	Mongolia	Turquoise Hill Resources (66%) / Government of Mongolia (34%)	18.3	20.3	11%
15	Kibali	DRC	AngloGold Ashanti (45%) / Randgold Resources (45%)[5]	16.4	20.0	22%
16	Kalgoorlie Super Pit	Australia	Barrick Gold (50%) / Newmont Mining (50%)	20.3	19.9	-2%
17	Cadia Valley	Australia	Newcrest Mining (100%)	18.8	19.8	5%
18	Loulo-Gounkoto	Mali	Randgold Resources (80%) / Government of Mali (20%)	19.9	19.6	-1%
19	Veladero	Argentina	Barrick Gold (100%)	22.5	18.7	-17%
20	Tarkwa	Ghana	Gold Fields (100%)	17.4	18.2	5%
21	Canadian Malartic	Canada	Agnico Eagle Mines (50%) / Yamana Gold (50%)	16.7	17.8	7%
22	Lagunas Norte	Peru	Barrick Gold (100%)	18.1	17.4	-4%
23	Geita	Tanzania	AngloGold Ashanti (100%)	14.8	16.4	10%
24	Kumtor	Kyrgyzstan	Centerra Gold (100%)	17.7	16.2	-8%
25	Cerro Negro	Argentina	Goldcorp (100%)	4.7	15.8	234%
26	Zijinshan	China	Zijin Mining (100%)	15.8	15.4	-3%
27	Detour Lake	Canada	Detour Gold (100%)	14.2	15.7	11%
28	Driefontein	South Africa	Sibanye Gold (100%)	16.3	15.3	-6%
29	Porgera	Papua New Guinea	Barrick Gold (47.5%) / Zijin Mining (47.5%)[6]	13.6	15.3	13%
30	Tropicana	Australia	AngloGold Ashanti (70%) / Independence Group NL (30%)	15.9	15.3	-4%

NB: 1: Estimated figure, 2: Rio Tinto is also entitled to a portion of production from Grasberg, 3: Payable gold produced, 4: PT Multi Daerah Bersaing (24%), PT Pukuafu Indah (17.8%) & PT Indonesia Masbaga Investama (2.2%) 5: Okimo (10%) 6: Enga Provincial Government (2.5%) &Local Landowners (2.5%)



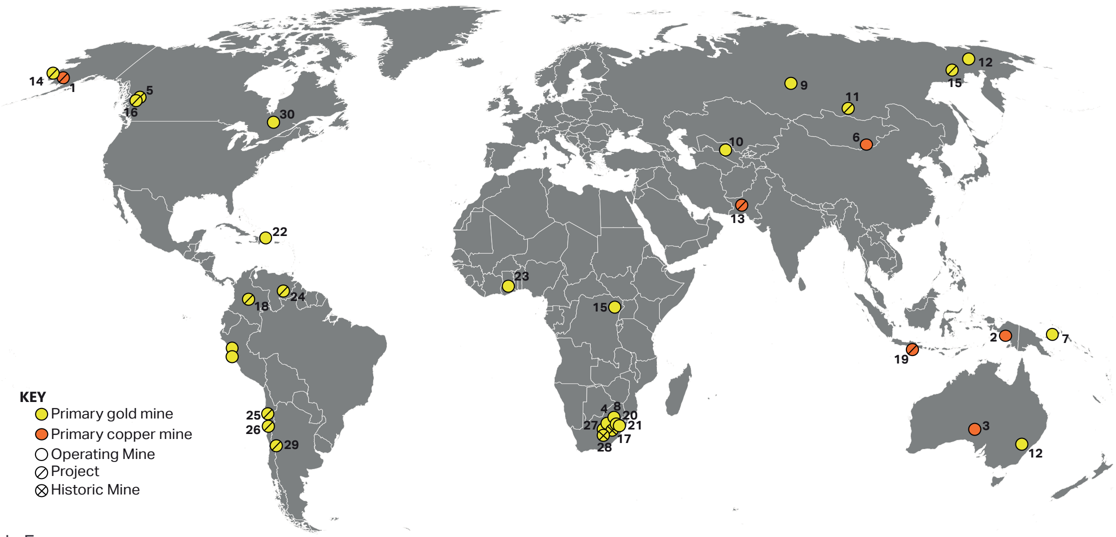
Source: Metals Focus

Appendix 2 - Top 30 Gold Mineral Resources

Rank	Asset	Country	Status	Ownership	Contained Gold, tonnes Reserve	Resource*
1	Pebble	United States	Project	Northern Dynasty Minerals (100%)	-	3,350
2	Grasberg	Indonesia	Operating	Freeport McMoRan (91%) / Gov. of Indonesia (9%)[1]	1,830	3,260
3	Olympic Dam	Australia	Operating	BHP Billiton (100%)	380	3,030
4	South Deep	South Africa	Operating	Gold Fields (100%)	1,180	2,365
5	KSM	Canada	Project	Seabridge Gold (100%)	1,190	1,990
6	Oyu Tolgoi	Mongolia	Operating	Turquoise Hill Resources (66%) / Gov. of Mongolia (34%)	450	1,825
7	Lihir	Papua New Guinea	Operating	Newcrest Mining (100%)	870	1,775
8	Mponeng	South Africa	Operating	AngloGold Ashanti (100%)	400	1,515
9	Olimpiada	Russia	Operating	Polyus Gold (100%)	910	1,475
10	Muruntau	Uzbekistan	Operating	Navoi Mining and Metallurgical Combinat (100%)	-	1,380
11	Sukhoi Log	Russia	Project	Government of Russia (100%)	-	1,345
12	Cadia Valley	Australia	Operating	Newcrest Mining (100%)	805	1,330
13	Reko Diq	Pakistan	Project	Barrick Gold (37.5%) / Antofagasta (37.5%)[2]	660	1,300
14	Donlin Gold	United States	Project	Novagold Resources (50%) / Barrick Gold (50%)	-	1,215
15	Natalka	Russian	Project	Polyus Gold (100%)	505	1,150
16	Snowfield	Canada	Project	Pretivm (100%)	-	1,085
17	Blyvooruitzicht	South Africa	Historic	Village Main Reef (100%)	110	1,040
18	La Colosa	Colombia	Project	AngloGold Ashanti (100%)	-	1,030
19	Tujuh Bukit	Indonesia	Project	PT Merdeka Copper Gold (100%)	-	940
20	Kloof	South Africa	Operating	Sibanye Gold (100%)	215	910
21	Evander	South Africa	Operating	Pan African Resources (100%)	260	865
22	Pueblo Viejo	Dominican Republic	Operating	Barrick Gold Corporation (60%) / Goldcorp (40%)	465	865
23	Obuasi	Ghana	Operating	AngloGold Ashanti (100%)	165	850
24	Las Cristinas	Venzuela	Project	Government of Venezuela (100%)	525	840
25	Cerro Casale	Chile	Project	Barrick Gold Corporation (75%) / Kinross Gold (25%)	725	830
26	Caspiche	Chile	Project	Exeter Resource (100%)	-	775
27	Driefontein	South Africa	Operating	Sibanye Gold (100%)	230	710
28	Buffelsfontein	South Africa	Historic	Village Main Reef (100%)	-	690
29	Pascua-Lama	Chile	Project	Barrick Gold (100%)	480	680
30	Detour Lake	Canada	Operating	Detour Gold (100%)	510	665

* Mineral resources stated are inclusive of reserves

NB: 1: Rio Tinto is also entitled to a portion of production from Grasberg, 2: Government of Balochistan (25%)

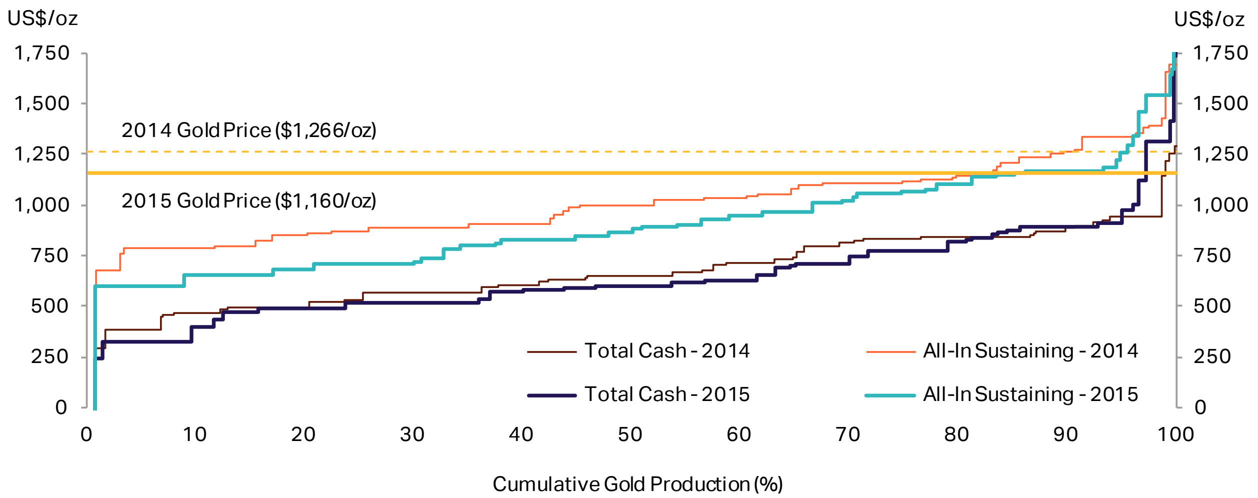


Source: Metals Focus

Appendix 3 - Gold Production Costs

US$/oz	2010	2011	2012	2013	2014	2015	Year on Year 2014	Year on Year 2015
North America								
United States								
Total Cash Cost	471	510	546	591	684	650	16%	-5%
Total Production Cost	631	669	715	787	885	859	12%	-3%
All-In Sustaining Cost	-	-	940	904	980	890	8%	-9%
Costed Production (tonnes)	189.2	198.2	201.9	195.3	174.7	179.7		
Canada								
Total Cash Cost	496	644	769	745	660	650	-11%	-2%
Total Production Cost	681	854	1,006	1,007	991	1,076	-2%	9%
All-In Sustaining Cost	-	-	1,250	1,150	1,027	938	-11%	-9%
Costed Production (tonnes)	81.7	86.3	88.9	112.0	127.9	123.4		
Mexico								
Total Cash Cost	251	171	255	555	594	561	7%	-6%
Total Production Cost	446	378	505	821	911	910	11%	0%
All-In Sustaining Cost	-	-	701	960	989	848	3%	-14%
Costed Production (tonnes)	57.4	66.6	78.0	72.1	74.7	79.7		
Total North America								
Total Cash Cost	439	479	538	630	658	632	5%	-4%
Total Production Cost	611	659	741	858	926	940	8%	1%
All-In Sustaining Cost	-	-	964	987	998	897	1%	-10%
Costed Production (tonnes)	328.3	351.1	368.8	379.4	377.2	382.8		

Regional Cost Curves - North America

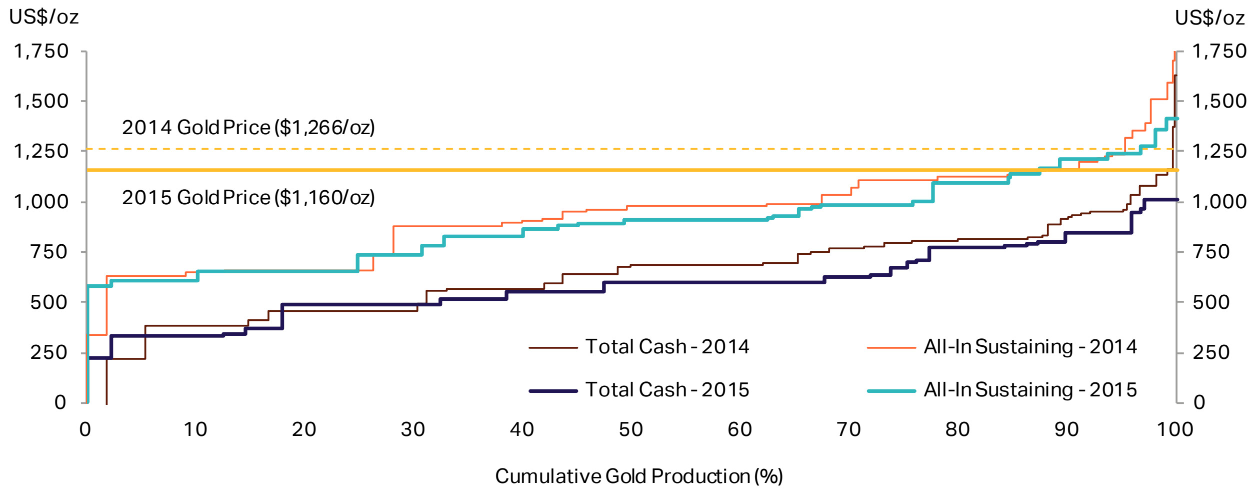


Source: Metals Focus Gold Mine Cost Service

Appendix 3 - Gold Production Costs (continued)

