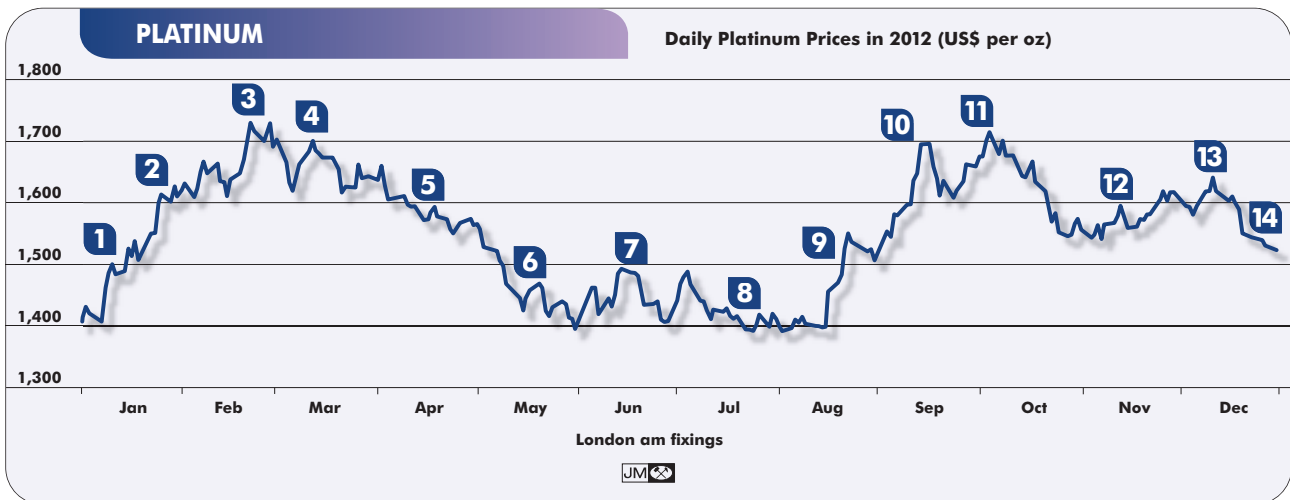


PRICES



Platinum made a strong start to the year after opening at \$1,408, reaching the 2012 high of \$1,729 by late February. These gains were eroded over the next three months by a combination of perceived weak demand, oversupply, a falling gold price and macroeconomic anxiety surrounding the eurozone. The price was rangebound between May and mid-August, finding support at \$1,400 and resistance at \$1,500, with a price of \$1,390 in early August marking the 2012 low. Prices staged a swift recovery on the back of labour disruption in South Africa, regaining the \$1,700 level in early October. For the rest of the year, platinum was supported by supply concerns and expectations of additional monetary easing, but undermined by a weakening gold price. With investors worrying about the USA going over the 'fiscal cliff', platinum closed the year on a weak note at \$1,523.

1 Platinum fixed at \$1,408 on the morning of 3rd January, the lowest opening New Year price since 2009. Better than expected European and Chinese manufacturing data and improved US jobs numbers gave investors the confidence that

Average PGM Prices in \$ per oz			
	2011	2012	Change
Platinum	1,721	1,552	(10%)
Palladium	733	643	(12%)
Rhodium	2,022	1,276	(37%)
Ruthenium	166	112	(33%)
Iridium	1,036	1,070	3%

Platinum and palladium prices are averages of London am and pm fixings. Other pgm prices are averages of Johnson Matthey European Base Prices.

had proved elusive in the final quarter of 2011, and platinum's price quickly rose. It was further bolstered by warnings from South African electricity provider Eskom of possible power shortages during routine maintenance. Speculative buying and a short-covering rally boosted the price to \$1,500 on the 12th, the highest in over a month.

