
PLATINUM QUARTERLY

Q3 2015



24th November 2015

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FOREWORD

It is now just over a year since the World Platinum Investment Council was established; a tough year for everyone operating in the platinum market. However, we are delighted at the response we have received for our efforts to bring independent, fundamental analysis and forecasting of the platinum market to investors, alongside our research partners, SFA (Oxford).

Today we publish our fifth *Platinum Quarterly* data set, which scrutinises activity in the third quarter of 2015, followed by a full year forecast for 2015 and projections for 2016. This edition provides the first quarterly data set from which we can make year-on-year comparison, allowing us to draw more meaningful conclusions about supply and demand drivers. We hope to uncover greater insights about the seasonality and cyclicity of the platinum market as our data series grows.

The third quarter of 2015 was dominated by the Volkswagen emissions revelations. While many commentators postulated that the scandal would inevitably mean a reduction in platinum demand, corresponding to fewer diesel cars, we do not agree. We believe the consequences could include automaker, regulator and consumer actions that are as likely to lead to increases in automotive uses of platinum in the coming months and years. As remedies are implemented and policies and choices play out, our publications will provide investors with timely updates into the size and timing of changes in platinum demand.

In today's *Platinum Quarterly* analysis, from our research partners SFA (Oxford), we observe a global platinum market deficit during the third quarter of 2015 and an overall deficit for 2015. The outlook is for the market to move to balance in 2016.

The estimated deficit of 320 koz in Q3 2015 follows a 20 koz deficit in Q2 2015 and is in stark contrast to the 240 koz surplus in Q3 2014, immediately after the strike. Total platinum supply fell by 40 koz quarter-on-quarter, almost wholly due to a decrease in mining supply. Total global demand rose by 260 koz quarter-on-quarter as growth in jewellery, investment and industrial demand offset the usual seasonal, summer holiday, dip in automotive demand. Comparing Q3 2014 and Q3 2015, we saw a significant upswing in investment demand on the back of strong bar sales in Japan and ETF increases in South Africa.

This latest report pulls the full year 2015 global platinum market deficit forecast back to 300 koz from the 445 koz forecast in the Q2 2015 *Platinum Quarterly*, recognising ETF outflows so far in the fourth quarter. The total supply for 2015 is expected to grow by 6% to 7,730 koz, with recovery from the 2014 strikes in South Africa more than offsetting a 7% decline in recycled platinum owing to lower jewellery demand in China and weaker PGM prices. Total demand is forecast to expand slightly to 8,030 koz as stronger automotive, industrial and investment demand more than offsets a drop in jewellery demand. Automotive platinum usage is forecast to add 130 koz, an increase of 4%, up to 3,415 koz in 2015, from 3,285 koz in 2014.

Looking ahead to 2016, SFA estimates that the platinum market will be close to balanced. Total mining supply and recycled platinum is forecast to increase, while modest demand growth will be seen across jewellery, industrial and automotive segments.

We are publishing *Platinum Quarterly* less than one week after Johnson Matthey resumed publication on a freely available to all basis of its own set of PGM data, focused on full year supply demand data and balances. The data that we and Johnson Matthey both provide includes estimates and forecasts, some made at different points in time, and will invariably differ. However, we are delighted that this provides all investors with access to an enriched set of valuable information.

Platinum market dynamics highlight the importance of the WPIC's market development efforts in stimulating investment demand. We expect to be able to update the market on a number of promising initiatives over the next few months.

As always, we welcome your thoughts regarding additional insights and research that the WPIC can instigate in the coming months.

Paul Wilson, CEO

PLATINUM QUARTERLY Q3 2015

Supply, demand and above ground stocks summary (Table 1)

	2014	2015f	2016f	2015f/2014 Growth %	2016f/2015f Growth %	Q2 2015	Q3 2015
Platinum Supply-demand Balance (koz)							
SUPPLY							
Refined Production	4,880	5,845	5,965	20%	2%	1,545	1,535
South Africa	3,115	4,185	4,225	34%	1%	1,130	1,110
Zimbabwe	405	365	425	-10%	16%	80	115
North America	400	385	390	-4%	1%	100	80
Russia	740	720	730	-3%	1%	190	185
Other	220	190	195	-14%	3%	45	45
Increase (-)/Decrease (+) in Producer Inventory	+350	-5	+100	-101%	-2100%	-5	-30
Total Mining Supply	5,230	5,840	6,065	12%	4%	1,540	1,505
Recycling	2,040	1,890	2,095	-7%	11%	475	470
Autocatalyst	1,255	1,310	1,485	4%	13%	310	340
Jewellery	775	575	605	-26%	5%	165	130
Industrial	10	5	5	-50%	0%	0	0
Total Supply	7,270	7,730	8,160	6%	6%	2,015	1,975
DEMAND							
Automotive	3,285	3,415	3,480	4%	2%	875	825
Autocatalyst	3,130	3,255	3,315	4%	2%	830	785
Non-road	155	160	165	3%	3%	40	40
Jewellery	2,990	2,850	2,905	-5%	2%	665	790
Industrial	1,570	1,605	1,640	2%	2%	395	405
Chemical	555	570	590	3%	4%	145	150
Petroleum	105	175	160	67%	-9%	45	45
Electrical	190	150	160	-21%	7%	35	40
Glass	175	150	120	-14%	-20%	25	45
Medical & Biomedical	240	250	255	4%	2%	70	50
Other	305	310	355	2%	15%	75	75
Investment	150	160	130	7%	-19%	100	275
Change in Bars, Coins	50					60	170
Change in ETF Holdings	215					45	110
Change in Stocks Held by Exchanges	-115					-5	-5
Total Demand	7,995	8,030	8,155	0%	2%	2,035	2,295
Balance	-725	-300	5	-59%	-102%	-20	-320
Above Ground Stocks	4,140*	2,740	2,445	-11%	0%	2,570	2,250

Source: SFA (Oxford). *As of 31st December 2012.

Notes: 1. All estimates are based on the latest available information. They are subject to revision in our subsequent quarterly reports in the event that additional information is identified.

2. The WPIC did not publish quarterly estimates for the first two quarters of 2014. However, estimates for both Q3 and Q4 2014 are included in the table on page 16 (supply, demand and above ground stocks).

3. The 2015 and 2016 forecasts are based on historical data and trends as well as modelling, with varying degrees of accuracy depending upon the supply or demand category. Investment demand is expected to be the least predictable segment. Some historic views are based on data and modelling that pre-date WPIC publication of PQ.



OVERVIEW

Quarterly analysis of the platinum market highlights a deficit of 320 koz in Q3'15 following three previous quarters of smaller deficits. Comparing Q3'15 with Q3'14 highlights the large fluctuations in investment demand with 175 koz of investment selling playing a significant part in the reported surplus of 240 koz in Q3'14 and recently 275 koz of bar purchases in Japan and net global ETF investment buying contributing to the deficit of 320 koz in Q3'15. There was a strong recovery in jewellery restocking in the third quarter ahead of a seasonal peak in demand, along with lower than expected recycling flows.

The full year 2015 global platinum market is forecast to be in a deficit of 300 koz down from the 445 koz forecast in the Q2 2015 Platinum Quarterly. The reduction recognises an implied surplus in Q4 caused by large movements in investment demand, specifically ETF outflows. Total platinum supply is forecast to rise 6% to 7,730 koz as mine output recovers from South Africa, which more than offsets the decline in recycling. Demand meanwhile should expand slightly to 8,030 koz aided by stronger automotive demand requirements, particularly in Western Europe as the implementation of Euro 6 emissions legislation continues and vehicle sales increase year on year. Industrial and investment demand growth offset a 5% reduction in jewellery demand. The full year forecast 160 koz investment demand estimates continued bar buying in Japan in Q4, albeit at a much lower rate than in early Q3, while ETF purchasing contracts.

Looking ahead to 2016 the market will move close to balance. A continued recovery in primary supply and higher levels of recycling narrow the gap to steadily increasing demand.

Above ground stocks are therefore forecast to reduce by 300 koz to 2,440 koz, and remain at similar levels by 2016 year end.