US$/oz	2010	2011	2012	2013	2014	2015	Year on Year 2014	Year on Year 2015
Central & South America								
Peru								
Total Cash Cost	433	444	449	540	539	483	0%	-10%
Total Production Cost	531	574	595	743	780	793	5%	2%
All-In Sustaining Cost	-	-	927	955	838	802	-12%	-4%
Costed Production (tonnes)	96.4	90.6	92.0	74.1	68.9	59.6		
Brazil								
Total Cash Cost	593	732	849	807	820	686	2%	-16%
Total Production Cost	790	963	1,129	1,114	1,156	1,045	4%	-10%
All-In Sustaining Cost	-	-	1,244	1,131	1,121	959	-1%	-14%
Costed Production (tonnes)	43.8	44.4	46.6	54.9	55.4	43.6		
Argentina								
Total Cash Cost	238	316	513	586	641	622	9%	-3%
Total Production Cost	325	425	760	826	845	994	2%	18%
All-In Sustaining Cost	-	-	966	984	968	953	-2%	-2%
Costed Production (tonnes)	45.6	42.8	37.9	38.2	41.3	51.4		
Dominican Republic								
Total Cash Cost	-	-	-	551	453	485	-18%	7%
Total Production Cost	-	-	-	739	684	773	-7%	13%
All-In Sustaining Cost	-	-	-	805	657	655	-18%	0%
Costed Production (tonnes)	-	-	-	25.3	34.5	32.1		

Regional Cost Curves - Central & South America



Source: Metals Focus Gold Mine Cost Service

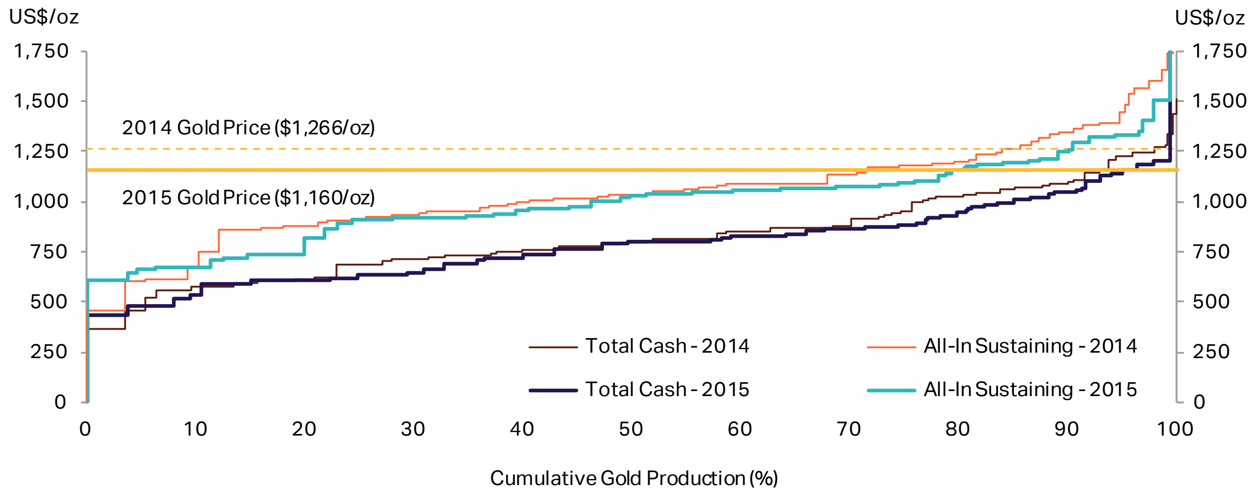
Appendix 3 - Gold Production Costs (continued)

US$/oz	2010	2011	2012	2013	2014	2015	Year on Year 2014	Year on Year 2015
Central & South America								
Chile								
Total Cash Cost	297	158	542	626	600	679	-4%	13%
Total Production Cost	601	443	877	1,103	942	991	-15%	5%
All-In Sustaining Cost	-	-	1,083	1,062	965	1,088	-9%	13%
Costed Production (tonnes)	19.8	23.4	22.5	25.0	21.2	16.8		
Other Central & South America								
Total Cash Cost	367	368	627	682	724	660	6%	-9%
Total Production Cost	563	586	884	995	1,066	1,348	7%	26%
All-In Sustaining Cost	-	-	1,007	1,047	1,049	1,099	0%	5%
Costed Production (tonnes)	29.4	35.5	30.7	30.7	30.1	16.0		
Total Central & South America								
Total Cash Cost	405	435	574	634	633	584	0%	-8%
Total Production Cost	549	609	797	905	909	943	0%	4%
All-In Sustaining Cost	-	-	1,024	1,005	933	891	-7%	-5%
Costed Production (tonnes)	235.1	236.6	229.7	248.2	251.4	219.5		
Africa								
South Africa								
Total Cash Cost	772	910	1,031	944	923	906	-2%	-2%
Total Production Cost	957	1,116	1,251	1,159	1,128	1,085	-3%	-4%
All-In Sustaining Cost	-	-	1,368	1,227	1,145	1,095	-7%	-4%
Costed Production (tonnes)	160.5	151.7	130.0	142.5	137.6	119.7		
Ghana								
Total Cash Cost	620	706	820	862	756	730	-12%	-3%
Total Production Cost	800	917	1,086	1,087	970	979	-11%	1%
All-In Sustaining Cost	-	-	1,278	1,247	981	972	-21%	-1%
Costed Production (tonnes)	81.7	82.6	88.2	88.7	90.8	79.7		
Mali								
Total Cash Cost	723	871	913	923	876	744	-5%	-15%
Total Production Cost	832	989	1,046	1,084	1,097	934	1%	-15%
All-In Sustaining Cost	-	-	1,170	1,265	1,083	933	-14%	-14%
Costed Production (tonnes)	36.7	36.1	41.1	40.8	40.3	41.3		
Tanzania								
Total Cash Cost	642	642	712	734	684	659	-7%	-4%
Total Production Cost	795	832	955	950	875	874	-8%	0%
All-In Sustaining Cost	-	-	1,231	1,163	1,008	973	-13%	-3%
Costed Production (tonnes)	37.5	41.4	40.1	38.5	39.8	41.2		

Appendix 3 - Gold Production Costs (continued)

US$/oz	2010	2011	2012	2013	2014	2015	Year on Year 2014	Year on Year 2015
Africa								
Burkina Faso								
Total Cash Cost	504	587	728	768	755	776	-2%	3%
Total Production Cost	658	770	929	1,001	998	1,084	0%	9%
All-In Sustaining Cost	-	-	1,114	1,125	987	999	-12%	1%
Costed Production (tonnes)	22.9	31.7	28.9	32.6	36.2	26.2		
Democratic Republic of the Congo								
Total Cash Cost	-	-	836	630	593	663	-6%	12%
Total Production Cost	-	-	1,121	919	877	940	-5%	7%
All-In Sustaining Cost	-	-	1,471	819	663	756	-19%	14%
Costed Production (tonnes)	-	-	0.8	5.3	19.4	25.7		
Other Africa								
Total Cash Cost	701	789	865	896	820	809	-9%	-1%
Total Production Cost	848	1,019	1,137	1,159	1,021	1,081	-12%	6%
All-In Sustaining Cost	-	-	1,245	1,149	1,030	999	-10%	-3%
Costed Production (tonnes)	45.9	50.6	50.1	53.3	60.5	56.5		
Total Africa								
Total Cash Cost	698	794	890	879	816	788	-7%	-3%
Total Production Cost	865	993	1,119	1,099	1,030	1,015	-6%	-1%
All-In Sustaining Cost	-	-	1,276	1,205	1,040	997	-14%	-4%
Costed Production (tonnes)	385.2	394.1	379.2	401.7	424.7	390.4		

Regional Cost Curves - Africa

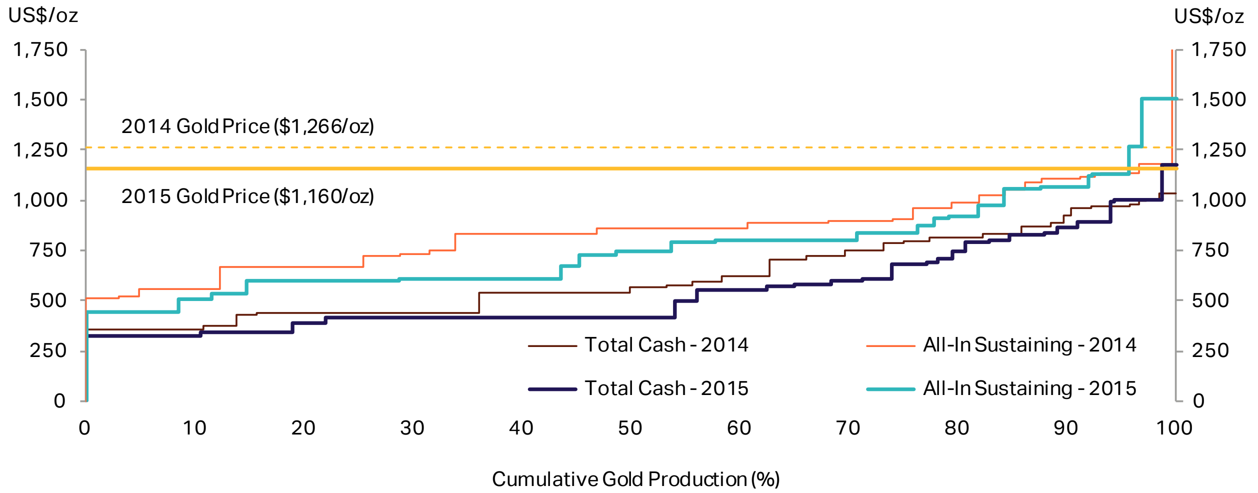


Source: Metals Focus Gold Mine Cost Service

Appendix 3 - Gold Production Costs (continued)

US$/oz	2010	2011	2012	2013	2014	2015	Year on Year 2014	2015
Commonwealth of Independent States								
Russia								
Total Cash Cost	523	632	685	744	631	561	-15%	-11%
Total Production Cost	650	772	851	937	821	727	-12%	-12%
All-In Sustaining Cost	-	-	980	1,031	827	748	-20%	-10%
Costed Production (tonnes)	100.4	104.3	115.9	127.6	138.3	133.6		
Kyrgyzstan								
Total Cash Cost	409	482	727	365	356	326	-2%	-8%
Total Production Cost	514	673	1,247	822	739	713	-10%	-4%
All-In Sustaining Cost	-	-	1,714	827	835	800	1%	-4%
Costed Production (tonnes)	17.7	18.1	9.8	18.7	17.7	16.2		
Other CIS								
Total Cash Cost	516	694	782	754	832	757	10%	-9%
Total Production Cost	638	768	891	925	823	733	-11%	-11%
All-In Sustaining Cost	-	-	1,074	1,007	1,094	972	9%	-11%
Costed Production (tonnes)	6.8	7.0	7.4	8.9	8.0	5.0		
Total CIS								
Total Cash Cost	506	615	694	699	611	543	-13%	-11%
Total Production Cost	638	768	891	925	823	733	-11%	-11%
All-In Sustaining Cost	-	-	1,040	1,005	841	761	-16%	-10%
Costed Production (tonnes)	124.9	129.4	133.1	155.2	163.9	154.8		

Regional Cost Curves - Commonwealth of Independent States



Source: Metals Focus Gold Mine Cost Service

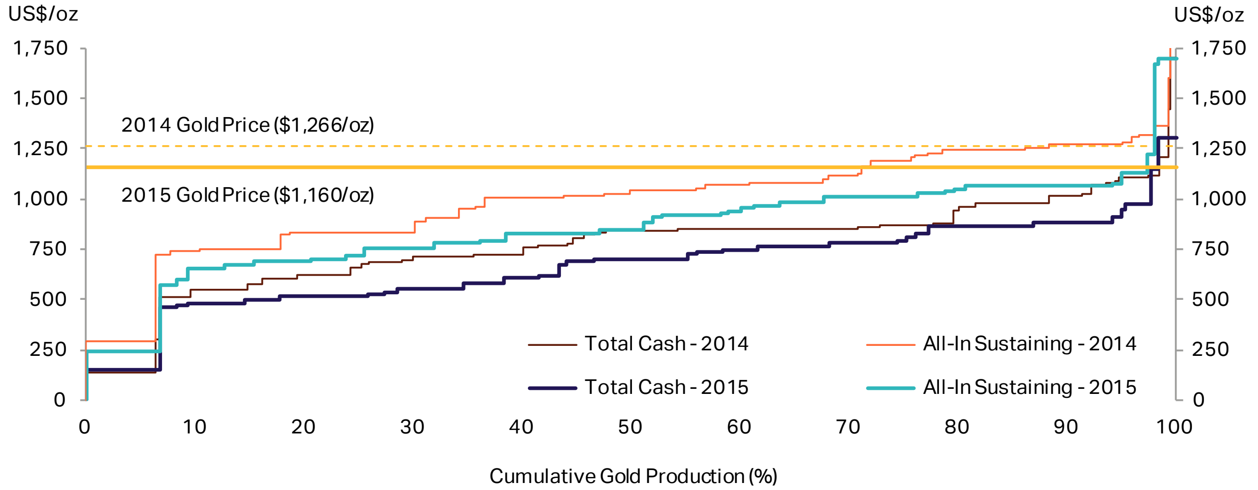
Appendix 3 - Gold Production Costs (continued)