2 A surprise announcement by the US Federal Reserve that interest rates would be kept on hold until late 2014 helped commodities to gain ground at the expense of the dollar. Platinum's price appreciated further late in January as an illegal strike began at Impala Platinum's Rustenburg operations. Investors bought heavily into the rising price, adding 380,000 oz to combined NYMEX and TOCOM net long positions.

3 Supply concerns intensified in February as over 17,000 illegally striking workers at Impala were dismissed and operations were suspended. Anticipating lower supplies, investors drove the price higher in the first half of the month. A loosening of Chinese monetary policy and a \$130 billion bailout for Greece, the eurozone's weakest economy, further stimulated risk appetite among investors. Platinum rose to \$1,729 on the 23rd, the peak price for the year and the highest price since September 2011.

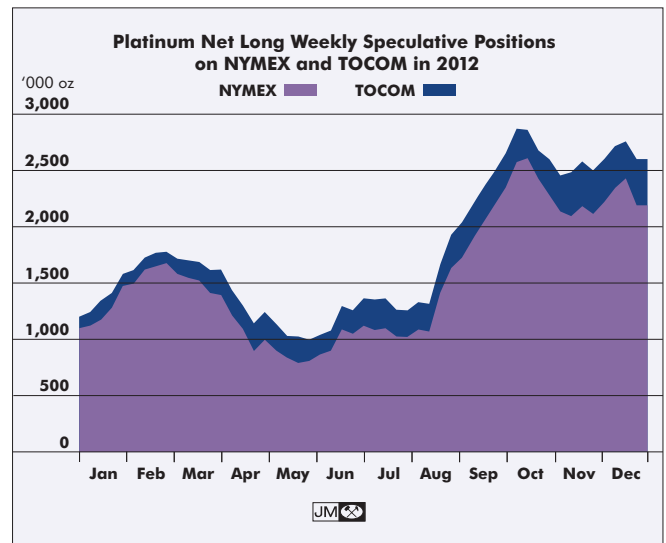
4 Profit-taking and the end of the illegal strike at Impala sent the platinum price sharply lower in early March, wiping off over \$100 in the week to the 7th. Strong physical buying re-emerged at this level, boosting the price briefly. Comments from the US Federal Reserve were widely interpreted as ruling out a further round of quantitative easing – the gold price plunged and the dollar soared in response. Platinum also lost ground in

mid-March but at a slower rate than gold, allowing the white metal to briefly recapture a price premium over gold.

5 Fresh concerns regarding the financial stability of the eurozone put pressure on risk assets in **April** as Spain missed targets to reduce its budget deficit. New passenger car registrations in the EU were reported to have fallen by 8% year-on-year in the first quarter of 2012, adding further to the gloom. Platinum slid below \$1,600 on 11th April and continued its downward trajectory for the remainder of the month. Combined net long positioning also fell, shedding over a third of a million ounces during April.

6 In **May**, reports of unemployment in the eurozone at record highs of almost 11% were sufficient to weaken the euro and trigger heavy falls in the precious metal complex. Platinum fell beneath \$1,500 for the first time since January on 9th May amid the general gloom. London Platinum Week saw a distinctly sombre mood prevail as South African producers weighed up the prospects of high costs and inadequate revenues against a backdrop of lower supplies and tapering demand. Liquidation in the ETF market saw cumulative platinum holdings trimmed to just under 1.5 million ounces by late May, leaving year-to-date net investment at around 37,000 oz. Combined net long futures positions, having declined in April and May, dropped below a million ounces for the first time since August 2009.

