

# PLATINUM

- **Gross demand for platinum in autocatalysts rose by 1.7% in 2012 to 3.24 million ounces. Weak demand from the depressed European vehicle market was largely offset by demand for light vehicle autocatalysts in Japan, India and North America.**
- **Retail expansion and some building of stock in China were mainly responsible for a 12% growth to 2.78 million ounces in gross demand for platinum in jewellery.**
- **Industrial demand for platinum slumped by 21% to 1.57 million ounces, affected by a slowing of expansion in the glass industry, reduced production of hard disk drives in the electrical industry and the drawdown of inventory in both sectors.**
- **Platinum investment demand was steady at 455,000 oz due to strong investor interest in North America and higher production of coins worldwide.**

## AUTOCATALYST

The depressed light vehicle market in Europe and a lower market share for diesel vehicles led to a significant fall in demand for platinum in the region. However, a rebound in output of vehicles in Japan, a continued surge in the manufacture of diesel vehicles in India and increased demand for pickup trucks in North America made up for most of this decline. Demand for platinum autocatalysts for heavy duty vehicles also improved marginally. Our estimate of total gross demand, at 3.24 million ounces, now includes platinum required for catalysts to control exhaust emissions from diesel non-road mobile machinery. This number, previously recorded in our Other demand estimates, more than doubled in 2012 to reach 100,000 oz.

## Europe

European demand for platinum in autocatalysts, mainly for diesel engine cars, heavy duty vehicles and non-road mobile machinery, fell by 12% in 2012 to 1.33 million ounces.

The principal driver of the lower demand was the pronounced weakness of the European light vehicle market. According to the European automobile manufacturers association, ACEA, new car sales in the EU-27 countries fell by 8.2% in 2012 to 12.05 million units. In an already fragile market this represented the lowest number of registrations since 1995. The United Kingdom, where attractive price discounts drove strong demand from private buyers, was the only major market in the region to demonstrate growth at 5.3%. Car sales in France, Spain and Italy all declined, by 13.9%, 13.4% and 19.9% respectively, Italy posting the lowest new vehicle registrations in over three decades. Even the previously resilient German market was not immune to the weak economic sentiment. After starting the year positively, the rate of German new car

registrations progressively deteriorated in the second half, ending the year almost 3% down on 2011.

In line with the much reduced sales levels, total production of light vehicles in the region, including light commercial vehicles, fell by 7% to 17.24 million units, the lowest output since 2009. Several auto manufacturers cut production capacity during 2012, with more reductions expected in 2013.

Diesel vehicle output fell to a greater degree than gasoline vehicle production as the share of diesel vehicles sold in Western Europe contracted slightly in 2012 to around 55% of total light vehicle registrations. While sales of premium diesel vehicles held up relatively well, at the lower end of the market demand for cheap, fuel-efficient cars drove a steady expansion in the production of small cars in the A and B vehicle segments. The proportion of diesel engine vehicles in these small car categories is low relative to the mid-size C and D segment vehicles they have displaced. Consequently, the number of diesel vehicles produced in the region declined to less than half of total European vehicle output. The resulting negative impact on demand for platinum was exacerbated by further substitution of platinum by palladium in diesel catalysts.

In contrast, demand for platinum in the European heavy duty sector rose modestly in 2012. This growth was in spite of an estimated 10% decline in truck output in the region. Euro VI

Platinum Demand: Autocatalyst						
'000 oz						
	Gross		Recycling		Net	
	2011	2012	2011	2012	2011	2012
Europe	1,505	1,330	(445)	(370)	1,060	960
Japan	500	600	(75)	(80)	425	520
North America	370	405	(635)	(580)	(265)	(175)
China	105	105	(15)	(15)	90	90
Rest of the World	705	800	(70)	(85)	635	715
<b>Total</b>	<b>3,185</b>	<b>3,240</b>	<b>(1,240)</b>	<b>(1,130)</b>	<b>1,945</b>	<b>2,110</b>

Catalysts for controlling pollution from diesel vehicle exhaust.



emissions standards were introduced for heavy duty vehicles sold in the EU from January 2013 and some Euro VI vehicles were released during 2012 ahead of the application of the new rules. Most Euro VI vehicles are fitted with a full aftertreatment system comprising a diesel oxidation catalyst (DOC), pgm-coated diesel particulate filter (DPF), selective catalytic reduction (SCR) and ammonia slip catalyst (ASC), containing significantly more pgm on average than Euro V vehicles.