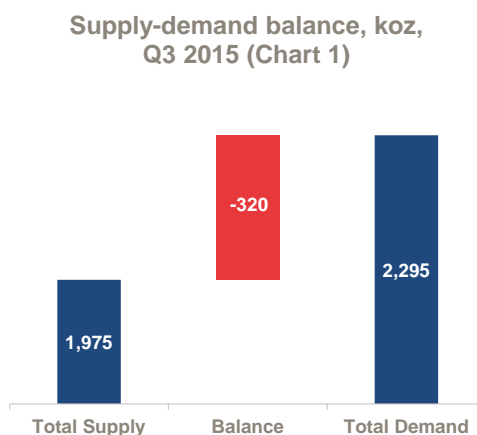
2015 THIRD QUARTER PLATINUM MARKET REVIEW

In the third quarter of 2015 the platinum market deficit was 320 koz, of which 275 koz was the result of a combination of ETF buying in South Africa and small bar purchases in Japan, the latter motivated by lower platinum prices. Over the past year the quarterly changes in investment demand have been far greater than changes in other demand categories and have had a material impact on the quarterly supply / demand balances. The main difference between Q3'14 and Q3'15 was investment demand which moved from a decline of 175 koz, mainly ETF and exchange stock reductions, to an increase of 275 koz due to strong bar sales and net ETF buying.

Total platinum supply in the third quarter reduced by 40 koz (-2%) quarter-on-quarter to 1,975 koz (Chart 1), with total mining supply dipping by 35 koz and secondary supply down 5 koz. Refined production was 10 koz lower and producer working inventory was 25 koz higher than in the second quarter.

Total demand rose 260 koz quarter-on-quarter (+13%) in Q3'15 to 2,295 koz as growth in jewellery demand, driven by restocking ahead of the wedding season and the national holiday in China, stronger investment demand and a slight improvement in industrial consumption offset the seasonal, northern hemisphere summer holiday, dip in automotive demand.

Total platinum supply in Q3'15 increased by 20 koz (+1%) when compared to Q3'14 as the 120 koz increase in mining supply was largely offset by the 100 koz fall in supply from recycling. Automotive, jewellery and industrial demand together increased 130 koz in Q3'15 compared to Q3'14.



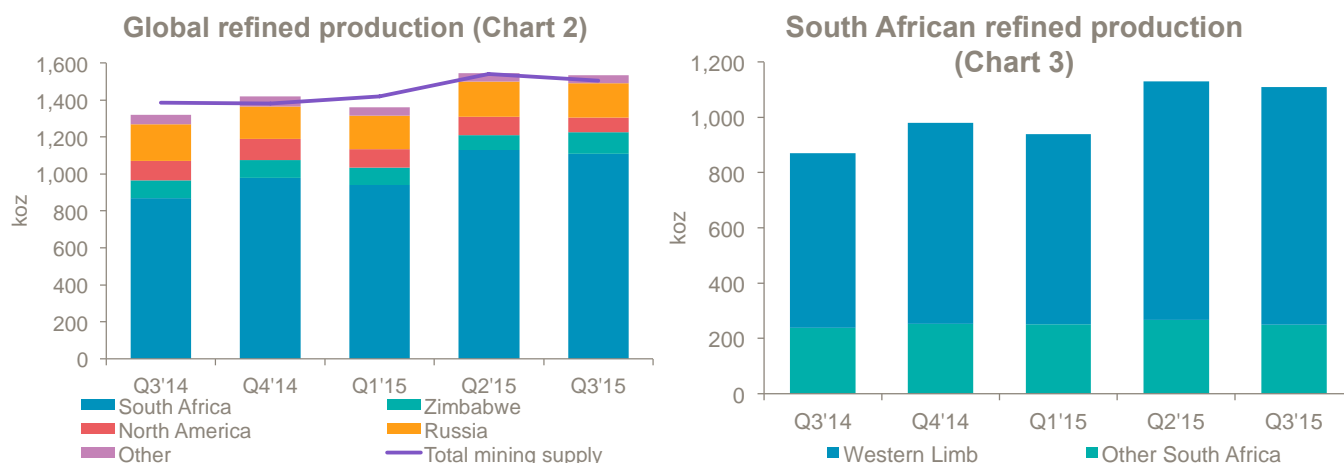
Source: SFA (Oxford)

Supply

Total mining supply in Q3'15 (Chart 2) was slightly down on Q2'15, but increased by 120 koz (+9%) to 1,505 koz compared to Q3'14 when strike-affected South African producers had not yet returned to pre-strike levels and sold 65 koz from working inventory. In Q3'15 South African mining production returned to levels similar to the average quarterly rate in 2013 and drawn down working inventory was replenished by 30 koz.

Global refined production increased by 16% to 1,535 koz in Q3'15 versus Q3'14 output of 1,320 koz. The increase comprised a fall of 25 koz in non-South African refined output and an increase of 240 koz from South Africa as Q3'15 was closer to pre-strike levels.

South African refined production was 1,110 koz for the quarter, up 240 koz (+28%) year-on-year due to the post-strike recovery, but 20 koz (-2%) down on Q2'15, owing to safety-related stoppages and pipeline lock-ups (smelter maintenance). Mining supply from South Africa (Chart 3) increased 145 koz (+16%) year on year due to the sales from working inventory in Q3'14 and increases in working inventory in Q3'15. Overall, refined output from South Africa has built fairly steadily since Q3'14, with the seasonal weak first quarter responsible for the pause in growth during Q1'15 (-40 koz quarter-on-quarter). Western Limb refined production, which was impacted the most by the 2014 strike, was 36% higher year-on-year at 860 koz in Q3'15, while other South African supply increased by 5% year-on-year to 250 koz.



Source: SFA (Oxford)

Production from Zimbabwe recovered to 115 koz in Q3'15 (+35 koz quarter-on-quarter), after dipping to 80 koz in Q2'15 following a furnace outage. North American supply is lower for Q3'15 (-20 koz quarter-on-quarter and -25 koz year-on-year) owing to planned maintenance and the upgrade of surface plants in Canada. Russian production is marginally lower than in Q2'15 at 185 koz (-5 koz) and down 15 koz year-on-year, when output was augmented by the processing of pipeline inventory and higher grade ore was mined.

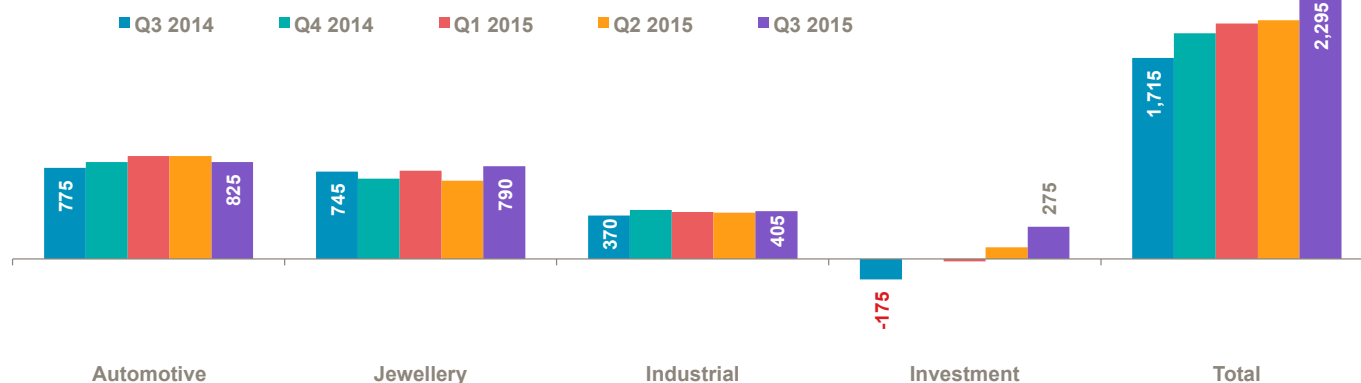
Platinum recovered from scrapped autocatalysts was 340 koz in the third quarter. Low steel and PGM prices have impacted the scrap vehicle collection rate and low PGM prices have reduced the flow of autocatalyst scrap supply for several quarters, but some autocatalyst collectors have started to release scrap that had been held back.