7 Prevailing weak platinum prices and rising costs for producers finally began to prompt action on the supply side in **June**. Aquarius put its Marikana mine on care and maintenance, while Eastern Platinum said it was suspending

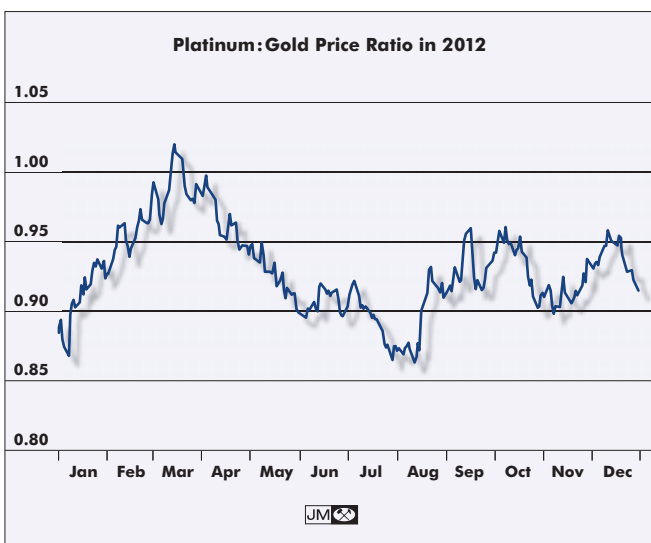


the development of its eastern limb assets pending better prices. These announcements appeared to be welcomed by the market and the price jumped to \$1,485 on the 14th.

8 Platinum was at the mercy of macroeconomic factors for much of **July**. Prices drifted downwards amid a risk-off backdrop as the full extent of bad loans in the Spanish banking sector became clear, adding further pressure to the ailing eurozone economy. Slack industrial demand and nervous anticipation of further downside led the price to reach a low for the year of \$1,390 on the afternoon of 3rd August, wiping out all of the gains in the year to date. With platinum cowed, the spread with gold widened to 0.86:1, a ratio not seen since 1985.

9 There were echoes of the earlier strike at Impala as an illegal walkout began at Lonmin's Marikana mine on 10th **August**. The dispute spilled over into violence between rival union factions, causing Lonmin to halt production at the mine. In unprecedented and shocking scenes, 34 striking miners were shot dead by the South African Police Service on the 16th. This tragic loss of life had an immediate effect on the platinum price as investors feared a prolonged disruption to operations and a spread of the conflict to other mines. Gaining over \$150 in the space of a few days, platinum reached \$1,549 on the 23rd. Futures markets rallied, with net long positioning increasing by over 600,000 oz in the last two weeks of August.

10 Platinum prices were underpinned by a volatile and highly fluid situation in the South African pgm mining industry during **September**, while also benefitting from a risk rally that followed the US Federal Reserve's announcement of a third



round of quantitative easing (QE3). As the strike continued at Lonmin, Anglo American Platinum suspended its Rustenburg operations in order to protect the workforce from intimidation. Driven by speculative investment rather than any physical shortages, platinum rose to a six-month high of \$1,697 on the 14th and net long platinum futures positions escalated to 2.5 million ounces by late September. Wage agreements at Lonmin and Impala and the re-opening of Anglo's operations saw prices soften somewhat, although further disruption continued to be anticipated by investors.

11 When Anglo initiated disciplinary action against 12,000 striking workers at its Rustenburg operations, the market reacted by bidding platinum up to \$1,714 on 5th **October**. With supply concerns by now fairly well discounted, the price strength was undermined by a progressively weak demand picture. In the European auto market Volkswagen reported a drop in profit and Ford announced the closure of three of its European vehicle plants in response to a deepening slump in vehicle sales. In addition, better-than-expected US economic data strengthened the dollar, weakening the precious metals. ETF investors sold into the falling price, liquidating 25,000 oz of platinum during the month, while futures market investors, after setting a new record-high of just under 2.9 million ounces net long positions, also became net sellers.