US$/oz	2010	2011	2012	2013	2014	2015	Year on Year 2014	Year on Year 2015
Asia								
China								
Total Cash Cost	489	528	762	721	616	593	-15%	-4%
Total Production Cost	740	806	978	973	777	855	-20%	10%
All-In Sustaining Cost	-	-	1,255	1,245	964	805	-23%	-16%
Costed Production (tonnes)	11.1	11.6	13.6	14.1	16.3	10.1		
Indonesia								
Total Cash Cost	272	389	480	575	528	464	-8%	-12%
Total Production Cost	377	548	658	875	849	754	-3%	-11%
All-In Sustaining Cost	-	-	650	904	776	677	-14%	-13%
Costed Production (tonnes)	14.9	13.5	13.9	17.7	18.8	19.6		
Turkey								
Total Cash Cost	339	372	406	399	471	535	18%	13%
Total Production Cost	390	483	482	518	637	723	23%	13%
All-In Sustaining Cost	-	-	752	768	685	835	-11%	22%
Costed Production (tonnes)	8.5	14.6	16.9	20.8	20.1	18.8		
Other Asia								
Total Cash Cost	466	552	655	725	702	774	-3%	10%
Total Production Cost	563	680	881	1,037	991	1,036	-4%	5%
All-In Sustaining Cost	-	-	928	969	969	1,068	0%	10%
Costed Production (tonnes)	21.1	16.8	24.1	25.0	22.5	3.2		
Total Asia								
Total Cash Cost	399	462	579	603	582	534	-3%	-8%
Total Production Cost	522	624	756	849	820	780	-3%	-5%
All-In Sustaining Cost	-	-	893	950	848	784	-11%	-8%
Costed Production (tonnes)	55.6	56.5	68.6	77.6	77.7	51.8		
Oceania								
Australia								
Total Cash Cost	608	744	842	824	732	623	-11%	-15%
Total Production Cost	782	956	1,092	1,086	961	856	-12%	-11%
All-In Sustaining Cost	-	-	1,243	1,102	950	811	-14%	-15%
Costed Production (tonnes)	220.0	224.2	216.2	241.1	242.0	230.0		
Papua New Guinea								
Total Cash Cost	588	610	863	935	961	877	3%	-9%
Total Production Cost	721	803	1,092	1,159	1,200	1,059	3%	-12%
All-In Sustaining Cost	-	-	1,400	1,377	1,202	1,090	-13%	-9%
Costed Production (tonnes)	48.8	44.4	39.4	46.5	46.8	49.0		

Appendix 3 - Gold Production Costs (continued)

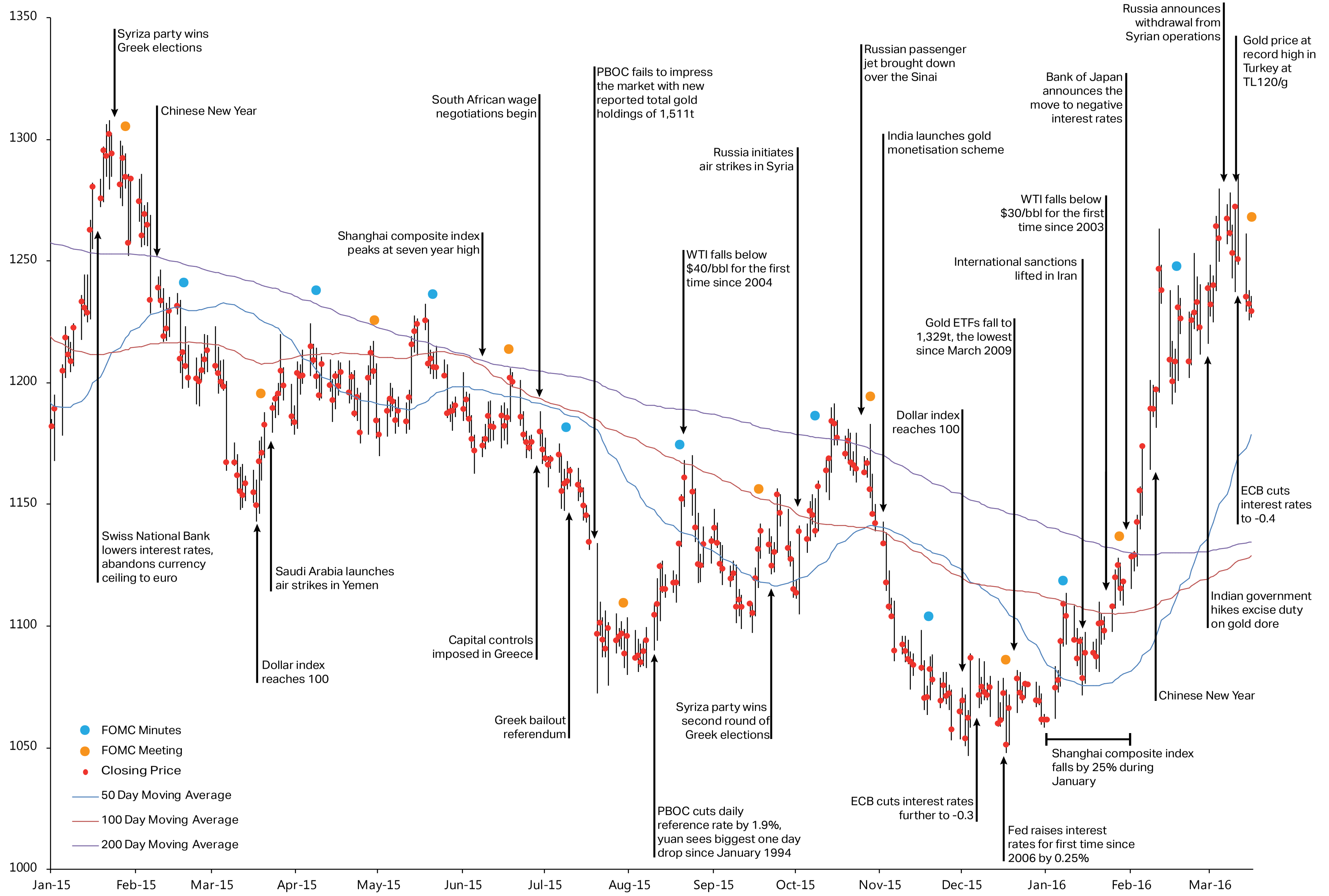
US$/oz	2010	2011	2012	2013	2014	2015	Year on Year 2014	Year on Year 2015
Oceania								
Other Oceania								
Total Cash Cost	489	528	762	721	616	593	-15%	-4%
Total Production Cost	740	806	978	973	777	855	-20%	10%
All-In Sustaining Cost	-	-	1,255	1,245	964	805	-23%	-16%
Costed Production (tonnes)	11.1	11.6	13.6	14.1	16.3	10.1		
Total Oceania								
Total Cash Cost	604	734	859	845	770	666	-9%	-13%
Total Production Cost	773	947	1,112	1,106	1,005	892	-9%	-11%
All-In Sustaining Cost	-	-	1,282	1,153	994	858	-14%	-14%
Costed Production (tonnes)	280.5	281.1	266.7	300.7	299.8	290.3		
Europe								
Total Cash Cost	658	817	490	616	718	710	16%	-1%
Total Production Cost	875	984	668	843	936	873	11%	-7%
All-In Sustaining Cost	-	-	755	935	1,147	1,083	23%	-6%
Costed Production (tonnes)	10.0	10.2	13.6	13.1	12.8	5.6		
Global Total								
Total Cash Cost	542	620	709	740	709	660	-4%	-7%
Total Production Cost	703	807	930	980	950	923	-3%	-3%
All-In Sustaining Cost	-	-	1,114	1,077	976	897	-9%	-8%
Costed Production (tonnes)	1,419.6	1,459.0	1,459.7	1,575.9	1,607.4	1,495.2		

Regional Cost Curves - Oceania



Source: Metals Focus Gold Mine Cost Service

Appendix 4 - Gold Price High, Low, Close (London, $/oz) and Key Events in 2015 - 2016



NB: Black line indicates daily trading range; Source: Metals Focus, Bloomberg

Appendix 5 - Nominal Gold Prices

Year	PM Fix US$/oz	Low[1] US$/oz	High[1] US$/oz	€/Kg[2]	CNY/g[3]	INR/10g	TL/g	A$/oz	RUB/g	ZAR/Kg
1985	317.37	284.25	340.90	13,516	30.05	1,257	n/a	454.29	n/a	22,960
1986	367.51	326.30	438.10	11,901	41.06	1,489	n/a	551.62	n/a	27,081
1987	446.23	390.00	499.75	12,302	53.53	1,858	n/a	636.40	n/a	29,236
1988	436.86	395.30	483.90	11,826	52.41	1,948	n/a	560.22	n/a	31,907
1989	380.95	355.75	415.80	10,979	46.07	1,984	n/a	480.93	n/a	32,093
1990	383.56	345.85	423.75	9,515	59.04	2,156	n/a	490.70	n/a	31,880
1991	362.26	344.25	403.00	9,248	62.13	2,642	n/a	464.71	n/a	32,136
1992	343.95	331.50	356.48	8,357	61.09	3,106	n/a	468.02	n/a	31,517
1993	359.87	327.50	410.50	9,743	66.84	3,614	n/a	530.02	n/a	37,903
1994	384.16	368.70	398.60	10,262	106.42	3,878	n/a	525.27	26.14	43,847
1995	384.05	371.50	398.30	9,316	103.11	4,000	n/a	518.48	54.44	44,778
1996	387.87	365.95	418.40	9,652	103.68	4,414	1.01	496.02	61.70	53,454
1997	331.29	281.35	369.65	9,403	88.30	3,861	1.61	444.95	59.53	48,984
1998	294.09	271.13	314.95	8,494	78.28	3,901	2.47	467.76	90.34	52,269
1999	278.57	251.95	340.50	8,403	74.14	3,857	3.77	431.77	215.41	54,752
2000	279.10	262.27	322.00	9,730	74.28	4,030	5.60	481.01	244.48	62,157
2001	271.04	253.85	298.50	9,735	72.13	4,112	10.79	524.30	246.15	74,874
2002	309.68	277.05	354.25	10,550	87.49	4,838	15.12	569.61	302.41	104,422
2003	363.32	319.15	417.75	10,330	96.97	5,435	17.53	558.25	346.50	87,981
2004	409.17	371.65	456.89	10,579	109.50	5,961	18.80	555.97	366.58	84,678
2005	444.45	410.40	541.00	11,542	117.57	6,307	19.25	583.35	391.37	91,087
2006	603.77	516.88	730.40	15,449	155.11	8,801	27.97	801.25	509.91	131,691
2007	695.39	602.46	845.84	16,295	170.59	9,223	29.09	828.54	552.14	157,341
2008	871.96	682.41	1,032.70	19,067	195.60	12,141	36.34	1,033.11	671.26	229,809
2009	972.35	802.59	1,226.56	22,408	214.47	15,113	48.50	1,234.95	957.59	261,427
2010	1,224.52	1,044.85	1,431.25	29,729	267.79	17,996	59.26	1,331.69	1,158.17	287,609
2011	1,571.52	1,308.25	1,921.15	36,321	328.93	23,621	85.38	1,523.35	1,439.34	368,390
2012	1,668.98	1,526.97	1,796.05	41,753	339.03	28,633	96.55	1,610.40	1,611.43	440,405
2013	1,411.23	1,180.50	1,696.28	34,201	281.92	26,441	85.99	1,454.48	1,394.35	435,434
2014	1,266.40	1,131.24	1,392.22	30,636	251.66	24,830	88.98	1,402.56	1,508.23	441,249
2015	1,160.06	1,046.43	1,307.98	33,605	235.15	26,306	101.37	1,542.68	2,204.22	474,079

NB: Unless specified, prices refer to London PM Fix converted to respective currencies using Bloomberg closing prices.

1: High and low based on spot price rather than London PM Fix to capture intra-day moves.

2: Euro price based on euro-quoted LBMA PM Fix from 1999 onwards and the dollar price converted into euros using Bloomberg synthetic exchange rates prior to that time.

3: Renminbi price is the SGE spot 99.99 from 2002 onwards and based on the London PM Fix converted into renmimbi using Bloomberg exchange rates prior to that time.