In the non-road mobile machinery sector, which covers a wide range of vehicles that use internal combustion engines, including agricultural, construction and industrial machines, demand for platinum in diesel emissions control catalysts increased off a low base. To meet European Stage IIIB emissions regulations, pgm-containing catalysts were introduced for diesel engines in the 130-560 kW power band in 2011. In 2012, the regulations were further rolled out to engines of 56-130 kW power, increasing overall catalyst fitment and platinum demand. More details on this component of autocatalyst demand are in our special feature on page 31.

## Japan

Demand for platinum for autocatalysts from the Japanese domestic motor industry, including non-road emissions control, increased by 20% to 600,000 oz in 2012.

In Japan, vehicle output in 2012 rebounded strongly from the depressed production levels following the Great East Japan Earthquake of March 2011. Total vehicle manufacturing in 2012 expanded to 9.7 million units, with both light and heavy duty segments recording the highest output since 2008. Total

domestic vehicle sales also rallied, recording the strongest annual total for five years.

Whilst light duty output grew by 20%, the production mix altered in 2012, with fewer diesel vehicles being made and the number of gasoline vehicles rising sharply, to account for 95% of all light vehicles manufactured in Japan. This reduction of the diesel share made little difference to demand for platinum, since gasoline cars built in Japan still use platinum in the catalyst mix.

Heavy duty output in Japan in 2012 returned for the first time to pre-recession levels. Most of the heavier vehicles for domestic sales, and for export markets with strict emissions legislation, were fitted with platinum-containing systems that included DOC, DPF and, if SCR was used for the control of nitrogen oxide (NOx) emissions, ASC. Many of the lighter vehicles in the heavy duty sector were fitted with lean NOx traps (LNT) to control NOx emissions, resulting in the additional use of a small amount of rhodium.

As with the rest of the automotive industry in Japan, the non-road sector produces machinery such as tractors and earth movers for a substantial export market. Consequently, Japanese non-road vehicle manufacturers were fitting platinum autocatalysts on vehicles in 2012 to meet tightening emissions legislation in not only the domestic market but in Europe and North America as well.

## North America

With most gasoline vehicles built in North America using palladium-rhodium catalysts, demand for platinum in the auto sector is increasingly reliant on diesel vehicle sales in the region. In 2012, pent-up demand for new diesel pickup trucks in the North American automotive market helped propel light duty diesel production up by 25%, to a record high of over half a million vehicles. There is a direct correlation between the number of new housing starts and pickup truck sales and, as building activity increased in 2012, contractors and landscaping companies felt confident enough to invest in new trucks. In addition to improved domestic demand, exports increased last year as some manufacturers consolidated production of specific models in the USA and shipped them elsewhere. This represents a significant shift from automakers' previous strategy of building vehicles where they are sold; since 2009, exports from North America to non-NAFTA countries have more than doubled.

The heavy duty sector in North America also thrived in 2012. The average age of trucks on the road hit a new high in 2010

as fleet managers and truck owners delayed purchases while the economy floundered. Since then, the average truck age has declined but still remains well over the historical average. As construction, housing starts and retail sales picked up last year, so did North American sales of heavy duty diesel trucks, rising by 14.5%.

While production of both light and heavy duty diesel vehicles rose strongly last year, the rate of increase in demand for platinum in road-going vehicles lagged behind, rising by only 1.8%. Platinum's less than stellar performance was due mostly to continued substitution of platinum with palladium by Japanese manufacturers in the light duty gasoline segment. However, demand for platinum received a boost from increased offtake in the burgeoning non-road mobile machinery sector, so that total demand in North America in 2012 was 405,000 oz, up by 9.5% compared to 2011.