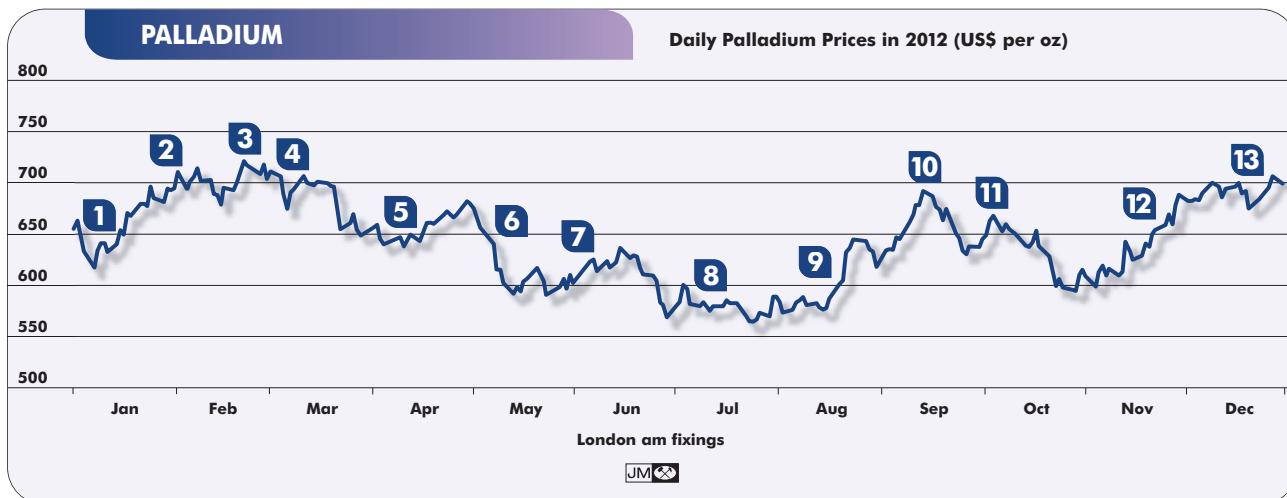
12 Platinum began **November** by weakening in line with gold in response to a positive non-farm payrolls report in the USA and a subsequently stronger dollar, although ongoing supply

challenges in South Africa provided support at around \$1,540. Mining concerns continued to provide positive motivation for investors, but this was tempered by weak end-user demand. Platinum edged up to \$1,594 by the 14th in response to the re-election of US President Obama, more in favour of monetary easing than his Republican opponent, Mitt Romney. This was followed by a price correction when Anglo announced it had reached agreement with striking workers, bringing to an end the two-month hiatus at the world's largest producer, and by the 16th platinum had fallen to \$1,554. In the same week, Johnson Matthey forecast that the platinum market in 2012 would be in deficit by the largest amount in a decade and this supported a steady rise in the price to \$1,617 at the month-end.

13 Another release of better than expected US employment data in early **December** boosted the dollar, pressuring platinum into a retreat to \$1,580 by the 6th. News of additional asset purchases by the Federal Reserve, a new bank bailout package for Spain and a debt management plan for Greece, then combined to weaken the dollar and strengthen the euro, boosting platinum to a month high of \$1,640 on the 12th.

14 Despite bullish signals, including higher than expected US third quarter growth, and sub-optimal production in South Africa, the platinum price began to decline. Concerns over the impending US 'fiscal cliff' that, by automatically invoking spending cuts and tax increases, threatened to tip the USA into recession, were dominant in investors' minds and contributed to year-end profit-taking and a closing platinum price of \$1,523.