Source: Metals Focus, Bloomberg

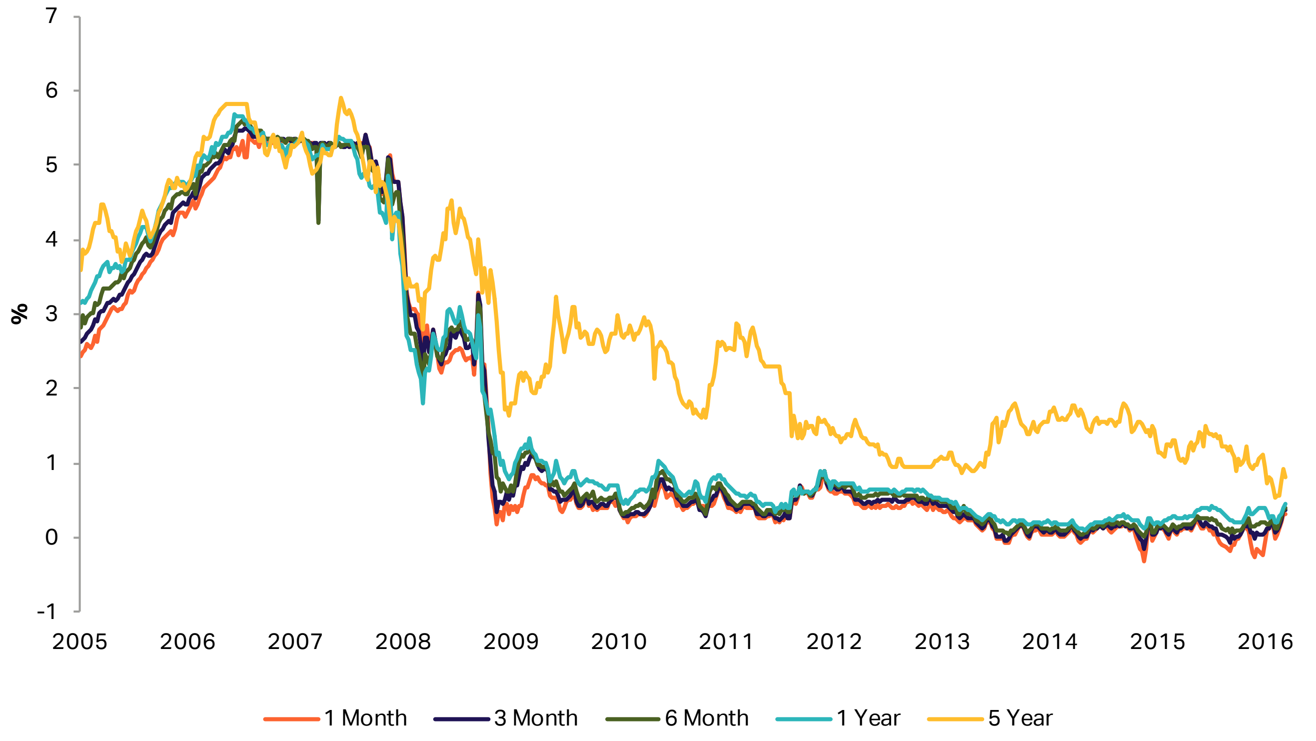
Appendix 6 - Real Gold Prices

Year	PM Fix US$/oz	Low[1] US$/oz	High[1] US$/oz	€/Kg[2]	CNY/g[3]	INR/10g	TL/g	A$/oz	RUB/g	ZAR/Kg
1985	681.81	610.66	732.36	28,169	21.05	22,974	n/a	1,195.74	n/a	229,598
1986	780.96	693.39	930.96	24,140	39.50	16,654	n/a	1,324.38	n/a	229,461
1987	907.97	793.56	1,016.87	24,127	59.46	13,864	n/a	1,425.22	n/a	214,913
1988	851.29	770.30	942.95	22,315	53.39	14,864	n/a	1,166.40	n/a	208,336
1989	709.37	662.45	774.27	19,741	40.55	13,091	n/a	928.75	n/a	181,750
1990	673.13	606.95	743.66	16,277	70.92	11,894	n/a	886.59	n/a	157,975
1991	616.85	586.18	686.22	15,009	84.95	12,958	n/a	827.01	n/a	137,194
1992	569.16	548.56	589.89	13,040	87.10	14,854	n/a	830.13	n/a	122,320
1993	579.57	527.44	661.11	14,607	89.52	14,238	n/a	923.20	n/a	134,415
1994	602.57	578.32	625.22	14,919	181.88	14,043	n/a	891.62	1,610	141,895
1995	587.49	568.29	609.29	13,146	158.19	14,008	n/a	837.42	1,127	135,433
1996	574.25	541.80	619.45	13,347	144.74	15,074	47.10	789.19	865	147,596
1997	482.27	409.57	538.12	12,812	114.49	15,850	37.57	710.05	727	127,634
1998	421.33	388.43	451.21	11,483	96.38	17,343	34.04	735.45	864	124,771
1999	388.66	351.52	475.07	11,165	96.44	16,884	30.76	666.09	1,109	127,946
2000	376.64	353.93	434.54	12,614	96.68	15,798	32.83	701.45	1,042	135,815
2001	360.18	337.33	396.67	12,368	89.97	16,000	37.57	741.25	864	156,516
2002	401.97	359.62	459.82	13,104	111.72	13,058	40.55	782.48	917	194,152
2003	462.90	406.62	532.24	12,583	132.52	11,651	41.70	748.55	924	163,037
2004	504.88	458.58	563.76	12,589	153.79	11,007	40.91	727.20	882	151,602
2005	530.30	489.67	645.49	13,436	166.07	11,057	38.88	742.07	835	157,487
2006	702.54	601.44	849.88	17,646	215.72	10,881	51.52	986.30	992	214,966
2007	777.42	673.53	945.62	18,058	228.28	12,264	49.43	991.27	986	236,012
2008	973.93	762.21	1,153.47	20,801	239.71	13,273	56.11	1,191.88	1,050	314,536
2009	1,057.28	872.70	1,333.69	24,221	254.19	14,028	70.30	1,396.03	1,342	336,640
2010	1,311.86	1,119.37	1,533.33	31,438	318.69	14,236	80.72	1,465.00	1,519	357,899
2011	1,635.17	1,361.24	1,998.96	37,382	381.18	18,717	105.30	1,627.15	1,741	432,254
2012	1,706.86	1,561.63	1,836.81	42,039	372.10	18,441	112.17	1,683.03	1,855	488,849
2013	1,421.91	1,189.43	1,709.11	34,146	291.00	22,403	93.01	1,479.46	1,503	458,569
2014	1,266.40	1,131.24	1,392.22	30,636	251.66	25,151	88.98	1,402.56	1,508	441,249
2015	1,160.06	1,046.43	1,307.98	33,605	235.15	26,742	101.37	1,542.68	2,204	474,079

NB: Based on respective countries' CPI. Unless specified, prices refer to London PM Fix converted to respective currencies using Bloomberg closing prices
1: High and low based on spot price rather than London PM Fix to capture intra-day moves
2: Euro price based on euro-quoted LBMA PM Fix from 1999 onwards and the dollar price converted into euros using Bloomberg synthetic exchange rates prior to that time 32,245
3: Renminbi price is the SGE spot 99.99 from 2002 onwards and based on the London PM Fix converted into renminbi using Bloomberg exchange rates prior to that time