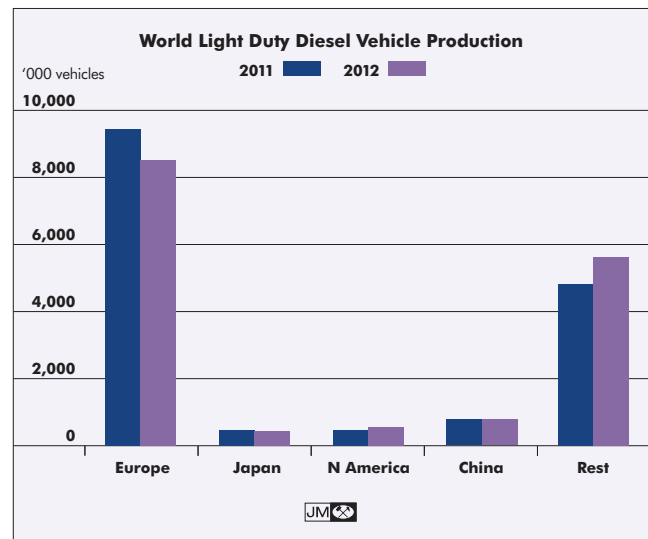
## China

Light duty vehicle production in China grew in 2012 to reach 16.8 million units. Fewer than 5% of these were powered by diesel engines, the key users of platinum-rich autocatalysts. However, there was a slight increase in the light duty diesel build in 2012, and despite a further postponement of China 4 emissions regulations for light duty diesels, which had been intended to apply nationwide in 2012, platinum consumption for diesel vehicles enjoyed some year-on-year growth.

Some foreign joint venture manufacturers in China use platinum in their gasoline vehicle catalyst mix, but they made fewer vehicles than in 2011. Chinese domestic manufacturers tend to fit only palladium-rhodium catalysts on their gasoline vehicles. Production of heavy duty diesels also declined, and as a result, overall gross demand for platinum in the Chinese autocatalyst sector remained flat in 2012 at 105,000 oz.

## Rest of the World

Platinum autocatalyst demand in other countries rose by 13.5% in 2012 to 800,000 oz. Thailand and India were the two markets registering the largest growth. In Thailand, the increase was due to production of light duty diesel vehicles growing by over 50% to 1.26 million units to meet strong domestic demand for pickup trucks. In India, where the auto market is three times the size of Thailand's, light vehicle output exceeded industry expectations, growing by 12% to just over four million units. Significantly for platinum demand, diesel vehicle production increased even more strongly, expanding



by over a quarter on 2011 levels.

Since the removal of price controls on gasoline fuel in June 2010, the gap between gasoline and diesel pump prices throughout India has widened as gasoline fuel costs have been rising in line with international prices. This has encouraged a growing number of cost-conscious Indian consumers to buy diesel cars, and in response vehicle manufacturers in the country have increased diesel vehicle supply. As part of a series of measures to reduce its fiscal deficit, in September 2012 the Indian government announced a 12% reduction to the subsidy on diesel fuel. However, even with the reduced support in place, diesel prices were substantially lower than gasoline prices for the remainder of the year and into early 2013, thus maintaining the incentive to purchase diesel vehicles. Diesel registrations received a further boost at the top end of the market with strong growth in SUV sales, the majority of which are diesel-fuelled. Almost half of the light vehicles produced in India in 2012 were powered by a diesel engine, a growth of around five percentage points on 2011. The expanding market share of diesel vehicles, combined with the overall growth in Indian vehicle output, resulted in an increase in platinum demand in India of almost 30% on 2011 levels.

## JEWELLERY

**Gross demand for platinum for manufacturing jewellery increased by 305,000 oz in 2012 to 2.78 million ounces. There was a surge of buying by manufacturers in China, in order to supply platinum jewellery to a growing number of retail outlets in Chinese cities. Manufacturers also took advantage of the relatively weak platinum price to increase**

**stocks to an extent. In India there was wider distribution of platinum jewellery in the retail network. The discount of platinum to gold during nearly all of 2012 made platinum jewellery more competitive with white gold in all markets.**

### Europe

Demand for platinum from the European jewellery industry increased by 5,000 oz to 180,000 oz in 2012, marking the first annual rise in demand since 2007 despite a significant slowdown in economic growth in the region. Lower platinum prices, both in absolute terms and relative to gold, have been a factor encouraging consumers to trade up to platinum, often at the expense of white gold, offsetting any retrenchment in consumer spending.