Platinum Prices in 2012 London am and pm fixings, \$ per oz				Palladium Prices in 2012 London am and pm fixings, \$ per oz				Rhodium Prices in 2012 Johnson Matthey Base Prices, \$ per oz			
	High	Low	Average		High	Low	Average		High	Low	Average
January	1,626.00	1,403.00	1,506.83	January	698.00	616.00	658.94	January	1,450.00	1,350.00	1,385.71
February	1,729.00	1,609.00	1,658.07	February	722.00	679.00	702.67	February	1,550.00	1,475.00	1,514.29
March	1,704.00	1,607.00	1,656.66	March	713.00	648.00	684.89	March	1,525.00	1,400.00	1,487.50
April	1,659.00	1,550.00	1,587.21	April	682.00	635.00	656.21	April	1,400.00	1,375.00	1,384.47
May	1,566.00	1,405.00	1,468.73	May	681.00	590.00	617.33	May	1,385.00	1,260.00	1,348.48
June	1,493.00	1,396.00	1,447.13	June	634.00	568.00	612.72	June	1,250.00	1,250.00	1,250.00
July	1,487.00	1,391.00	1,426.41	July	601.00	564.00	579.34	July	1,250.00	1,165.00	1,227.95
August	1,549.00	1,390.00	1,450.14	August	645.00	573.00	600.14	August	1,165.00	1,100.00	1,125.65
September	1,697.00	1,543.00	1,620.78	September	702.00	624.00	657.53	September	1,400.00	1,100.00	1,175.00
October	1,714.00	1,539.00	1,636.00	October	668.00	593.00	633.55	October	1,225.00	1,100.00	1,185.87
November	1,620.00	1,541.00	1,576.52	November	688.00	598.00	635.64	November	1,150.00	1,100.00	1,134.09
December	1,640.00	1,523.00	1,588.86	December	706.00	675.00	691.19	December	1,125.00	1,080.00	1,094.47
Annual	1,729.00	1,390.00	1,551.73	Annual	722.00	564.00	643.22	Annual	1,550.00	1,080.00	1,275.86



The palladium price opened the year at \$655 in London and echoed the early price strength of platinum, reaching a high for the year of \$722 in February before positive market sentiment gave way to risk aversion and concerns about industrial demand. The price was briefly lifted by disruption to South African mining during August and into September, although this had a naturally greater impact on the platinum price, causing the price ratio between the two metals to widen to 2.62:1 in October 2012. This trend was reversed in the final two months of 2012, during which palladium posted gains of 15% compared to a loss of 3% in platinum, narrowing the ratio to 2.18:1 by the year end. The divergence was driven by palladium's more favourable fundamentals – good growth in demand for palladium in 2012, allied with disruption to primary supply from South Africa and declining output from Russia. As a result palladium closed the year on an upward trend at \$699.

1 Palladium opened the year at \$655, slightly up on the end of 2011 as the gloom that had enveloped the pgm markets in the final quarter began to lift. An estimated 10% rise in US new car and light truck sales in 2011, the fastest since the 1980s, helped give some upward momentum to the palladium price, although it quickly retreated to \$616 on 9th **January**.

2 Electricity supply concerns in South Africa, together with firm physical demand, helped put the palladium price on a rising trend for much of January and into early **February**. Comments from the CEO of Norilsk Nickel, the world's biggest palladium miner, confirmed that its pgm production would be flat or lower in 2012. Together with another rise in US car sales in January, this helped palladium to regain the \$700 level for the first time

in five months on 3rd February. Combined net long speculative positions increased by over 740,000 oz to 1.2 million ounces in the four weeks to 7th February, while ETF investment for the year to date rose to over 100,000 oz, reflecting a return of investor appetite for palladium.

3 The price dipped sharply in mid-February as investors reduced their exposure to industrial commodities in the wake of a credit rating downgrade for six European countries, including Italy, Spain and Portugal. Palladium proved relatively resilient, however, due to tightness in the availability of the metal in sponge form, and the price quickly recovered to reach \$721 on 23rd February. This was to mark the high point for the calendar year. Palladium was supported by lingering supply concerns, a weaker dollar and stronger platinum and gold prices.