Jewellery recycling slipped to 130 koz in the third quarter, 35 koz lower than in Q2'15 due to the decline in the metal price. Compared to Q3'14, the price was down 30% in Chinese yuan and 19% in Japanese yen. Correspondingly, total jewellery recycling has fallen 35% since Q3'14.

Demand

In Q3'15 global demand was 2,295 koz (Chart 4), 160 koz higher than in Q2, with the increase being driven by an unexpectedly strong recovery in jewellery consumption and a significant increase in investment demand.

Platinum demand, koz (Chart 4)



Source: SFA (Oxford)

Automotive demand

Comparison with Q3 last year shows overall automotive demand up 6% from 775 koz to 825 koz in Q3'15 (Chart 5). Platinum usage in light- and heavy-duty autocatalysts is up by 45 koz, from 740 koz to 785 koz, with non-road demand increasing 5 koz to 40 koz.

Autocatalyst demand for platinum has fallen back slightly in Q3'15, to 785 koz from 830 koz in Q2'15. The third quarter of the year usually sees a slowdown in autocatalyst consumption owing to the northern hemisphere summer holidays. Non-road demand is flat quarter-on-quarter, at 40 koz, but this remains a relatively small part of the overall market as only a minority of equipment globally is currently subject to legislation.

This year has seen the full implementation of Euro 6 emissions legislation; since 1 September all new vehicles sold in Europe must be compliant. Manufacturers have made the transition from Euro 5 to Euro 6 over many months, with some buying of metal for autocatalysts boosting demand during 2014. The annual growth in automotive demand reflects both increased vehicle sales and higher platinum loadings per vehicle to achieve Euro 6 compliance.

Western European car sales were up by 8% year-on-year in Q3'15, but growth is expected to slow.

Jewellery demand

Platinum jewellery demand in Q3 is estimated at 790 koz, up some 19% on the previous quarter as manufacturers in several of the larger markets prepared for strong selling seasons ahead.

Chinese jewellery manufacturer requirements for platinum rose in Q3 compared to Q2, and retail sales were boosted in Q3 due to the wedding season and retailers launching new products with promotions. However, the third quarter saw a divergence between manufacturing and consumer buying, as although fabrication demand grew in excess of 10% during the quarter, this has yet to be matched by consumer demand. The big brands continue to perform well but at the expense of smaller independent jewellery retailers. In Hong Kong, which relies on mainland Chinese tourists to drive sales, demand was weaker than on the mainland.

In the US, sales were up around 8% year-on-year in Q3. In this predominantly bridal market, where customers tend to buy the setting and stone separately, platinum has become increasingly attractive over white gold as the platinum price has declined relative to gold.

Japan has seen platinum jewellery demand remain flat quarter-on-quarter in Q3 as the economy remains fragile.

India is the strongest region in growth terms, with Q3 sales up over 20% quarter-on-quarter as the region heads into the peak wedding season.

Industrial demand

Platinum consumption by industrial end-uses grew 9% year-on-year (+35 koz) in the third quarter to 405 koz, lifted mainly by higher demand from the glass (+25 koz) and petroleum (+20 koz) sectors. Growth in these industries, plus other end-uses (+5 koz), more than offset lower requirements for electrical applications (-10 koz) and chemical processes (-5 koz). On a regional basis, the Rest of the World accounted for the majority of demand growth, underpinned by the glass industry, whilst consumption also increased in North America, Japan and China versus Q3'14.

-Chemical

Third-quarter demand from the chemical sector dropped by 3% year-on-year (-5 koz) to 150 koz, with minor growth in nitric acid and propane dehydrogenation (PDH) plant requirements being outweighed by reduced consumption by silicone and paraxylene producers. North American demand fell in the quarter, as nitric acid and paraxylene producers required less metal than in Q3'14, whilst greater metal purchases for new PDH capacity were negated by lower demand for silicone curing in China.

-Petroleum

Petroleum sector demand for platinum grew by 20 koz year-on-year in Q3'15, largely owing to refining capacity growth in North America and China. However, overall growth was hindered slightly as Western Europe's net demand remained negative, despite fewer refining capacity reductions, whilst purchasing by Japanese refiners declined from Q3'14 as industry cutbacks potentially resulted in metal returning to market.

-Electrical

Platinum usage in electrical devices fell by 10 koz from Q3'14 as hard disk drive (HDD) platinum demand contracted considerably year-on-year. Traditionally a strong period for HDD shipments, third-quarter deliveries were up by 7% from Q2'15 but remained low compared to recent years, particularly versus the high demand seen in Q3'14 (-19%). This continued the trend of declining deliveries seen in the first half of the year, with shipments failing to recover in Q3'15 as much as previously anticipated, primarily owing to persistently weak demand for PC HDDs, which was down by 28% year-on-year.

-Glass

Glass sector consumption rose by 25 koz year-on-year, owing to early buying for a greater number of new plants than in Q3'14. Early metal purchasing increased as fabricators equipped new capacity ahead of opening in Q4 or early next year, with the majority of this new capacity being built in China and the Rest of the World. More new plants are set to start up during this period than in Q4'14 and early 2015, whilst Q3 demand also compared favourably to last year as less metal was returned to market owing to fewer plant closures.

-Other

Q3 demand for other industrial end-uses grew by 7% (+5 koz) from the previous year, although it remained flat quarter-on-quarter. Platinum consumption by fuel cell and spark plug manufacturers was slightly higher compared to Q3'14, with Japan accounting for a large portion of this growth on a regional basis. Automotive sensor and spark plug demand fell marginally from Q2, although the third quarter tends to be a weaker period for platinum consumption in these sectors.

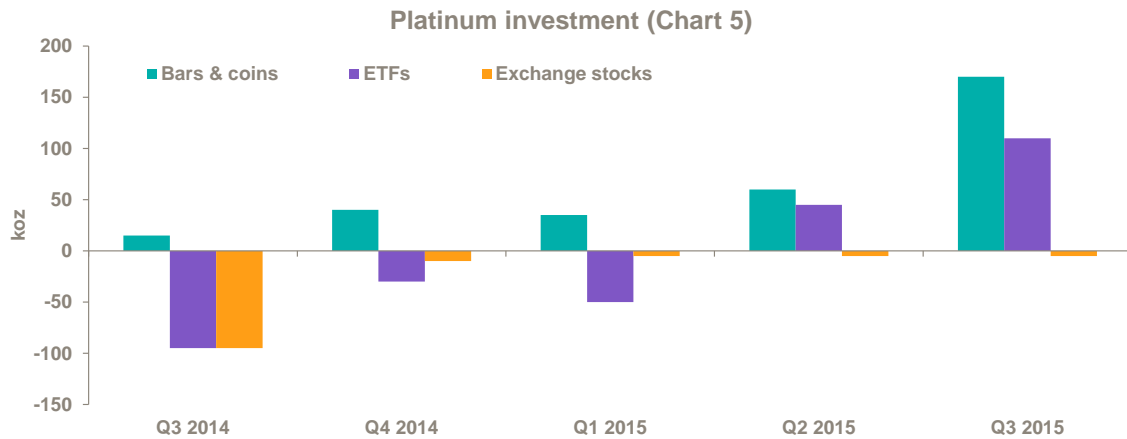
Investment demand

Investment in platinum increased significantly to 275 koz in the third quarter (Chart 5) from 100 koz in Q2'15, driven by a sharp rise in both ETF holdings and bar purchases in Japan. Investors increased their holdings in ETFs by 110 koz in Q3'15. However, while the quarter started strongly with large inflows in July and August, September saw net outflows. The quarterly increase in ETF holdings was the most dramatic in South Africa where, despite the net selling in September, 161 koz of net purchases were made during the quarter. In Europe, ETF holdings declined in Q3'15, falling by 28 koz. UK ETF holdings reduced by 12 koz compared to a 38 koz decline in Q2'15 and Swiss ETF holdings also reduced by 16 koz in Q3'15. US ETF investors switched from being modest purchasers in Q2'15 to divesting 40 koz in Q3'15.