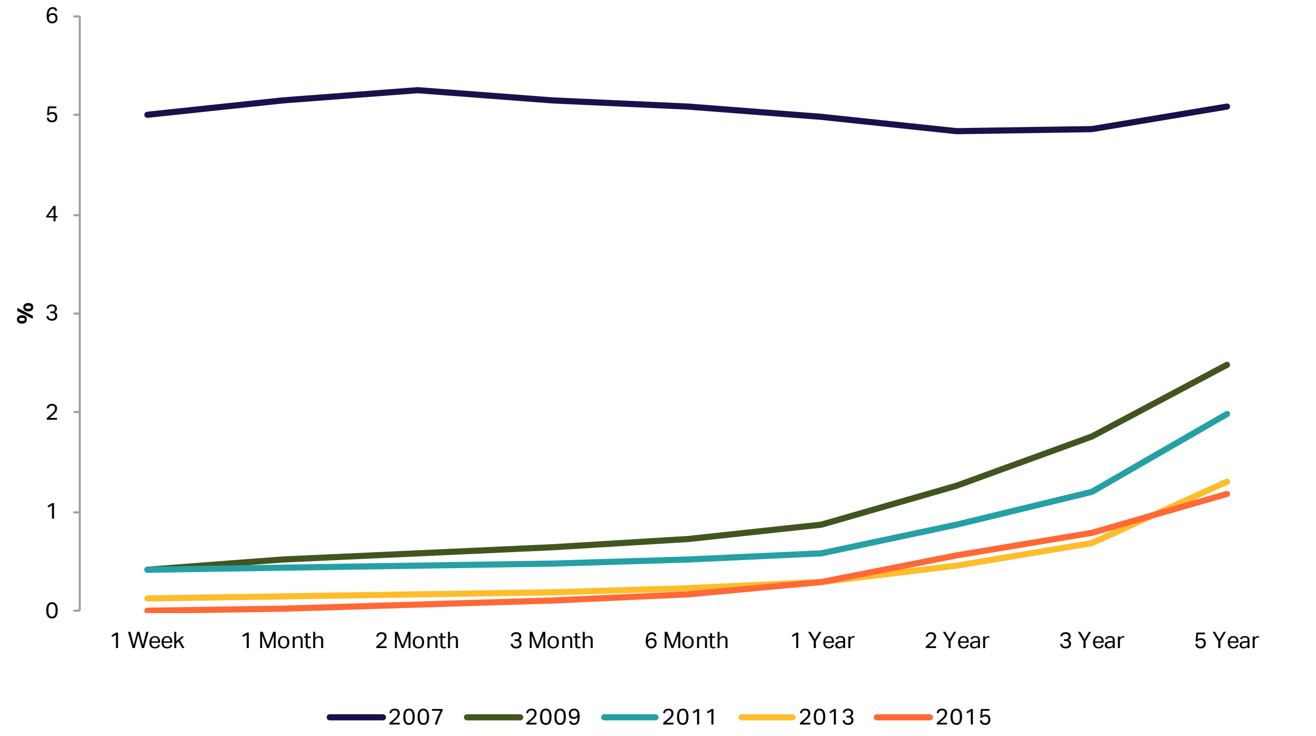
Source: Metals Focus, Bloomberg

Appendix 7 - Gold Forward Rates



Source: Bloomberg

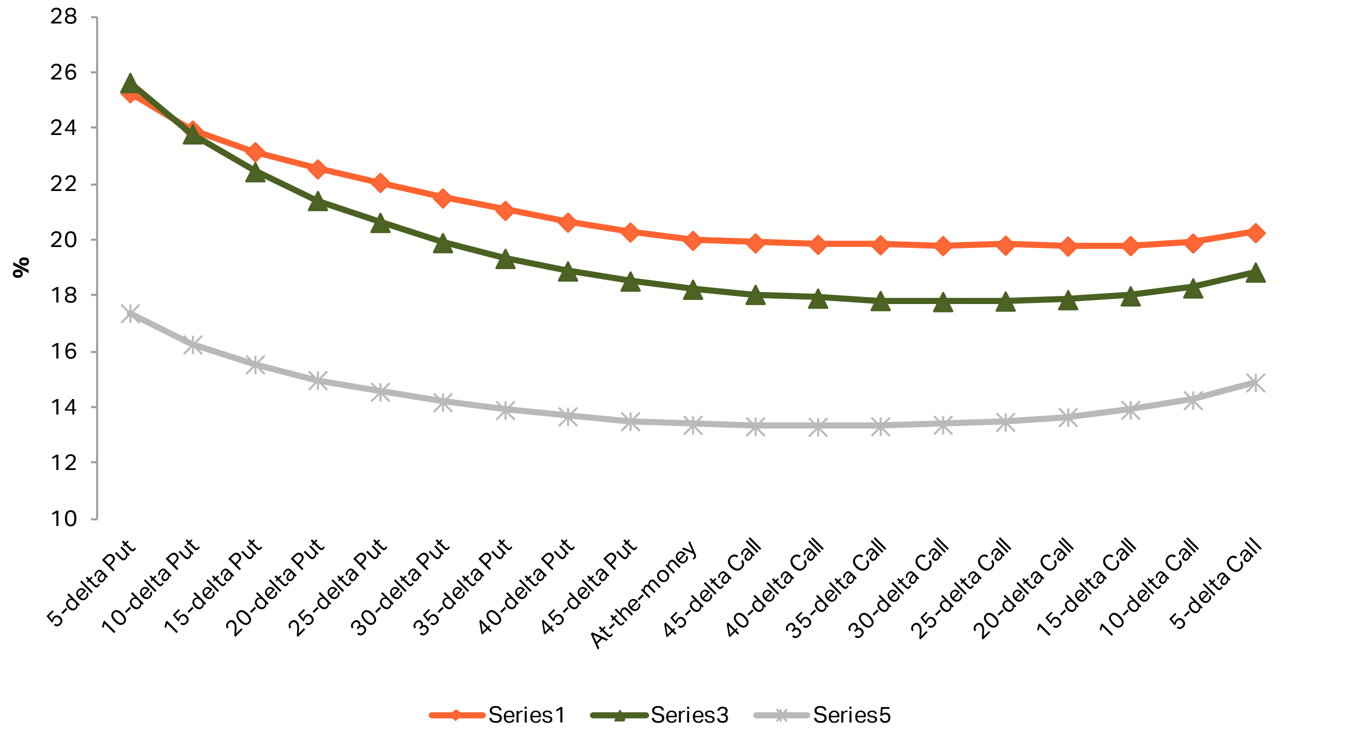
Appendix 7 - Gold Forward Curves*



* Curves are based on the average rates over each year

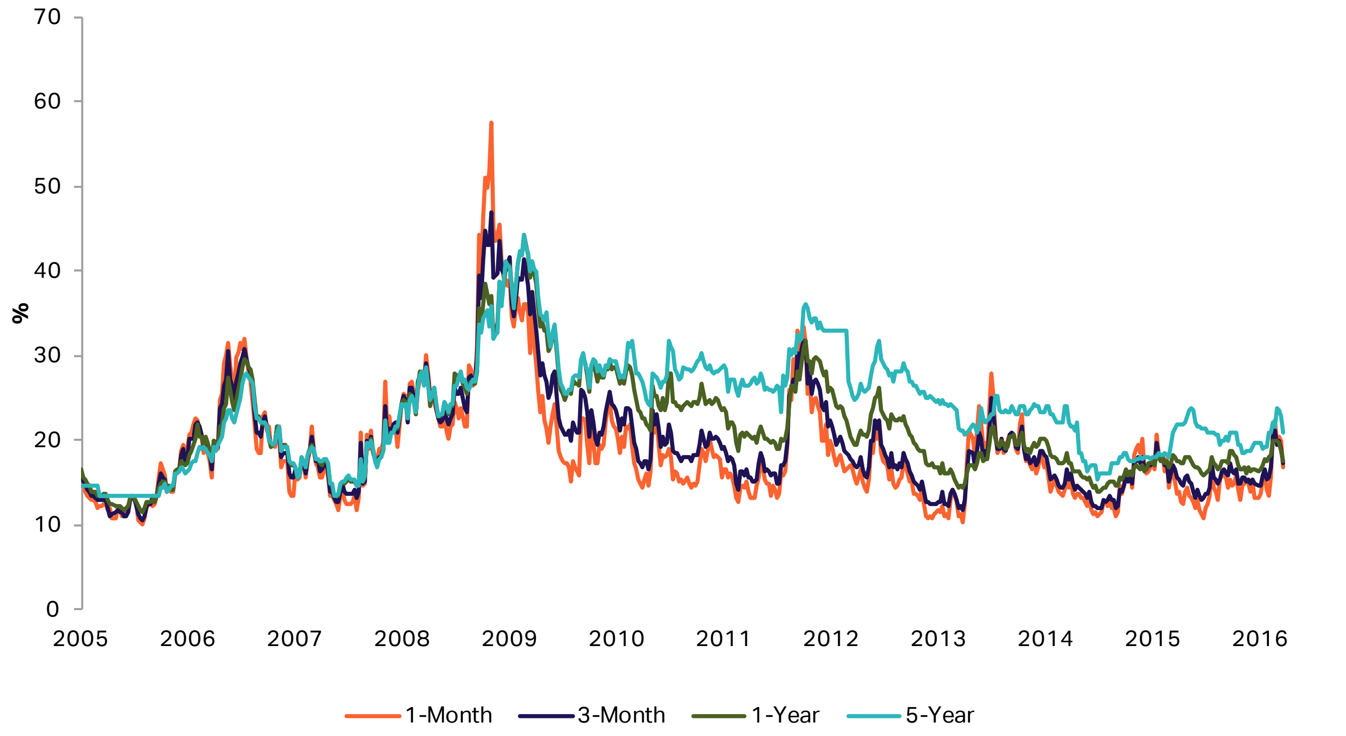
Source: Bloomberg

Appendix 8 - Year-End One-Month Option Volatility Skew



Source: Bloomberg

Appendix 8 - Historic At-The-Money Option Volatilities



Source: Bloomberg

Appendix 9 - Comex Activity & Inventories

Nominal tonnes	Futures		Non-Commercial & Non-Reportable Positions in Comex Futures				
Year/Month	Volume[1]	Open Interest[2]	Long[2]	Short[2]	Net[2]	Net Change[3]	Comex Inventories
2010	138,655	1,820	1,029	221	808	-60	361
2011	152,952	1,304	699	189	510	-298	353
2012	136,475	1,331	817	233	584	74	344
2013	147,102	1,181	544	441	103	-481	243
2014	126,027	1,156	677	325	352	249	246
2015	130,132	1,291	581	533	48	-304	198
Jan-14	11,679	1,163	571	369	202	99	222
Feb-14	8,110	1,202	652	289	363	161	223
Mar-14	13,064	1,143	647	250	397	34	241
Apr-14	8,376	1,183	582	280	302	-95	247
May-14	11,294	1,174	622	377	245	-58	256
Jun-14	7,801	1,247	698	289	409	165	258
Jul-14	11,970	1,146	705	241	463	54	271
Aug-14	7,408	1,136	662	277	384	-79	309
Sep-14	9,971	1,182	643	454	189	-195	284
Oct-14	11,520	1,296	710	403	308	119	262
Nov-14	14,546	1,160	623	410	213	-94	247
Dec-14	10,288	1,156	677	325	352	139	246
Jan-15	14,021	1,315	878	236	641	289	248
Feb-15	7,959	1,249	697	275	422	-219	259
Mar-15	13,696	1,206	640	388	252	-170	249
Apr-15	9,481	1,276	701	369	332	80	242
May-15	11,575	1,237	712	371	341	9	245
Jun-15	8,883	1,376	723	490	233	-109	250
Jul-15	14,167	1,353	676	628	47	-185	236
Aug-15	10,673	1,281	692	497	195	147	225
Sep-15	9,073	1,297	671	443	228	33	213
Oct-15	9,549	1,414	826	310	516	288	208
Nov-15	12,547	1,221	618	581	37	-479	198
Dec-15	8,508	1,291	581	533	48	10	198
Jan-16	12,759	1,162	650	464	186	138	200
Feb-16	13,591	1,401	861	354	507	321	211

NB: 1: Aggregate volume over the period, 2: Position at end-period, 3: Net change versus previous end-period

Source: Comex, CFTC, Bloomberg

Appendix 10 - Chinese Exchanges' Activity

Tonnes	Shanghai Gold Exchange					Shanghai Futures Exchange	
Year/Month	99.99 Volume[1]	99.95 Volume[1]	T + D Volume[1]	T + D Open Interest[2]	Deliveries[1]	Futures Volume[1]	Futures Open Interest[2]
2010	793	810	4,423	109	837	6,632	79
2011	1,120	772	5,371	134	1,043	14,125	102
2012	1,142	759	4,226	145	1,139	11,612	111
2013	3,188	818	6,695	169	2,197	40,175	171
2014	4,205	916	8,665	150	2,102	48,267	195
2015	6,929	983	11,297	199	2,596	50,634	259
Jan-14	332	91	545	147	246	3,683	155
Feb-14	291	45	548	191	172	3,318	204
Mar-14	303	57	704	187	147	5,565	212
Apr-14	273	38	459	150	130	4,016	202
May-14	304	55	552	139	129	3,171	234
Jun-14	313	78	563	142	128	2,989	200
Jul-14	295	73	592	128	138	3,181	199
Aug-14	297	80	575	142	162	2,815	203
Sep-14	415	98	773	143	202	3,092	196
Oct-14	368	89	770	147	201	3,069	259
Nov-14	491	95	1,207	138	212	6,549	249
Dec-14	522	117	1,377	150	236	6,818	195
Jan-15	526	98	1,035	162	255	5,059	228
Feb-15	440	81	690	161	156	2,854	239
Mar-15	733	126	1,042	170	213	4,528	220
Apr-15	608	105	708	142	195	3,953	203
May-15	530	52	646	163	162	2,991	179
Jun-15	658	66	687	176	196	2,330	177
Jul-15	669	101	916	151	285	4,775	241
Aug-15	593	98	1,463	166	265	7,222	244
Sep-15	567	80	815	126	260	3,586	225
Oct-15	440	58	821	149	176	3,534	229
Nov-15	542	60	1,197	195	203	4,449	281
Dec-15	622	58	1,277	199	228	5,354	259
Jan-16	628	55	1,378	139	225	5,306	292
Feb-16	343	48	1,231	166	108	6,176	358

1: Aggregate volume over the period, 2: Position at end-period

N.B. Volumes on both the Shanghai Gold Exchange and Shanghai Futures Exchange record each transaction twice, from the point of view of the buyer and the seller. As such, to compare the above volume figures with other exchanges, such as the Comex, one needs to divide them by two.

Source: SGE, SHFE, Bloomberg

Appendix 11- Exchange Rates*

Year	JPY	EUR[1]	CNY	INR	TRY	AUD	RUB	ZAR	CAD	DXY[2]
2010	87.73	1.33	6.77	45.73	1.51	1.09	30.37	7.32	1.03	81.21
2011	79.70	1.39	6.46	46.68	1.68	0.97	29.40	7.26	0.99	76.50
2012	79.84	1.29	6.31	53.47	1.80	0.97	31.06	8.21	1.00	80.58
2013	97.63	1.33	6.15	58.60	1.91	1.04	31.86	9.65	1.03	81.44
2014	105.92	1.33	6.16	61.03	2.19	1.11	38.63	10.85	1.10	82.58
2015	121.04	1.11	6.29	64.15	2.73	1.33	61.25	12.78	1.28	96.29
Jan-14	103.88	1.36	6.05	62.11	2.22	1.13	33.78	10.88	1.09	80.80
Feb-14	102.12	1.37	6.08	62.21	2.21	1.11	35.31	10.95	1.11	80.44
Mar-14	102.36	1.38	6.17	61.02	2.21	1.10	36.13	10.75	1.11	79.87
Apr-14	102.51	1.38	6.23	60.36	2.13	1.07	35.67	10.54	1.10	79.85
May-14	101.84	1.37	6.24	59.32	2.09	1.07	34.84	10.41	1.09	79.96
Jun-14	102.07	1.36	6.23	59.76	2.12	1.07	34.37	10.68	1.08	80.44
Jul-14	101.75	1.35	6.20	60.06	2.12	1.07	34.75	10.66	1.07	80.54
Aug-14	102.98	1.33	6.15	60.86	2.16	1.07	36.17	10.66	1.09	81.85
Sep-14	107.39	1.29	6.14	60.87	2.21	1.11	38.01	10.99	1.10	84.37
Oct-14	108.02	1.27	6.13	61.38	2.25	1.14	40.96	11.06	1.12	85.68
Nov-14	116.40	1.25	6.13	61.73	2.23	1.16	46.30	11.09	1.13	87.72
Dec-14	119.44	1.23	6.19	62.74	2.30	1.21	56.67	11.51	1.15	89.19
Jan-15	118.33	1.16	6.22	62.24	2.34	1.24	64.33	11.56	1.21	92.82
Feb-15	118.78	1.14	6.25	62.03	2.47	1.28	64.16	11.58	1.25	94.39
Mar-15	120.37	1.08	6.24	62.48	2.59	1.29	60.13	12.08	1.26	97.90
Apr-15	119.52	1.08	6.20	62.76	2.65	1.29	52.83	11.99	1.23	97.52
May-15	120.84	1.12	6.20	63.79	2.64	1.27	50.62	11.97	1.22	95.23
Jun-15	123.68	1.12	6.21	63.84	2.70	1.29	54.61	12.29	1.24	95.17
Jul-15	123.32	1.10	6.21	63.65	2.70	1.35	57.54	12.46	1.29	96.93
Aug-15	123.05	1.11	6.34	65.08	2.86	1.37	65.65	12.92	1.31	96.39
Sep-15	120.09	1.12	6.37	66.20	3.02	1.42	66.79	13.66	1.33	95.78
Oct-15	120.16	1.12	6.35	65.04	2.92	1.39	63.13	13.50	1.31	95.72
Nov-15	122.63	1.07	6.37	66.14	2.88	1.40	65.02	14.15	1.33	99.07
Dec-15	121.58	1.09	6.45	66.58	2.92	1.38	70.14	15.04	1.37	98.31
Jan-16	118.30	1.09	6.57	67.30	3.01	1.43	77.15	16.34	1.42	98.99
Feb-16	114.67	1.11	6.54	68.21	2.94	1.40	77.21	15.77	1.38	97.04

*Period average. Rates shown against the US dollar, except for (1) where the US dollar rate is shown against the euro and (2) which is the US dollar traded weighted index

Source: Bloomberg

Appendix 12 - Central Bank Gold Holdings

	End - 2005				End - 2015			
	Gold Reserves (tonnes)	Value of Gold[1] ($Bn)	Other Reserves ($Bn)	Gold's Share (%)	Gold Reserves (tonnes)	Value of Gold[1] ($Bn)	Other Reserves ($Bn)	Gold's Share (%)
United States	8,135	134	54	71%	8,134	277	107	72%
Germany	3,428	57	45	56%	3,381	115	59	66%
Italy	2,452	40	26	61%	2,452	84	47	64%
France	2,826	47	28	63%	2,436	83	55	60%
China	600	10	822	1%	1,762	60	3,345	2%
Russia	387	6	176	4%	1,415	48	320	13%
Switzerland	1,290	21	36	37%	1,040	35	567	6%
Japan	765	13	834	1%	765	26	1,207	2%
Netherlands	695	11	9	56%	612	21	17	55%
India	358	6	132	4%	558	19	334	5%
Turkey	116	2	51	4%	516	18	94	16%
Taiwan	423	7	253	3%	424	14	426	3%
Portugal	417	7	3	66%	383	13	6	67%
Venezuela[2]	357	6	24	20%	361	12	6	66%
Saudi Arabia	143	2	155	1%	323	11	616	2%
United Kingdom	311	5	38	12%	310	11	119	8%
Lebanon	287	5	12	28%	287	10	39	20%
Spain	458	8	10	44%	282	10	44	18%
Austria	302	5	7	42%	280	10	13	43%
Belgium	228	4	8	31%	227	8	16	32%
Kazakhstan	60	1	6	14%	222	8	20	27%
Philippines	155	3	16	14%	196	7	74	8%
Algeria	174	3	56	5%	174	6	145	4%
Thailand	84	1	51	3%	152	5	151	3%
Singapore	127	2	116	2%	127	4	248	2%
Sweden	168	3	22	11%	126	4	54	7%
South Africa	124	2	19	10%	125	4	42	9%
Mexico	3	0	74	0%	121	4	173	2%
Libya	144	2	40	6%	117	4	75	5%
Greece	108	2	1	78%	113	4	2	64%
IMF	3,217				2,814			
ECB	720				505			
BIS[3]	180				108			
Global Total	**31,250**				**33,239**			

1: Value of gold reserves is based on the London PM Fix at end-2005 and end-2015.
2: Gold reserves for 2015 was as of September 2014.
3: End-March 2005 and end-March 2015. BIS' gold holdings do not include gold deposits held by customers at the Bank.