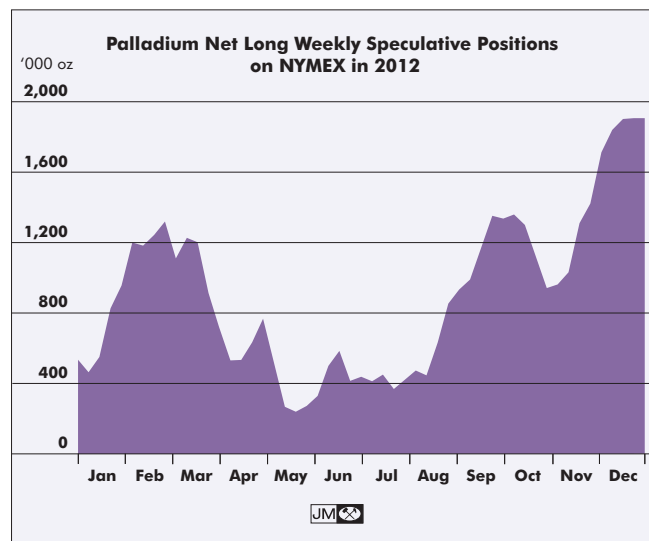
4 With palladium looking overbought, investors liquidated positions, bringing the price down. A fall in platinum as the Impala strike came to an end also affected palladium, which briefly reached \$675 on 7th **March**. This was despite positive news from the auto sector, in particular an 11% year-on-year rise in US auto sales for February which beat analysts' expectations, and rising sales in Japan aided by government subsidies. Unusually, as the palladium price was falling in March, ETF holdings continued to grow, suggesting investors still had confidence in the underlying market fundamentals.

5 Thin trading conditions in Europe around the Easter holiday meant that the palladium price behaved rather erratically, before settling on an upward trend. In contrast to platinum, which lost value in **April**, the palladium price was lifted by

news of a return to growth in the Chinese car market as well as generally positive investor sentiment, reflecting strong physical demand. Net long futures positions grew in line with price rises, adding 100,000 oz in the week to 24th April while ETF holdings were steady, unlike those of platinum, which declined.

6 Palladium saw its year-to-date gains wiped out in a sharp downward price correction in the first two weeks of **May**. Palladium's peak-to-trough decline was more severe than that for platinum, losing 13% of its value between 30th April and 14th May, in contrast to a 9% fall for platinum between 30th April and 16th May. The trigger for the fall in both metals was investor concerns over eurozone debt levels as well as dimmer prospects for growth in China and the USA. Risk aversion and a falling price triggered a steep sell-off in palladium futures, with combined net long positions shedding over half a million ounces in the first three weeks of May to leave palladium long futures positions at an historic low level of just under 250,000 oz. Illustrating the divergent behaviour of the futures and physical investment markets, investors in ETFs continued to add to positions as the price fell during May.

7 Johnson Matthey's 'Platinum 2012' publication, launched on 14th May, forecast a market deficit for palladium in 2012, due in part to lower Russian state stock sales and healthy autocatalyst demand. With the fundamentals in the palladium market remaining strong, the price clambered higher in the second half of May and into **June**. Palladium gained some support from a rising platinum price in early June, itself boosted by reports of mine closures in South Africa. Rising to

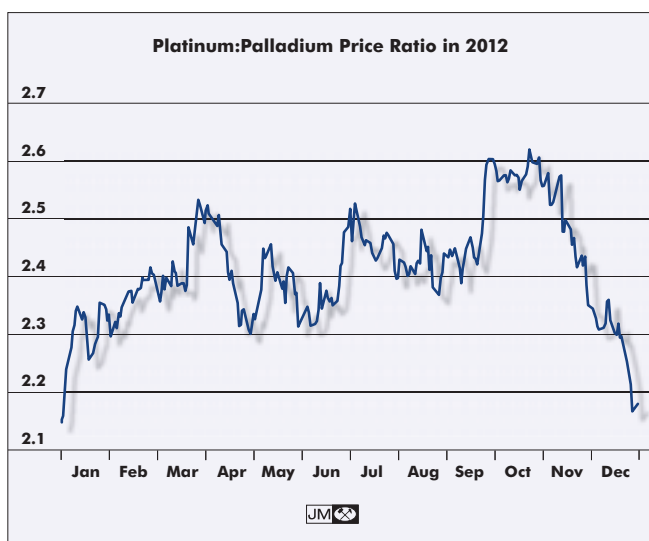


\$636 on 15th June, palladium once again came under pressure alongside the other precious metals as the US Federal Reserve slashed its growth forecasts and embarked on an extension of 'Operation Twist', designed to boost bank lending.