Japanese investor interest in ETFs has historically been very limited but has grown in 2015. Although the third quarter saw a record inflow, investors added only 16 koz to their holdings.

Bar and coin purchases more than doubled quarter-on-quarter to 170 koz in Q3'15, driven by investors in Japan where buying bars has traditionally been the main investment route. Purchasing increased very substantially in July as the platinum price initially fell below ¥4,000/g and remained at elevated levels throughout the quarter.

NYMEX exchange stocks declined by 5 koz, a similar amount to the decline in the first two quarters.



Source: SFA (Oxford)

Since the first *Platinum Quarterly*, investment in platinum has increased significantly yet has been highly volatile. ETFs have shown three quarters of net sales and two quarters of net purchases, swinging from outflows of 95 koz in Q3'14 to net purchases of 110 koz in Q3'15. This has mostly been driven by large flows into funds in South Africa in the second and third quarters of this year. From Q3'14 South African ETFs have added 208 koz, whereas US, UK and Swiss investors have generally been sellers over the period with holdings declining by 54 koz, 159 koz and 55 koz respectively. Interest in the Japanese ETF picked up in 2015 adding 36 koz, leaving global ETF holdings 23 koz lower at the end of Q3'15 than at the start of Q3'14.

The bar and coins segment has been dominated by Japanese investors who have steadily increased their bar purchases as the price has fallen, with total global bar and coin investment climbing from 15 koz in Q3'14 to 170 koz in Q3'15. Historically, Japanese investors generally buy when they consider the price is low and sell when the price is high.

Exchange stocks have shrunk consistently, with an unusually large drop in Q3'14 coinciding with a significant fall in the non-commercial traders' net long position.

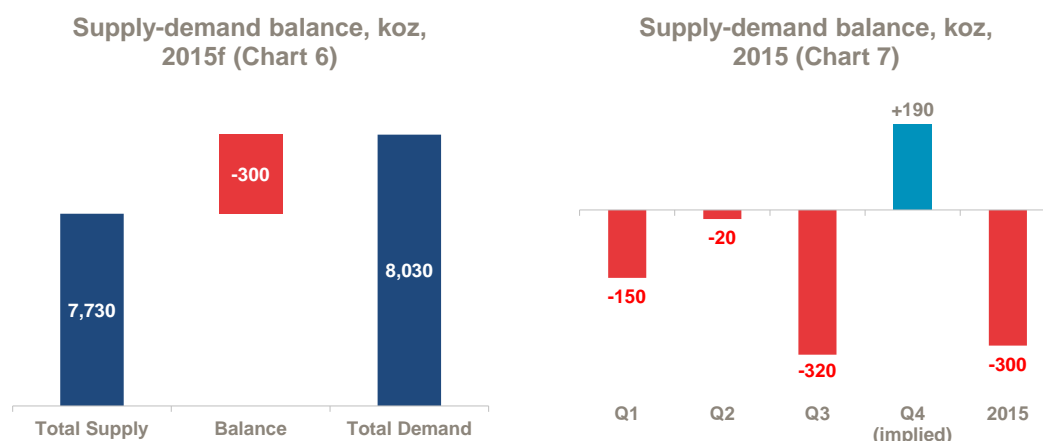
2015 FULL-YEAR FORECAST

This year has seen a number of different trends in the platinum market. Primary supply is higher as South African mine production recovered from the strike in 2014, while recycling has been lower than last year as low prices reduced recycled jewellery supply and restrained the growth in autocatalyst recycling. Automotive demand increased, driven by strong sales growth in Western Europe, and industrial demand has improved year-on-year, while jewellery demand has been negatively impacted by weaker sales in China. Investment demand has increased owing to the platinum price decline encouraging a sharp increase in bar purchases by Japanese investors although ETFs could see net outflows for the year.

This year total platinum supply is expected to grow by 6% to 7,730 koz (Chart 6) as a recovery in South African production following the 2014 strike more than offsets a 7% decline in recycled platinum owing to lower jewellery demand in China and weaker PGM prices.

Total demand is forecast to expand slightly to 8,030 koz as stronger automotive, industrial and investment requirements more than offsets a drop in jewellery fabricators' needs and global demand is expected to exceed supply by 300 koz (Chart 7).

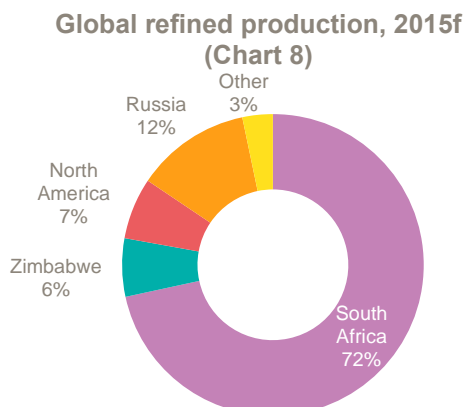
Investment demand has been very volatile this year, particularly South African ETF holdings, which have seen record outflows so far in Q4. However, Japanese bar purchases increased dramatically through the first three quarters as the platinum price fell, and although these are unlikely to be maintained at such a high level in Q4, bar and coin demand will be significantly higher in 2015 than 2014. However, if bar buying returns to a more typical level and ETF demand does not improve then the fourth quarter could see a larger surplus than currently anticipated.



Source: SFA (Oxford)

Mine supply

Refined production is forecast to be 20% higher year-on-year at 5,845 koz in 2015, as South African refined production recovers to 4,185 koz (72% of global supply (Chart 8), compared to 64% in 2014).



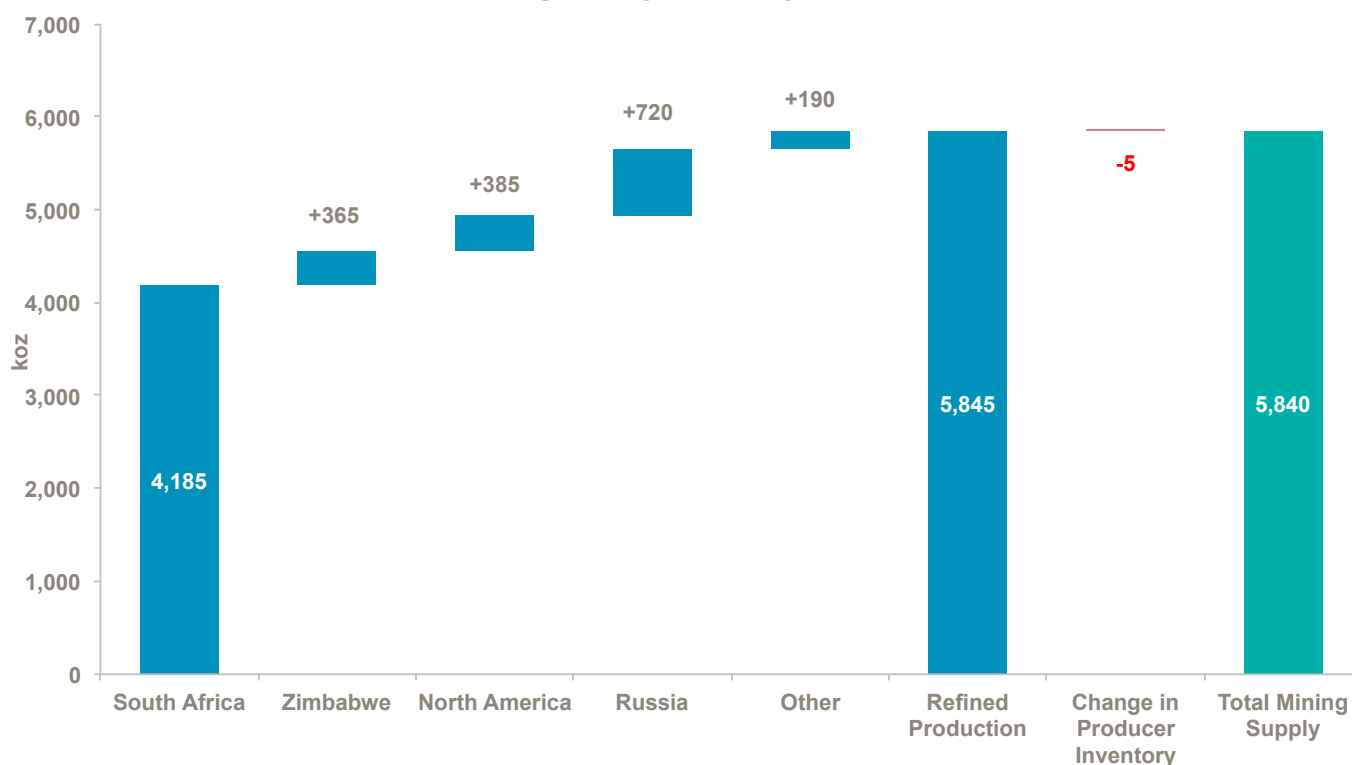
Source: SFA (Oxford)

Source: SFA (Oxford)

The South African supply forecast of 4,185 koz is lower than the 4,355 koz produced in 2013. This is, in part, the result of further shaft closures in response to lower PGM prices (-110 koz) and a deterioration in safety performance.