Source: IMF, BIS, respective central banks, Metals Focus

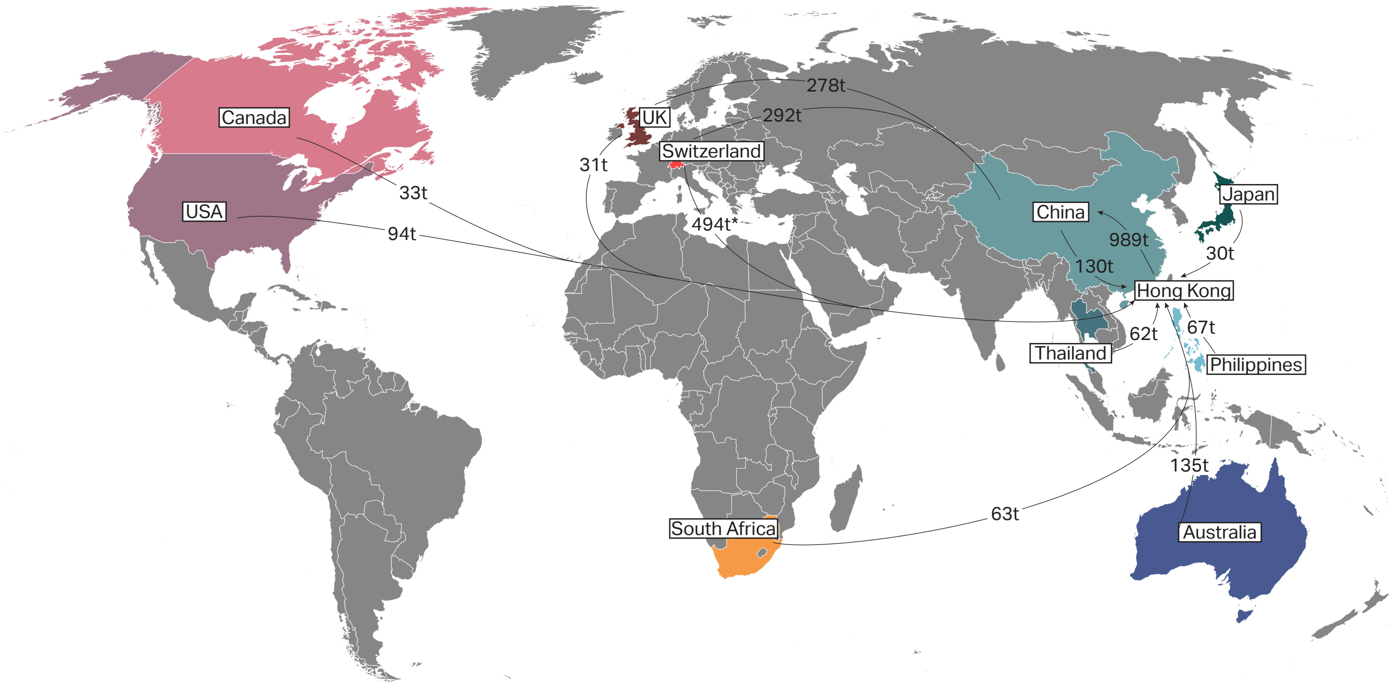
Appendix 13 - Physically Backed Gold ETF Holdings*

Tonnes Year/Month	SPDR Gold Shares	iShares Gold Trust	ZKB Gold ETF	ETFS Physical Gold	Gold Bullion Securities	Xetra -Gold	Other	Total Holdings (tonnes)	Total Value ($Bn)
2010	1,281	118	188	130	123	49	404	2,293	104
2011	1,255	171	224	137	124	51	570	2,532	125
2012	1,351	218	236	158	140	52	684	2,838	151
2013	798	162	179	106	97	45	536	1,923	74
2014	709	161	138	122	84	50	474	1,738	67
2015	642	153	127	103	69	59	452	1,604	55
Jan-14	793	162	170	107	95	46	517	1,890	76
Feb-14	804	164	169	107	94	45	512	1,896	81
Mar-14	813	165	166	110	91	46	519	1,909	79
Apr-14	788	164	164	111	89	47	516	1,881	78
May-14	785	163	161	111	90	48	514	1,873	75
Jun-14	791	165	156	109	89	48	513	1,871	79
Jul-14	802	166	155	108	90	49	512	1,881	78
Aug-14	795	165	155	108	92	50	505	1,870	77
Sep-14	770	164	152	111	88	49	497	1,830	72
Oct-14	741	161	144	112	88	49	495	1,790	67
Nov-14	718	162	141	114	86	49	487	1,756	67
Dec-14	709	161	138	122	84	50	474	1,738	67
Jan-15	758	168	140	127	87	52	467	1,799	73
Feb-15	771	166	139	128	91	53	469	1,817	71
Mar-15	737	165	139	112	85	55	469	1,763	67
Apr-15	739	166	139	111	85	55	472	1,766	67
May-15	716	167	138	112	85	58	472	1,748	67
Jun-15	711	168	138	109	83	59	470	1,739	65
Jul-15	673	163	137	103	72	59	461	1,668	59
Aug-15	683	161	134	108	70	59	456	1,672	61
Sep-15	687	161	133	103	70	59	460	1,673	60
Oct-15	692	162	131	104	72	60	460	1,682	62
Nov-15	655	159	129	106	69	60	459	1,636	56
Dec-15	642	153	127	103	69	59	452	1,604	55
Jan-16	669	166	131	103	71	60	480	1,680	60
Feb-16	777	189	134	112	90	67	510	1,880	75

*Holdings at end-period

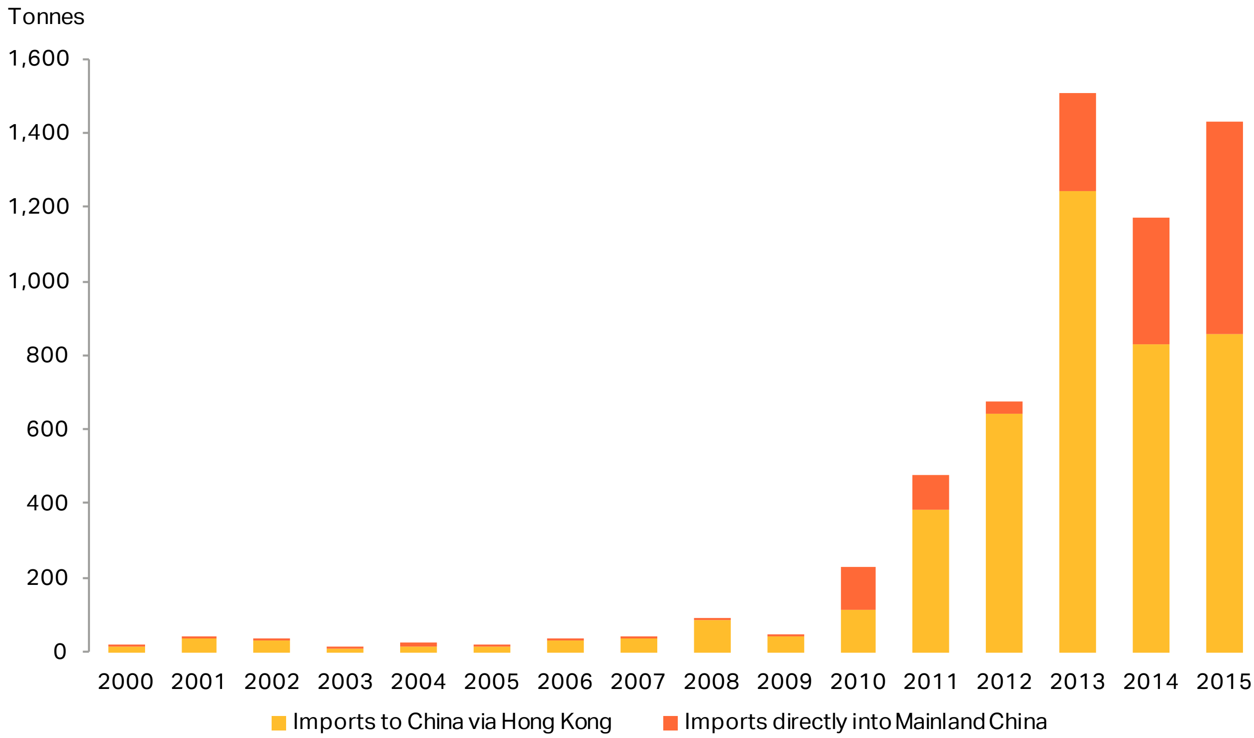
Source: Respective ETP providers, World Gold Council, Bloomberg

Appendix 15 - Mainland China & Hong Kong Gold Bullion Imports in 2015



Source: Various, Metals Focus

Appendix 15 - Mainland China Official Gold Bullion Imports



Source: Various, Metals Focus

Appendix 16 - Key Historical Swiss Gold Bullion Trade Flows

Imports, Tonnes

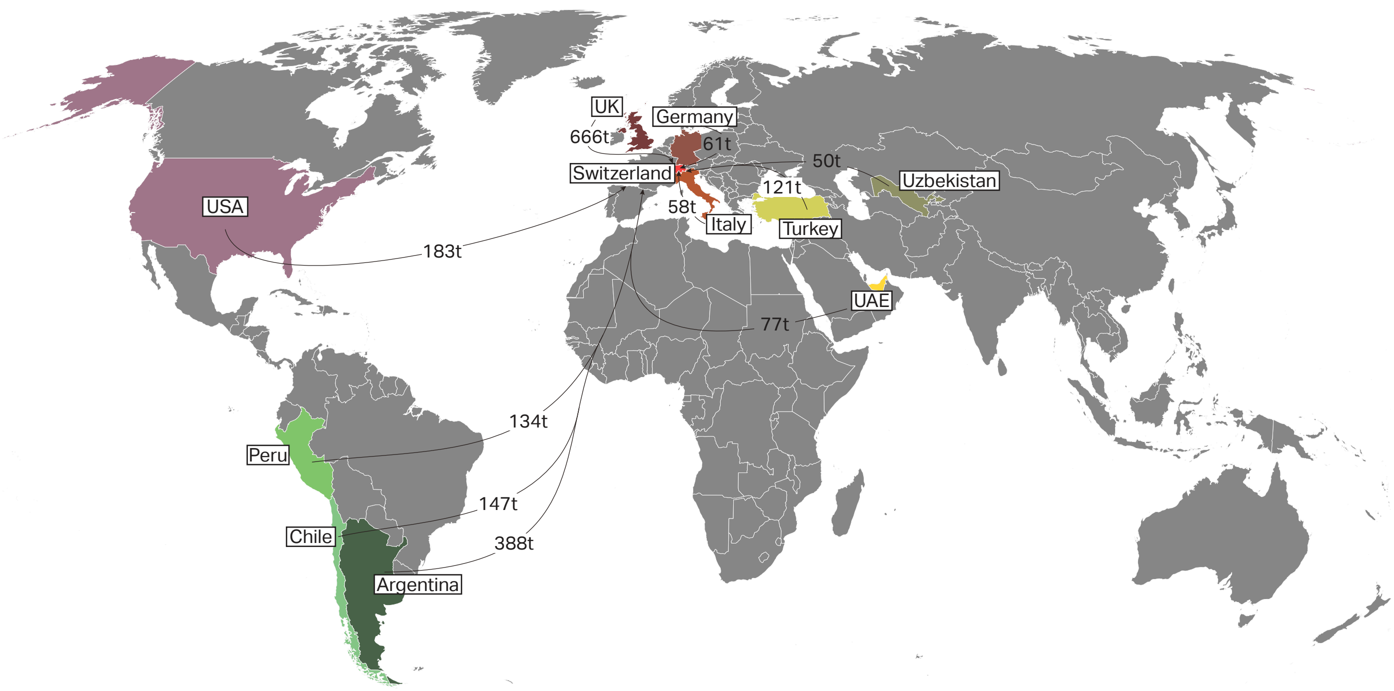
Year	UK	USA	UAE	France	Peru	Italy	Germany	Thailand	Japan	Uzbekistan
2000	60.6	463.9	2.7	3.6	80.9	0.6	28.4	0.0	2.6	61.2
2001	198.1	428.7	6.9	4.7	42.5	3.2	18.2	12.1	10.7	70.5
2002	16.8	198.7	15.3	12.6	52.6	3.5	11.2	16.1	13.5	30.2
2003	4.8	243.4	44.6	6.9	60.2	3.2	2.2	26.6	7.5	50.6
2004	67.7	182.9	47.1	6.5	17.2	4.5	1.6	4.2	0.6	51.6
2005	440.0	234.1	50.0	45.9	52.2	3.8	7.7	0.4	0.4	69.9
2006	21.6	205.2	92.4	48.3	83.7	2.8	11.5	4.8	5.3	30.0
2007	85.2	300.3	56.8	66.6	106.8	7.5	18.5	19.1	8.4	61.8
2008	254.2	393.3	67.1	27.4	118.3	12.7	34.3	36.9	13.8	120.6
2009	71.2	209.4	104.8	78.1	132.5	48.6	51.2	80.2	102.6	86.0
2010	239.9	242.3	97.6	129.7	114.1	59.8	89.8	85.9	111.9	55.5
2011	599.1	233.0	82.6	169.6	117.5	110.1	96.6	70.1	94.3	68.3
2012	124.9	265.2	304.9	140.5	99.5	138.7	102.7	72.1	10.2	10.1
2013	1374.7	265.9	55.1	98.4	71.9	98.8	70.7	13.4	3.6	33.9
2014	647.1	194.3	64.0	38.0	60.6	69.1	65.8	22.6	5.4	32.3
2015	668.0	192.0	77.0	45.0	134.0	61.0	73.0	42.0	8.0	50.0