8 The price recovered in late June and into early **July**, as investors regained confidence in palladium following a loosening of monetary policy in China and the eurozone. Reports of improved domestic sales for US automakers and better sales in China also helped. Palladium was becalmed in mid-July before a sell-off in gold and platinum caused palladium to lose ground, dipping to a low for the year of \$564 on July 24th. Total physical investment in palladium ETFs continued to hold up relatively steadily at just over two million ounces in July, despite some light selling, perhaps reflecting some positions being out of the money at prevailing prices and also that some investors were seeing long-term upside for palladium.

9 After a somewhat quiet start to **August**, prices moved up rapidly in response to renewed supply concerns as a labour dispute at Lonmin developed into a violent confrontation between rival union factions. Between 14th and 24th August, the palladium price increased by 12%. News of a strike at Royal Bafokeng Platinum and fears of contagion further unsettled the market.

10 Early in **September** palladium made further gains as a double-digit rise in August US auto sales helped investor sentiment towards the metal. Palladium rose along with platinum as the South African supply situation deteriorated.



With operations shuttered at Lonmin due to inter-union violence and intimidation, Anglo Platinum's Rustenburg mines suspended and workers at Impala agitating for another wage increase, investors moved in. Following announcements of monetary stimulus in the eurozone, Japan and the USA, the price soared as part of a broad-based risk rally, rising to \$702 on the 14th, the highest level since March. It subsequently dropped back under pressure from speculative liquidation and technical selling late in the month.

11 Positive news from the North American automotive market helped the palladium price to regain some upward momentum in early **October**, with the price reaching a month high of \$668 on the 5th. Offsetting negative news from the European and Japanese auto markets, cheap credit in the USA supported growth in new light vehicle sales of 9.5% in September, the highest rate of expansion since the 'cash for clunkers' programme in 2009. As with platinum, there was a correction but it was relatively limited, palladium ending the month at \$606.

12 Although the palladium price moved in tandem with that of platinum on all but one of the 22 trading days in **November**, palladium's upward price movements were relatively more pronounced, ensuring that over the month as a whole palladium posted a gain of 13% compared to 3% for platinum. The palladium price was boosted early in the month by an announcement from Norilsk Nickel, the world's largest palladium miner, that its third quarter output was 4% lower than in the previous three months. Palladium rose to \$643 by the 14th and although the price dipped over the next couple of days on news that striking workers at Anglo Platinum were to resume mining, the anticipation of a market close to one million ounces in deficit in 2012, as forecast in Johnson Matthey's Interim Review, gave palladium a boost for the second half of the month. During the last two weeks in November the price rose by more than 10% (compared to 2% for platinum) to reach \$688 by the 30th, further supported by an increase of nearly half a million ounces in net long futures positions.

13 **December** marked only the second month of 2012 in which the direction of the palladium and platinum prices diverged, with palladium posting a 2% gain compared to a 6% fall in platinum. Price action during the month was nonetheless rather choppy, but ultimately the strong fundamental outlook for palladium stimulated a positive reaction from investors. ETF investors added 36,000 oz to holdings, while NYMEX

speculators added close to half a million more ounces to net long positions. Dollar depreciation towards the end of the month helped palladium to finish the year strongly, rising from a month low of \$675 on the 21st to \$706 on the 28th. This narrowed the Pt:Pd price spread to just 2.18:1, close to where it had begun the year, and significantly lower than its 2012 peak of 2.62:1 in October. A palladium price of \$699 brought 2012 to a close, marking a 7% gain over the year.