Estimates of producer inventory sales have been reduced for this year and carried over to 2016 as producer sales are broadly corresponding to production levels. A 5 koz increase in producer inventory is estimated for the year, giving total mining supply of 5,840 koz, a 12% year-on-year increase (Chart 9).

Total mining supply summary, 2015f (Chart 9)



Source: SFA (Oxford)

Recycling

Global supply from recycled platinum is projected to drop by 7% to 1,890 koz this year. Platinum recovered from spent autocatalysts is forecast to be 1,310 koz in 2015, up 4% on 2014, but down from the 10% growth forecast in the previous report. The decline in metal prices negatively impacted collection rates over the last three quarters, and, while scrap availability remains an issue, some improvement has been seen in the third quarter. Jewellery recycling, which is expected to fall by 26% (-200 koz) to 575 koz, has been negatively impacted by reduced sales volumes in China and also lower prices reducing recycling in Japan.

Automotive demand

Automotive platinum usage is forecast to add some 130 koz (+4%) to 3,415 koz in 2015 from 3,285 koz in 2014. Diesel cars in Western Europe are set to remain the largest consumers of platinum for autocatalysts, so the prospects for this sector are key to platinum demand.

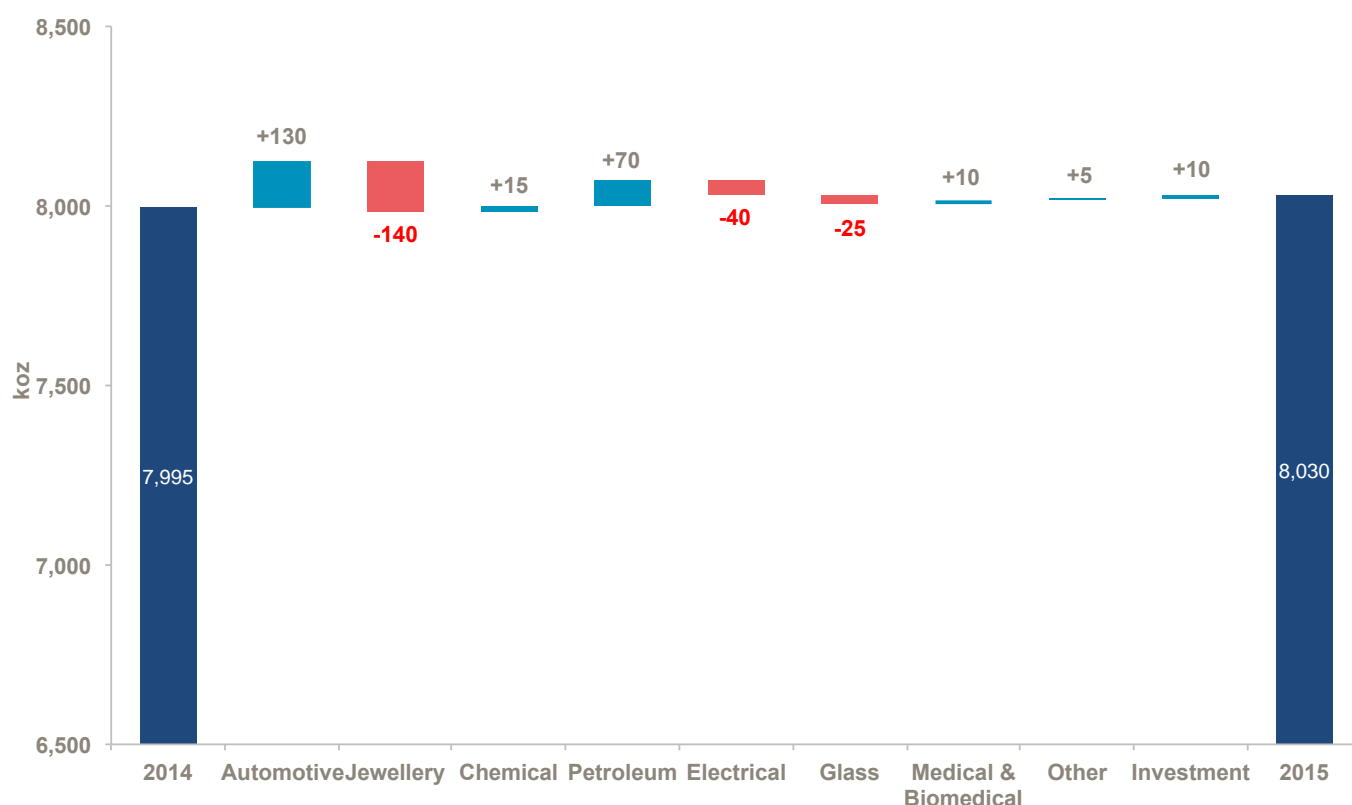
The VW diesel emissions crisis which broke in late September in the US has prompted widespread debate over emissions legislation, testing procedures and vehicle powertrains. Uncertainty among consumers over true emissions and fuel consumption is expected to cause some buyers to delay their purchases into 2016.

The diesel debate has been going on for over a year now, but the recent scrutiny has confirmed that it is perfectly possible to meet Euro 6 NO_x limits with the right combination of engine tuning and urea based aftertreatment. Some clarity is returning to

the market, especially in the run-up to the UN climate talks in December in Paris, as the role diesel powertrains play in helping to curb vehicle CO₂ emissions is increasingly recognised.

Western Europe is currently the fastest growing region in the world for vehicle sales, with light vehicle sales likely to exceed earlier expectations and rise by around 8% this year, more than 1 million units ahead of 2014. Ten months into the year, October's vehicle sales showed some slowing of growth in Europe as a result of the VW crisis. Diesel shares in the major markets of Germany and the UK have so far remained stable.

Changes in demand by category, 2015f vs. 2014 (Chart 10)



Source: SFA (Oxford)