Exports, Tonnes

Year	India	Hong Kong	China	Singa-pore	Thailand	France	UK	Turkey	UAE	Germany
2000	297.6	22.0	3.1	19.5	22.8	7.0	1.3	111.7	159.1	16.3
2001	378.0	0.5	2.0	13.3	33.9	15.6	1.4	80.8	151.9	16.3
2002	189.3	0.7	0.0	6.4	11.4	9.2	4.7	128.7	93.6	9.2
2003	207.5	2.2	0.0	2.8	6.0	16.7	6.4	184.2	66.6	8.5
2004	307.9	13.0	4.3	9.1	8.7	12.6	22.1	187.8	92.5	8.3
2005	435.3	14.9	1.5	8.6	23.3	29.0	86.0	161.2	68.9	13.0
2006	405.5	7.5	0.5	3.9	18.7	45.6	42.5	85.1	54.7	12.2
2007	463.1	27.9	2.8	2.0	8.1	48.6	66.1	115.1	40.5	15.9
2008	423.3	47.3	6.3	27.4	72.4	12.0	165.6	121.5	57.2	49.6
2009	308.9	20.3	2.6	15.5	34.6	20.0	272.0	31.0	39.7	56.8
2010	634.6	100.0	113.6	53.5	96.0	104.3	91.8	62.4	35.1	78.5
2011	718.8	201.0	91.2	90.6	128.0	119.1	17.2	53.9	111.2	45.3
2012	513.4	137.7	29.3	58.2	91.4	136.1	306.2	46.5	37.9	38.4
2013	487.3	956.0	249.9	179.9	143.7	105.9	8.1	148.3	127.6	61.7
2014	471.2	377.2	213.1	134.2	44.4	37.0	30.0	69.1	66.3	89.0
2015	516.0	494.0	292.0	113.0	40.0	55.0	24.0	16.0	42.0	47.0

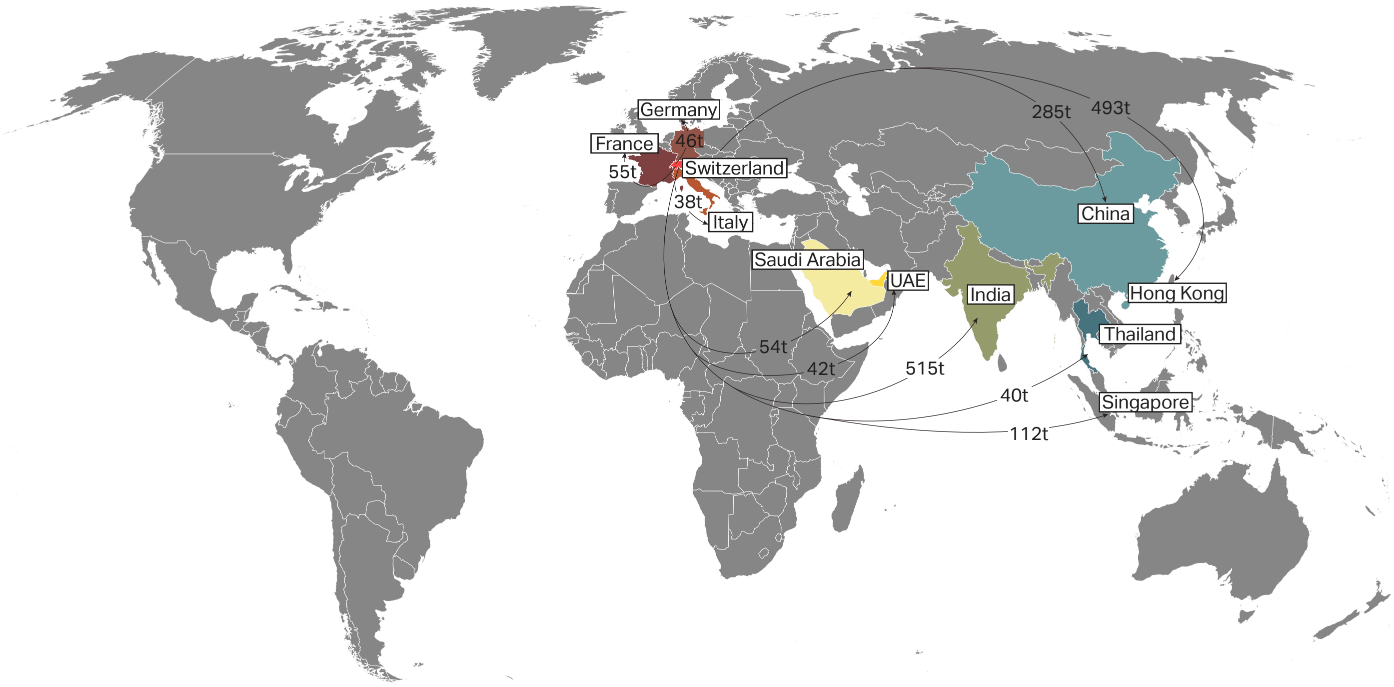
Source: Swiss Customs Administration

Appendix 16 - Swiss Bullion Imports in 2015



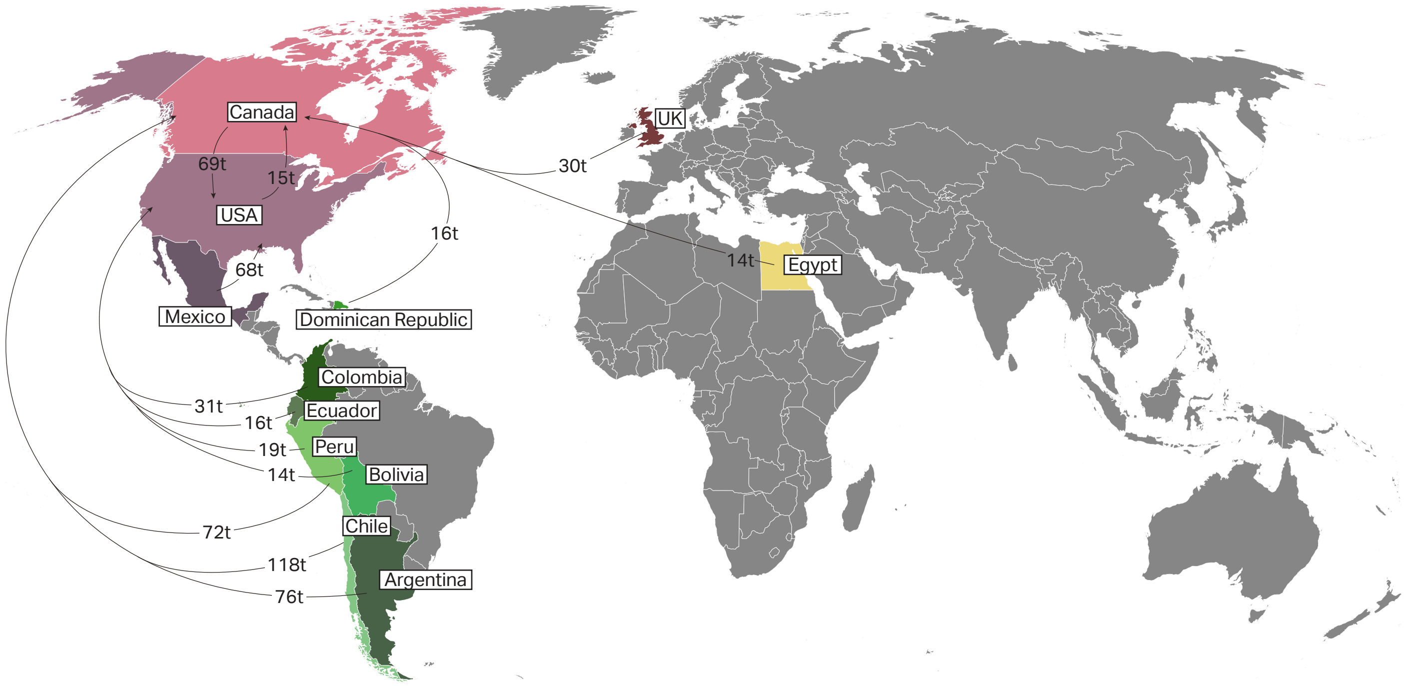
Source: Swiss Customs Administration, Metals Focus

Appendix 16 - Swiss Bullion Exports in 2015



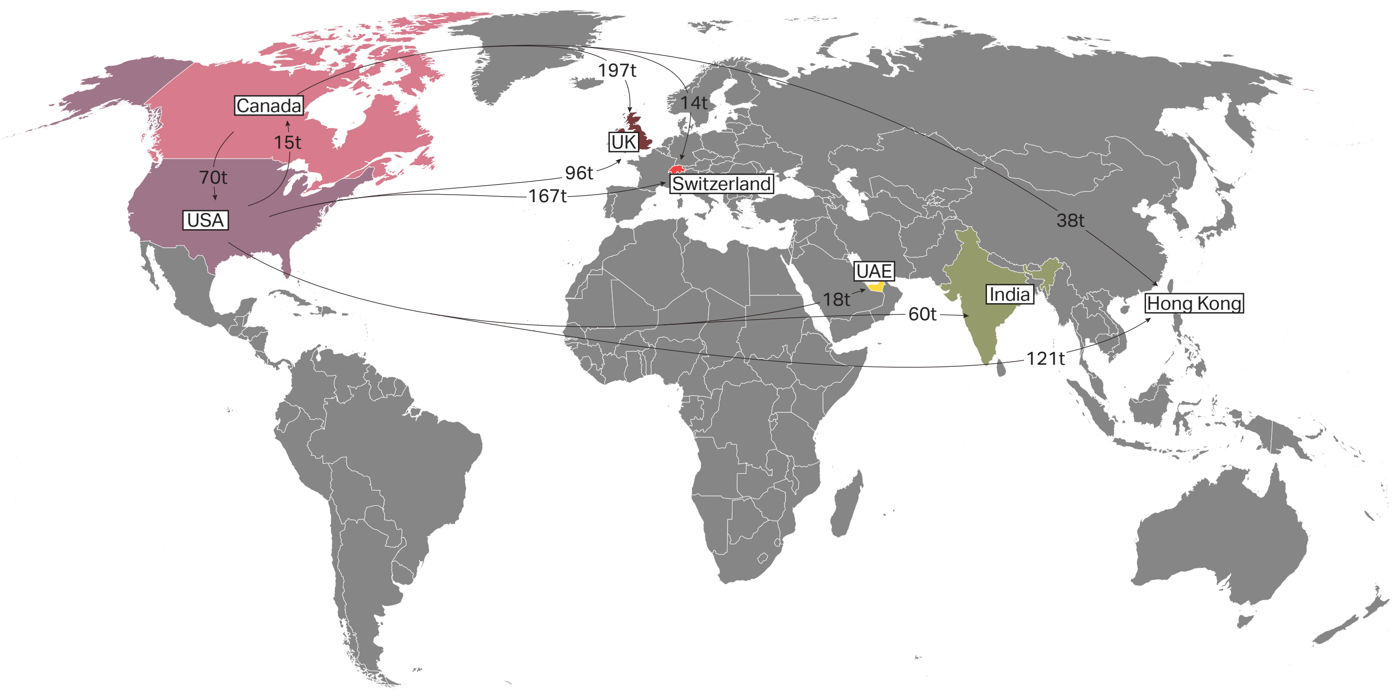
Source: Swiss Customs Administration, Metals Focus