OTHER PGM

Beginning the year at the lowest level since 2009, the rhodium price gained some momentum in the initial two months of the year before succumbing to the prevailing weak market sentiment that also dragged down platinum and palladium. There was a brief price spike in mid-September, when the price jumped by \$300, and a short period of strength in October, when the price climbed by \$125. Apart from these episodes, rhodium was seemingly at the mercy of negative news while experiencing little of the periodic upside seen in the platinum and palladium markets. Overall, rhodium traded on average at \$1,276, 37% lower than in 2011.

Rhodium came under light selling pressure early in the New Year, resulting in the price falling from an opening Johnson Matthey Base Price of \$1,400 on 3rd **January** to \$1,350 on the 10th – the lowest price for 32 months. At this level, it attracted steady buying interest from Europe and Asia. This, together with supply side pressure coming from the prolonged strike taking place at Impala, helped rhodium to make gains, reaching a high for the year of \$1,550 on 14th **February**. At this point, Asian investors held back and light selling in Europe saw the rhodium price soften to \$1,525, where it remained until 15th **March**.

A year on from the earthquake and tsunami disaster in Japan, recovery in automotive production by Japanese manufacturers, the biggest users of rhodium in emissions control catalysts, failed to have much impact on the rhodium price, which continued to shed value under the pressure of selling in the market. Wiping out its gains for the year to date, the rhodium price declined to \$1,375 by mid-**April** before appreciating by \$10 in steady two-way trade.

Rhodium was not immune to the negative market conditions in **May**. With weak prospects for economic growth in the eurozone, the USA and China dominating the news wires, rhodium succumbed to selling pressure and dropped by 10% between 9th **May** and 1st **June** to reach \$1,250.

Rhodium remained unchanged at this level until 10th **July** with quiet trading. The price then softened for the remainder of the month as the weight of European selling overwhelmed Asian buying.

Subdued trading flows in **August** saw the price come under further pressure, reaching a new low for the nine-month period of \$1,100. Prices showed almost no reaction initially to the disruptions at Lonmin's mines in South Africa, rhodium gaining merely \$20 on Asian buying interest, before softening once again to \$1,100.

After remaining becalmed for the first half of **September**, speculators and industrial buyers moved to cover their rhodium requirements in the light of the disruption to South African pgm supplies. In the space of three days, the price gained \$300, briefly spiking at a five-month high of \$1,400 on the 18th. At this level, investors liquidated speculative holdings and the price dropped almost as quickly as it had risen, coming to rest at \$1,100 once again.

Rhodium gained \$125 in early **October**, reaching a month high of \$1,225 before selling by investors led to a \$100 retreat by month-end.

Price action during **November** and **December** was particularly subdued, despite Johnson Matthey's forecast of a market in deficit. By the end of 2012 the price had fixed at a new low of \$1,080 for the year, signalling a 23% decline since the start of 2012.

The price of ruthenium was on a declining trend in 2012, with the average at \$112, down from \$166 in 2011.

Ruthenium made gains in **January** and **February** on the back of industrial purchasing, increasing by 18% to \$130. The price weakened in **March** and early **April** amid a surfeit of sellers in the market to reach \$115, where it remained until mid-**August**. Immune from the wider price movements in the other precious metals markets, ruthenium then softened to \$110, where it remained until a further decline to \$90 occurred in **November**, marking the final price action of the year as well as a three-year low.

Price movements in iridium were infrequent in 2012, the price averaging \$1,070 compared to \$1,036 in 2011.

There was very limited activity in iridium between **January** and **July**, with the price having remained at \$1,085 since September 2011. The market finally succumbed to some selling pressure and a lack of buyers on 10th **July** to reach a new Johnson Matthey Base Price of \$1,070. Iridium fell by a further \$20 in **August** amid light selling and subdued buying, ending **September** at \$1,050, where it remained for the rest of the year.