Jewellery demand

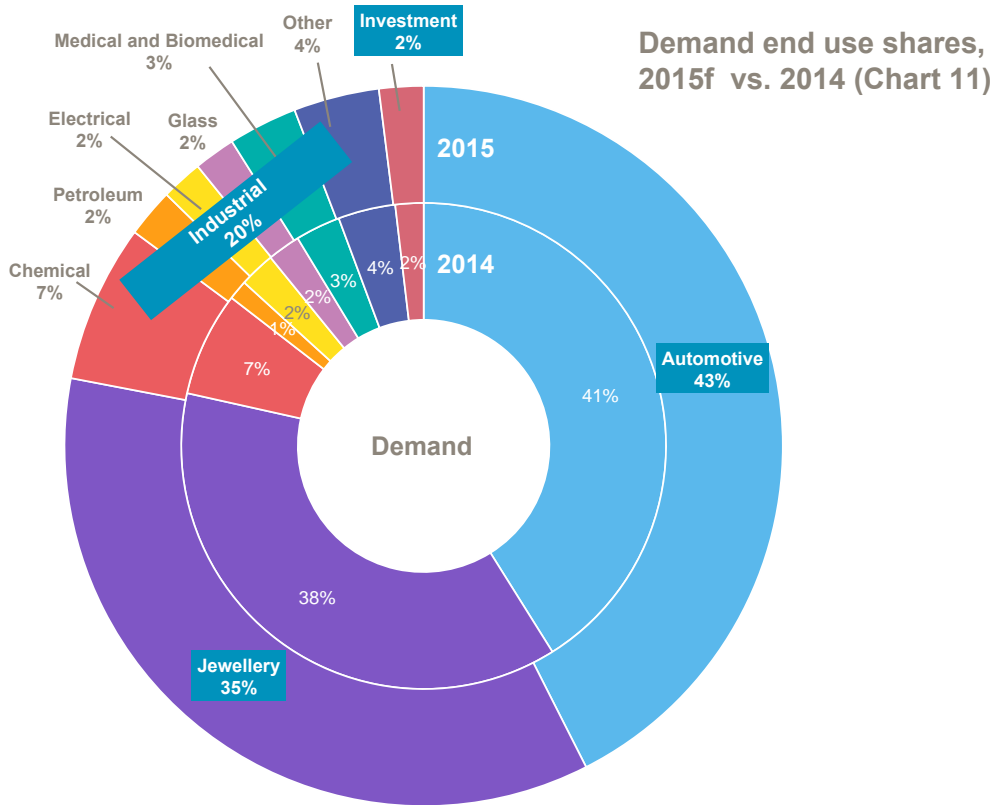
Jewellery demand is expected to finish 2015 slightly below that of 2014, down 5% at 2,850 koz from 2,990 koz in 2014, but much depends on whether the rate of growth seen in Q3 is sustained into Q4 as purchasing in October was very low by historic standards.

Jewellery sales in China, particularly those in Hong Kong, have suffered from lacklustre market sentiment arising from political tensions between the mainland and Hong Kong that affected travel and spending during the normally buoyant Chinese New Year period, and the summer stock market rout curbing some luxury spending. The big brands (many of them based in Hong Kong but with shops throughout the mainland) continue to do well, but some smaller independent stores have closed.

Wedding registrations in China are down 8% year-on-year (Ministry of Civil Affairs) and have been below the levels of the past three years throughout 2015. Only around a fifth of current platinum jewellery sales are directly bridal, which has muted the impact.

In India, Q4 is the peak jewellery buying season, with substantial sales normally seen during the Diwali festival period.

Demand end-use shares for the 2015 forecast versus 2014 are shown in Chart 11.



Source: SFA (Oxford)

Industrial demand

Industrial platinum consumption is forecast to rise by 2% (+35 koz) from 2014, owing mainly to robust growth in the petroleum (+70 koz) sector. Oil-refining capacity is expected to increase in North America and China, although new metal demand growth is set to be slightly offset by negative net demand in Western Europe and Japan where refinery closures continue to return metal back to the market. Higher platinum requirements for petroleum catalysts, chemical processes (+15 koz), and medical and biomedical uses (+10 koz) are likely to be partially offset by lower usage in glass fabrication (-25 koz) and electrical devices (-40 koz), particularly HDDs, this year.

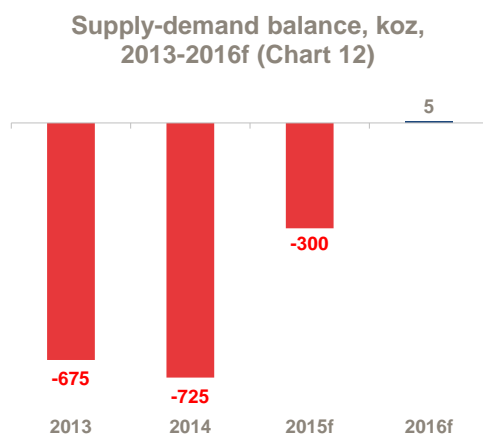
Platinum usage by nitric acid and silicone manufacturers is set to be lower than forecast in the previous quarterly report, whilst the rebound in HDD shipments in the second half of this year is likely to be weaker than previously anticipated, resulting in lower chemical and electrical demand estimates for 2015. Historical chemical demand figures have also been revised down since the Q2'15 report, as historical capacity utilisation and growth rates were found to be lower than previously estimated.

Investment demand

Investment in platinum is forecast to be 160 koz in 2015, slightly ahead (+10 koz) of 2014, but with a significant change in the mix between ETFs and bars and coins. ETF investment has been volatile this year and with record net sales so far in the fourth quarter ETF holdings are now projected to decline this year. However, Japanese investors have shown an increasing appetite for platinum bars as the price has fallen through the year and, with the price remaining relatively low so far in the fourth quarter, further buying is anticipated, although not at the same elevated level as Q3'15. On current trends the fourth quarter is likely to see negative investment demand.

2016 OUTLOOK

The platinum market is estimated to be close to balance in 2016 (Chart 12).

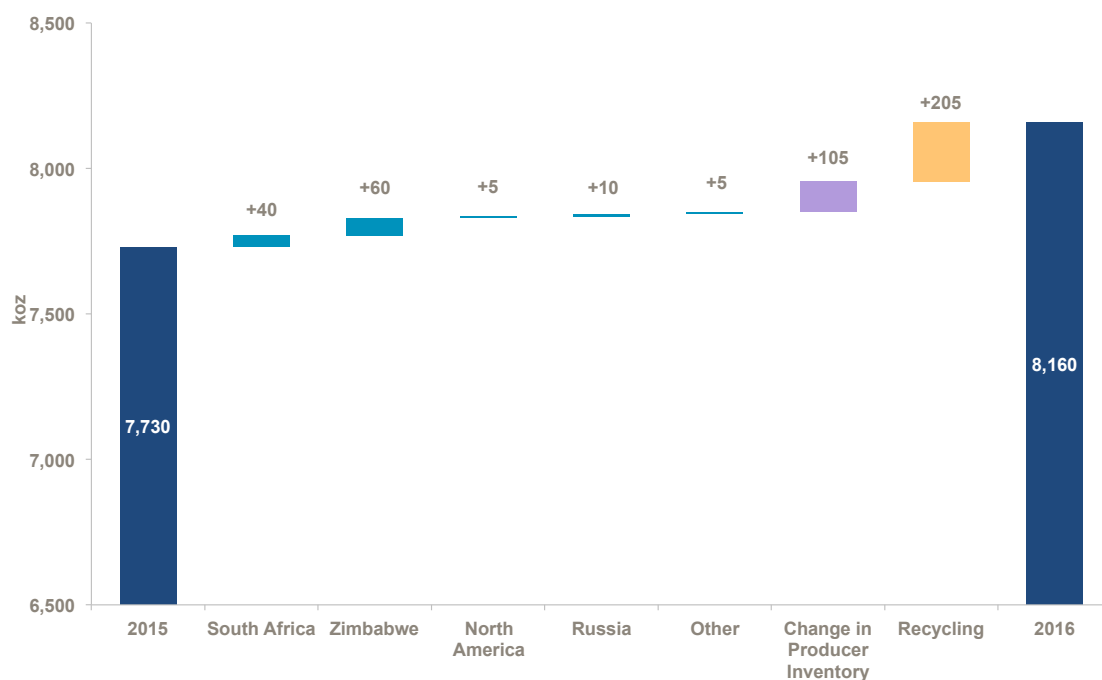


Source: SFA (Oxford)

Total mining supply is forecast to grow 6% year-on-year in 2016 with global refined supply increasing 2% year-on-year to 5,965 koz in 2016. Anticipated sales from producer working inventory of 100 koz that did not materialise in 2015 are expected in 2016 lifting total mining supply to 6,065 koz. A new mine start-up, pipeline stock processing and an expected improvement in safety performance lift South African production to 4,225 koz in 2016 (+1%), and a return to full production is anticipated in Zimbabwe, along with stable output from Russia and North America.

Producers will be seeking to maximise production from available reserves in order to achieve good cost efficiency next year. However, with the next round of wage negotiations in South Africa due to take place in 2016, industrial action is possible which could adversely impact mine supply.