Appendix 17 - US & Canadian Gold Bullion Imports in 2015



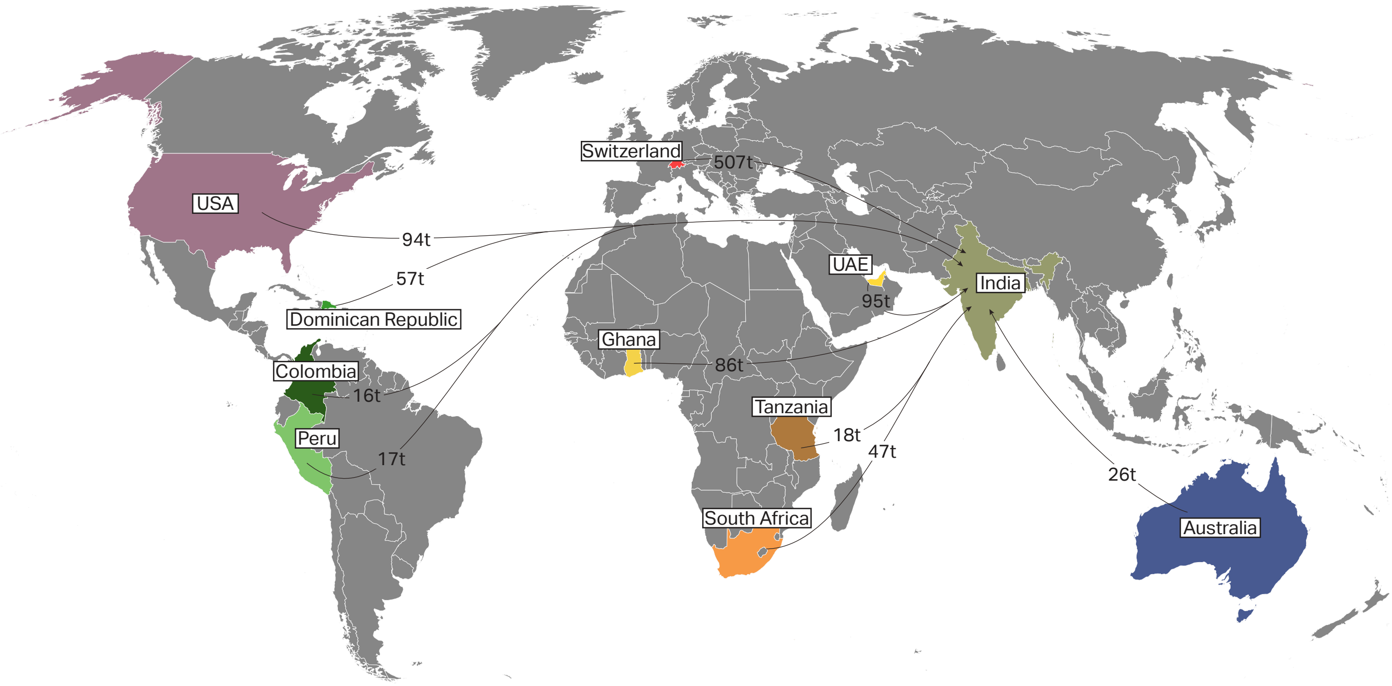
Source: Various, Metals Focus

Appendix 17 - US & Canadian Gold Bullion Exports in 2015



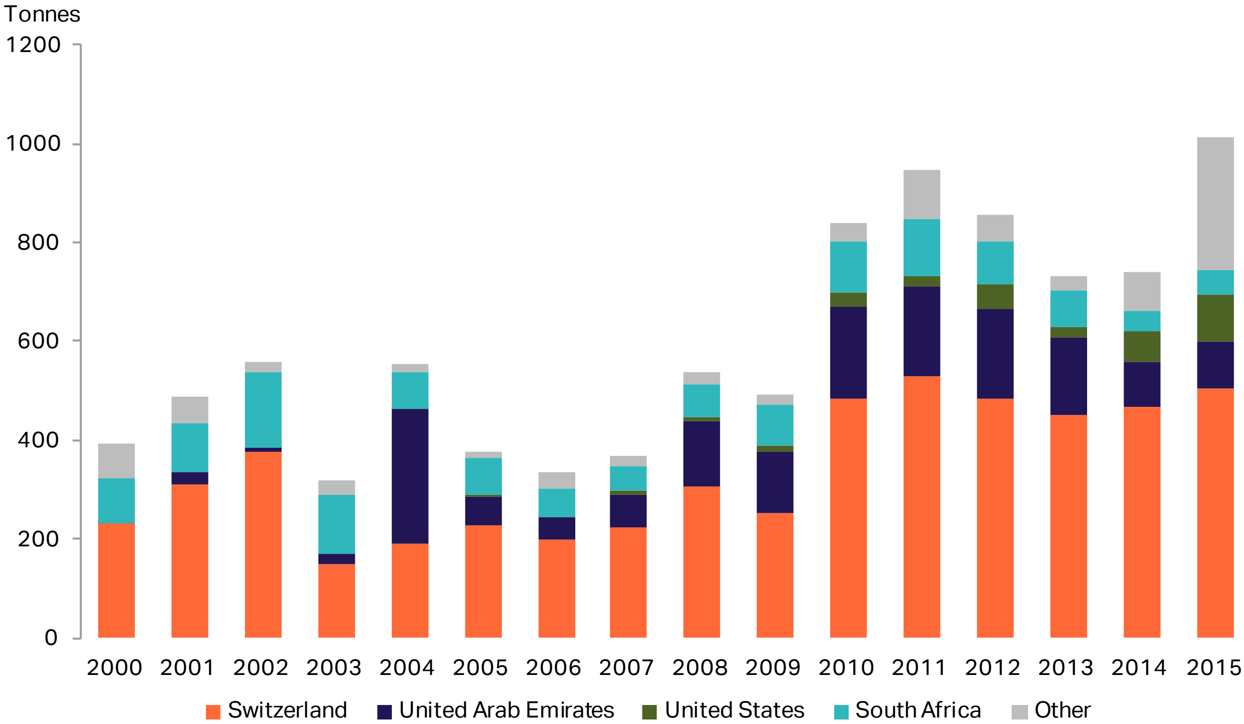
Source: US Department of Commerce, Bureau of Census, Statistics Canada, Metals Focus

Appendix 18 - Indian Official Gold Bullion & Doré* Imports in 2015



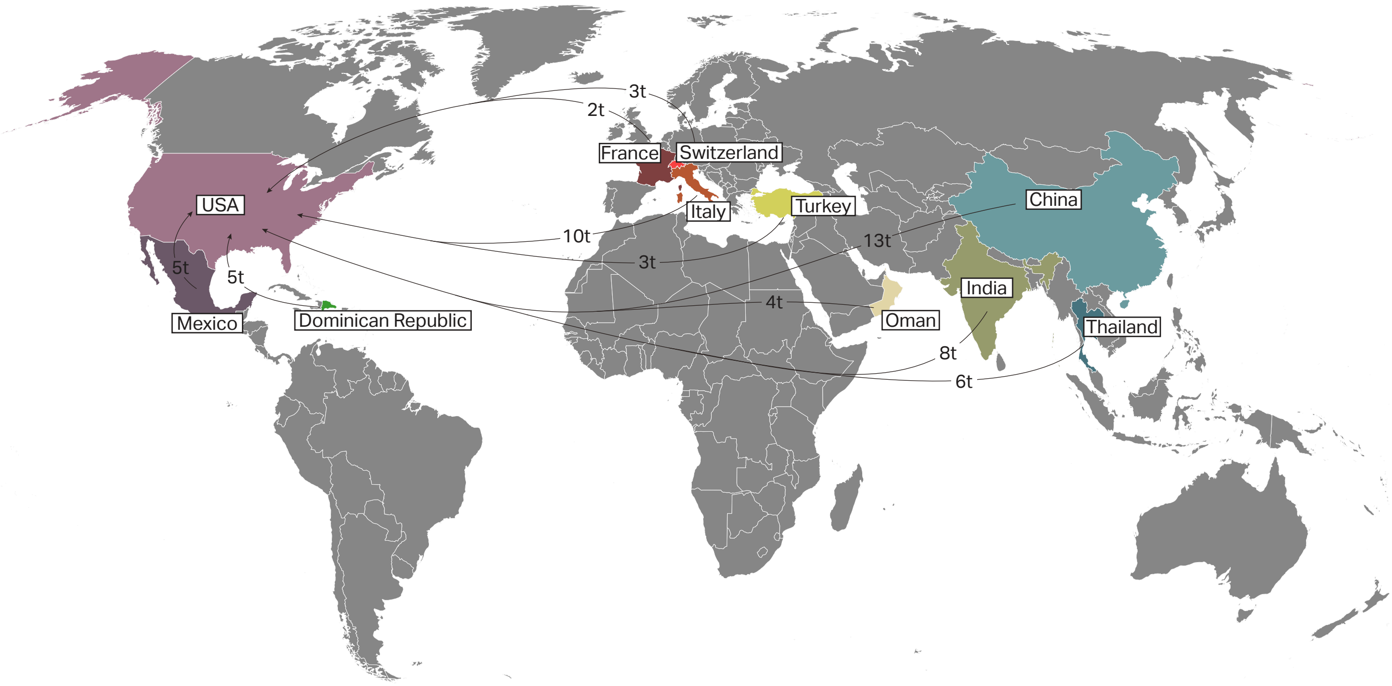
Source: Indian Ministry of Commerce, Metals Focus

Appendix 18 - Indian Official Gold Bullion & Doré* Imports



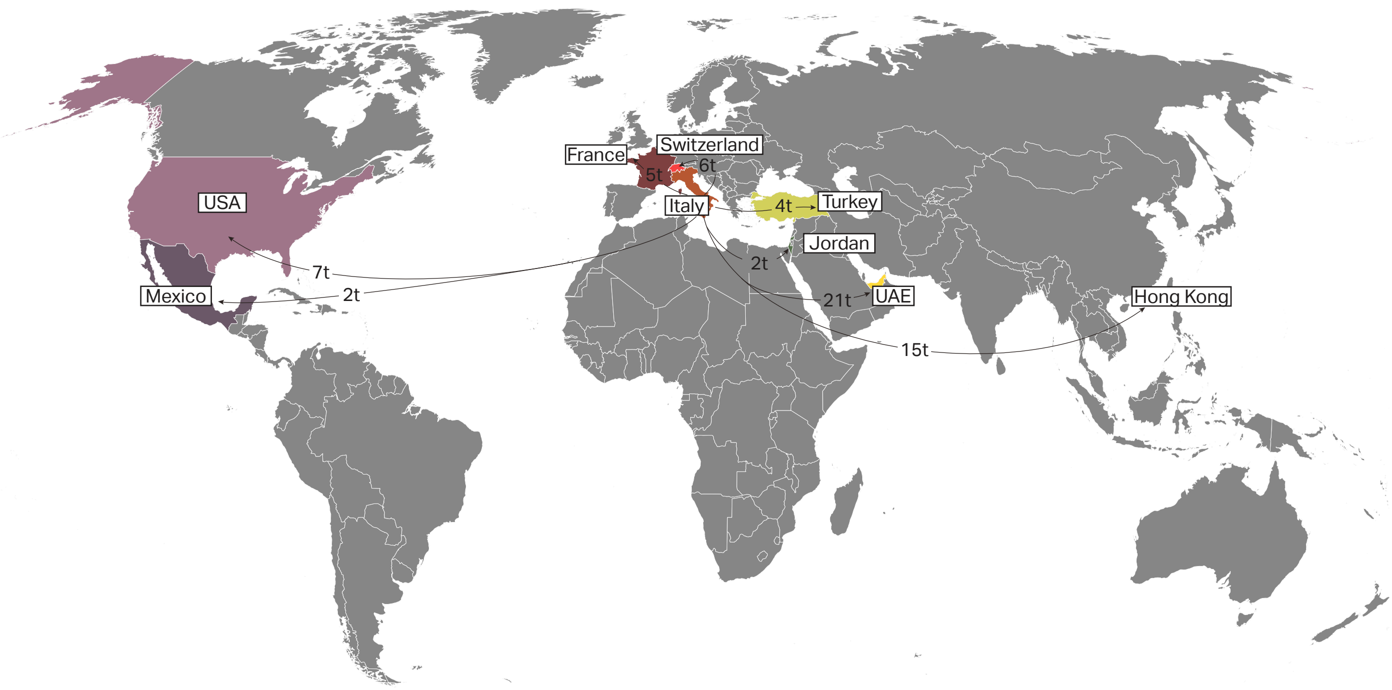
Source: Indian Ministry of Commerce

Appendix 19 - Major US Gold Jewellery Imports in 2015



Source: US Department of Commerce, Bureau of Census, Metals Focus

Appendix 20 - Major Italian Gold Jewellery Exports in 2015



Source: Italy Customs (National Institute of Statistics), Metals Focus

Notes & Definitions

Notes

Throughout the tables, totals may not add up due to independent rounding.

What one country reports as an export to another may be different to the imports reported by that second country due to such factors as rules of origin or timing. As a result, an identical trade flow in a different map or table may show different volumes if each has a different data source. The tonnage figures shown are fine weights calculated by Metals Focus from the data provided by each origin for exports and by each destination for imports.

Units

Troy ounce (oz)	One troy ounce - 31.103 grammes
Tonne (t)	One metric tonne - 1,000 kilogrammes (kg) or 32,151 troy ounces
Carat	Gold purity in parts per 24
Grade (g/t)	Grammes per metric tonne of rock
Dollar ($)	US dollar unless otherwise stated

Definitions

Consumption The sum of domestic jewellery fabrication, plus imports, less exports, adjusted for changes in trade stocks.

Fabrication Captured in the country where the first transformation of gold bullion or grain into a semi-finished product takes place.

Recycling Covers the recovery of gold from fabricated products, including unused trade stocks. Excludes scrap generated during manufacturing (known as production or process scrap). The recycling is captured in the country where the scrap is generated, which may differ from where it is refined.

Mineral Resources A concentration of material in, or on, the earth's crust of such grade or quantity where there is a reasonable prospect for economic extraction.

Mineral Reserves The economically mineable part of a measured or indicated mineral resource demonstrated by at least a preliminary feasibility study.

Total Cash Cost Includes all direct and indirect mine site cash costs related directly to the physical activities of producing metals, including mining, ore processing on-site general and administrative costs, third-party refining expenses, royalties and production taxes, net of by-product revenues.

Total Production Cost Total cash costs, plus depreciation, amortisation and reclamation and closure cost obligations relating to each operating unit.

All-In Sustaining Cost The sum of total cash costs plus community costs, sustaining capital expenses, corporate, general and administrative expenses (net of stock option expenses) and exploration expenses.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