Changes in total supply, 2016f vs. 2015f (Chart 13)



Source: SFA (Oxford)

Recycled platinum is likely to expand by 205 koz (+13%) to 2,095 koz next year. The majority of this growth is anticipated to come from recycled autocatalysts as both the volume of recovered autocatalysts and the proportion of diesel catalysts (which have higher platinum content than gasoline catalysts) are expected to rise. If metal prices remain weak then scrappage and collection rates could be lower than currently anticipated reducing the amount of platinum recovered. Jewellery recycling is projected to be 5% higher next year, reflecting slightly higher jewellery sales turnover in China.

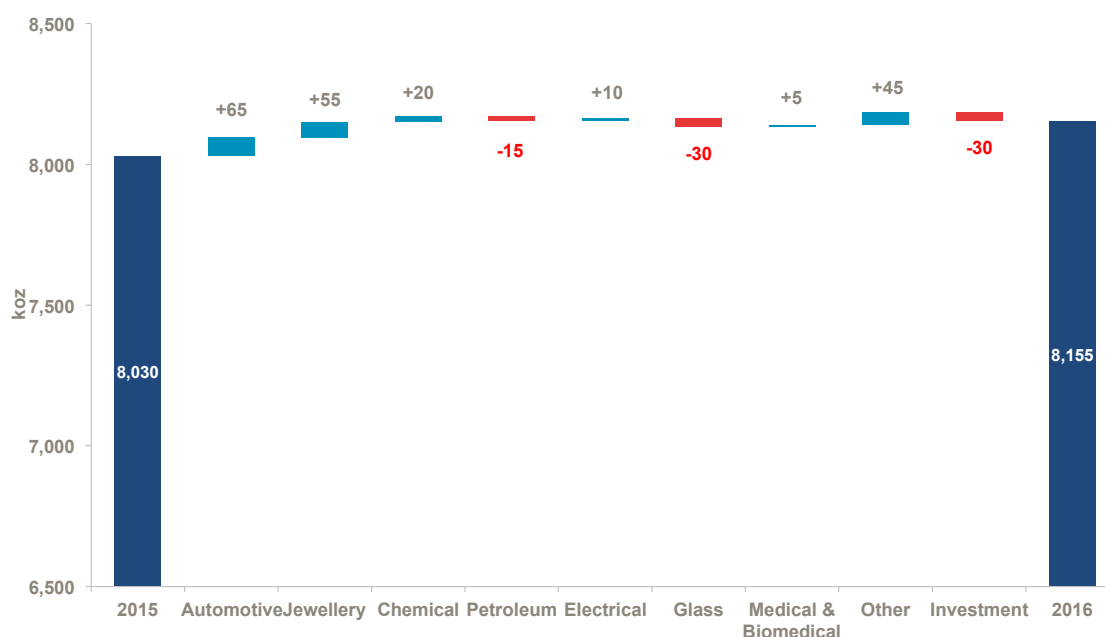
Total supply is forecast to expand by 6% (+430 koz) to 8,160 koz (Chart 13) while global demand is predicted to grow by 2% (+125 koz) to 8,155 koz in 2016 (Chart 15), leaving the market close to balance.

Automotive demand for platinum is expected to reach 3,315 koz in 2016, up 2% from 2015 with growth forecast in most regions, except in Japan where demand is likely to be unchanged and North America where a slight decline is anticipated.

Even prior to the VW scandal, diesel market shares in Western Europe were on a declining trend, losing some share to gasoline in smaller vehicles where the cost:benefit case for diesel is no longer as strong as it remains in medium and larger cars. Diesel car sales in Western Europe were up by 5% in 2014 and are estimated to grow by over 3% in 2015. Current sales forecasts show continued growth in 2016, albeit at a lower rate, up just over 1%.

The full impact of the VW crisis on powertrain choices and automotive sales is yet to play out, as investigations continue into both NO_x and CO₂ emissions from a number of automakers. The crisis has opened up the debate about compliance with emissions legislation and the discrepancies between real world driving and test bed emissions. The current forecast assumes a limited impact on diesel auto sales as consumer buying preferences do not appear to have been significantly affected so far.

Changes in demand by category, 2016f vs. 2015f (Chart 14)



Source: SFA (Oxford)

Jewellery sales are expected to return to very modest growth, with demand at 2,905 koz for 2016, up 2% from 2015. Marketing spend is essential to drive jewellery sales in China and Platinum Guild International (PGI) continues to adapt marketing efforts to maximise consumer interest and purchases.

India should see on-going demand growth as the Platinum Evara Blessings campaign continues to accelerate in its second year.

Platinum demand for industrial end-uses is projected to rise by an estimated 2% (+35 koz) year-on-year in 2016, with growth in the chemical (+20 koz), electrical (+10 koz), medical and biomedical (+5 koz), and other industrial (+45 koz) sectors outweighing shrinking demand for petroleum catalysts (-15 koz) and glass fabrication (-30 koz). Higher Chinese demand is expected to boost chemical consumption, although glass production is forecast to decline in Asia and the Rest of the World next year. The rate of

oil-refining capacity expansion is predicted to slow in North America, whilst the rate of capacity reductions is likely to accelerate in Western Europe.

Investment demand is forecast to be 130 koz in 2016. With a modest price recovery anticipated, but no new ETFs currently planned for launch next year, investment in ETFs should show modest growth, while bar and coin purchases are expected to return to a more typical, lower level.

ABOVE GROUND STOCKS

For 2015 as a whole, above ground stocks are forecast to decline by 300 koz to 2,440 koz.

In the third quarter, above ground stocks fell to 2,250 koz but are expected to end the year at 2,440 koz, as weaker jewellery and investment demand in particular are projected to contribute to a surplus in the fourth quarter.

In 2016 the market is forecast to be close to balance and above ground stocks are expected to end the year at 2,445 koz.

The WPIC definition of above-ground stocks is: the year-end estimate of the cumulative platinum holdings not associated with exchange-traded funds, metal held by exchanges or working inventories of mining producers, refiners, fabricators or end users.

PLATINUM QUARTERLY Q3 2015

Supply, demand and above ground stocks summary – annual comparison (Table 2)

	2013	2014	2015f	2016f	2015f/2014 Growth %	2016f/2015f Growth %
Platinum Supply-demand Balance (koz)						
SUPPLY						
Refined Production	6,070	4,880	5,845	5,965	20%	2%
South Africa	4,355	3,115	4,185	4,225	34%	1%
Zimbabwe	405	405	365	425	-10%	16%
North America	355	400	385	390	-4%	1%
Russia	740	740	720	730	-3%	1%
Other	215	220	190	195	-14%	3%
Increase (-)/Decrease (+) in Producer Inventory	-215	+350	-5	+100	-101%	-2100%
Total Mining Supply	5,855	5,230	5,840	6,065	12%	4%
Recycling	1,985	2,040	1,890	2,095	-7%	11%
Autocatalyst	1,120	1,255	1,310	1,485	4%	13%
Jewellery	855	775	575	605	-26%	5%
Industrial	10	10	5	5	-50%	0%
Total Supply	7,840	7,270	7,730	8,160	6%	6%
DEMAND						
Automotive	3,150	3,285	3,415	3,480	4%	2%
Autocatalyst	3,010	3,130	3,255	3,315	4%	2%
Non-road	145	155	160	165	3%	3%
Jewellery	2,945	2,990	2,850	2,905	-5%	2%
Industrial	1,490	1,570	1,605	1,640	2%	2%
Chemical	550	555	570	590	3%	4%
Petroleum	75	105	175	160	67%	-9%
Electrical	190	190	150	160	-21%	7%
Glass	155	175	150	120	-14%	-20%
Medical & Biomedical	235	240	250	255	4%	2%
Other	285	305	310	355	2%	15%
Investment	930	150	160	130	7%	-19%
Change in Bars, Coins	-10	50				
Change in ETF Holdings	905	215				
Change in Stocks Held by Exchanges	35	-115				
Total Demand	8,515	7,995	8,030	8,155	0%	2%
Balance	-675	-725	-300	5	-59%	-102%
Above Ground Stocks	4,140*	3,465	2,740	2,445	-11%	0%

Source: SFA (Oxford). *As of 31st December 2012.

PLATINUM QUARTERLY Q3 2015

Supply, demand and above ground stocks summary – quarterly & half-yearly comparison (Table 3)

	Q3 2014	Q4 2014	Q1 2015	Q2 2015	Q3 2015	H1 2014	H2 2014	H1 2015
Platinum Supply-demand Balance (koz)								
SUPPLY								
Refined Production	1,320	1,420	1,360	1,545	1,535	2,140	2,740	2,905
South Africa	870	980	940	1,130	1,110	1,265	1,850	2,070
Zimbabwe	95	95	95	80	115	215	190	175
North America	105	115	100	100	80	180	220	200
Russia	200	175	180	190	185	365	375	370
Other	50	55	45	45	45	115	105	90
Increase (-)/Decrease (+) in Producer Inventory	+65	-40	+60	-5	-30	+325	+25	+55
Total Mining Supply	1,385	1,380	1,420	1,540	1,505	2,465	2,765	2,960
Recycling	570	475	435	475	470	995	1,045	910
Autocatalyst	365	305	315	310	340	585	670	625
Jewellery	200	170	120	165	130	405	370	285
Industrial	5	0	0	0	0	5	5	0
Total Supply	1,955	1,855	1,855	2,015	1,975	3,460	3,810	3,870
DEMAND								
Automotive	775	825	875	875	825	1,680	1,605	1,750
Autocatalyst	740	790	835	830	785	1,600	1,530	1,665
Non-road	35	40	40	40	40	80	75	80
Jewellery	745	685	750	665	790	1,560	1,430	1,415
Industrial	370	415	400	395	405	785	785	795
Chemical	155	135	145	145	150	265	290	290
Petroleum	25	25	45	45	45	55	50	90
Electrical	50	50	40	35	40	90	100	75
Glass	20	55	35	25	45	100	75	60
Medical & Biomedical	50	70	60	70	50	120	120	130
Other	70	80	75	75	75	155	150	150
Investment	-175	0	-20	100	275	325	-175	80
Change in Bars, Coins	15	40	35	60	170	-5	55	95
Change in ETF Holdings	-95	-30	-50	45	110	340	-125	-5
Change in Stocks Held by Exchanges	-95	-10	-5	-5	-5	-10	-105	-10
Total Demand	1,715	1,925	2,005	2,035	2,295	4,350	3,645	4,040
Balance	240	-70	-150	-20	-320	-890	165	-170
Above Ground Stocks	4,140*	2,810	2,740	2,590	2,570	2,575	2,740	2,570

Source: SFA (Oxford). *As of 31st December 2012.

PLATINUM QUARTERLY Q3 2015

Regional demand – annual and quarterly comparison (Table 4)

	2013	2014	2015f	2016f	2015f/2014 Growth %	2016f/2015f Growth %	Q1 2015	Q2 2015	Q3 2015
PLATINUM GROSS DEMAND (koz)									
Automotive	3,150	3,285	3,415	3,480	4%	2%	875	875	825
North America	425	465							
Western Europe	1,350	1,450							
Japan	580	585							
China	125	115							
India	160	160							
Rest of the World	510	510							
Jewellery	2,945	2,990	2,850	2,905	-5%	2%	750	665	790
North America	200	230							
Western Europe	220	220							
Japan	335	335							
China	1,990	1,965							
India	140	175							
Rest of the World	60	65							
Chemical	550	555	570	590	3%	4%	145	145	150
North America	75	75							
Western Europe	45	50							
Japan	30	30							
China	160	165							
Rest of the World	240	235							
Petroleum	75	105	175	160	67%	-9%	45	45	45
North America	40	25							
Western Europe	-45	-15							
Japan	-30	5							
China	80	-5							
Rest of the World	30	95							
Electrical	190	190	150	160	-21%	7%	40	35	40
North America	20	20							
Western Europe	15	15							
Japan	20	20							
China	75	70							
Rest of the World	60	65							
Glass	155	175	150	120	-14%	-20%	35	25	45
North America	5	10							
Western Europe	-10	15							
Japan	0	-10							
China	80	60							
Rest of the World	80	100							
Medical and Biomedical	235	240	250	255	4%	2%	60	70	50
North America	90	95							
Western Europe	90	90							
Japan	20	20							
China	15	15							
Rest of the World	20	20							
Other industrial	285	305	310	355	2%	15%	75	75	75
Investment	930	150	160	130	7%	-19%	-20	100	275
Total Demand	8,515	7,995	8,030	8,155	0%	2%	2,005	2,035	2,295

Source: SFA (Oxford)

GLOSSARY OF TERMS

Above ground stocks

The year-end estimate of the cumulative platinum holdings not associated with: exchange-traded funds, metal held by exchanges or working inventories of: mining producers, refiners, fabricators or end-users. Typically, unpublished vaulted metal holdings from which a supply-demand shortfall can be readily supplied or to which a supply-demand surplus can readily flow.

Bharat Stage III/IV standards

Bharat Stage III is equivalent to Euro 3 emissions legislation. Introduced in 2005 in 12 major cities across India and enforced nationwide from April 2010. Bharat Stage IV is equivalent to Euro 4 emissions legislation. Introduced in 2010 in 14 major cities across India and set to be enforced nationwide from April 2017.

Diesel particulate filter (DPF) and catalysed diesel particulate filter (CDPF)

A DPF physically filters particulates (soot) from diesel exhaust. A CDPF adds a PGM catalyst coating to facilitate oxidation and removal of the soot. The terms are often used interchangeably.

Emissions legislation

Tailpipe regulations covering emissions of particulate matter, hydrocarbons and oxides of nitrogen.

ETF

Exchange-traded fund. A security that tracks an index, commodity or basket of assets. Platinum ETFs included in demand are backed by physical metal.

Euro V/VI emission standards

EU emission standards for heavy-duty vehicles. Euro V legislation was introduced in 2009 and Euro VI in 2013/2014; will be widely adopted later in other regions.

Euro 5/6 emission standards

EU emission standards for light-duty vehicles. Euro 5 legislation was introduced in 2009 and Euro 6 in 2014/2015; will be widely adopted later in other regions.

GTL

Gas-to-liquids is a refinery process that converts natural gas to liquid hydrocarbons such as gasoline or diesel fuel.

HDD

Hard disk drive.

HDV

Heavy-duty vehicle.

koz

Thousand ounces.

LCD

Liquid-crystal display used for video display.

LCV

Light commercial vehicle.

Lean NO_x traps (LNT)

Rhodium-based, catalyses the chemical reduction of NO_x in diesel engine exhaust to harmless nitrogen.

moz

Million ounces.

Net demand

A measure of the theoretical requirement for new metal, i.e. net of recycling.

Non-road engines

Non-road engines are diesel engines used, for example, in construction, agricultural and mining equipment, using engine and emissions technology similar to on-road heavy-duty diesel vehicles.

OECD

Organisation for Economic Co-operation and Development, consisting of 34 developed countries.

oz

A unit of weight commonly used for precious metals. 1 troy ounce = 1.1 ounces.

Paraxylene

A chemical produced from petroleum naphtha extracted from crude oil using a platinum catalyst. This is used in the production of terephthalic acid which is used to manufacture polyester.

PDH

Propane dehydrogenation, where propane is converted to propylene.

PGMs

Platinum-group metals.

Refined production

Processed platinum output from refineries.

Secondary supply

Recycling output.

Selective catalytic reduction (SCR)

PGM-free, converts harmful NO_x in diesel exhaust to harmless nitrogen, via a tank of urea solution. Used in heavy-duty diesel vehicles, increasingly competes with LNT in light-duty diesel vehicles.

SGE

Shanghai Gold Exchange.

Stage 4 regulations

European emission standards implemented in 2014 for non-road diesel engines.

Three-way catalyst

Used in gasoline cars to remove hydrocarbons, carbon monoxide and NO_x. Largely palladium-based now, some rhodium.

Tier 4 stage

Emissions standards phased in between 2008 and 2015 in the US for non-road vehicles.

WPIC

The World Platinum Investment Council.

Ounce conversion

1 million ounces = 31.1 tonnes

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