In the UK, where platinum retains a strong position in the bridal sector, the number of British-made hallmarked pieces rose by a modest 1.8%. Exhibiting stronger growth, the number of platinum jewellery pieces hallmarked in Switzerland in 2012 soared by 14% on the previous year, with the hallmarking of platinum watch cases climbing by 5% to just over 9,500 pieces, demonstrating continued recovery in demand for high-end luxury goods.

### Japan

Buying of platinum by the Japanese jewellery trade continued to show signs of consolidation in 2012 as year-on-year gross demand remained steady at 310,000 oz, supported by the first annual increase in overall platinum retail sales since 2009. Generally, a lower platinum price, both in absolute terms and relative to gold, helped platinum to gain market share in place of white gold. In some instances it also slowed the trend to save costs by making lighter weight platinum jewellery pieces.

At retail level, in the all-important bridal sector, in which the majority of rings are made in platinum, a decline in the weight

per wedding ring matched an increase in the number of rings sold, leaving the market flat on the previous year. Demand in the non-bridal sector grew thanks to the emergence of moderately priced platinum jewellery, with lightweight chains proving popular.

The increase in retail platinum sales was partly met by higher platinum jewellery imports and, as exports of platinum jewellery declined in 2012, domestic manufacturing of platinum was flat overall. With the amount of old jewellery recycled falling by 19% to 285,000 oz, demand net of scrap was positive in 2012 at 25,000 oz.

### North America

Purchasing of platinum by the North American jewellery industry in 2012 was flat at 185,000 oz. The pull-through effect on demand of greater sales of platinum jewellery at retail level was offset by a drawdown of inventory by manufacturers as they sought to operate leaner facilities.

Demand for platinum from the bridal sector remained largely unchanged. Platinum's favourable price relative to gold in 2012 helped to advance its share of the female bridal market, at the expense of white gold, by around 1%. However, this was balanced by a continued decline in the number of marriages. The marriage rate in the USA last year was 6.8 per thousand, compared to 8.2 per thousand ten years earlier, while in Canada the rate was also on a downward trend.

Demand from the non-bridal sector also remained fairly stable. Platinum jewellery continued to be in demand in the high-end market, both domestically and for export, but lower priced alternatives such as 14k white gold provided stiff competition in the mid-range market.

### China

Gross demand for platinum jewellery in China increased by 16% in 2012 to 1.95 million ounces, second only to the record 2.08 million ounces bought in 2009. Purchasing by the industry during the first three-quarters of the year was at a very strong rate. This was driven by continued retail expansion, in particular by Hong Kong brands into lower-tier mainland cities, and to a lesser extent by an increase in manufacturers' stocks as they took advantage of the weaker platinum price. Significantly lower purchasing by the trade towards the end of 2012 did not prevent full year purchasing of platinum by the jewellery trade on the Shanghai Gold Exchange from reaching a new record, surpassing the previous high of 2009.

Platinum Demand: Jewellery '000 oz						
	Gross <sup>1</sup>		Recycling <sup>2</sup>		Net <sup>3</sup>	
	2011	2012	2011	2012	2011	2012
Europe	175	180	(5)	(5)	170	175
Japan	310	310	(350)	(285)	(40)	25
North America	185	185	0	0	185	185
China	1,680	1,950	(455)	(600)	1,225	1,350
Rest of the World	125	155	0	0	125	155
<b>Total</b>	<b>2,475</b>	<b>2,780</b>	<b>(810)</b>	<b>(890)</b>	<b>1,665</b>	<b>1,890</b>

**NOTES TO TABLE**

- <sup>1</sup> Gross demand is equivalent to the sum of platinum jewellery manufacturing volumes and any increases in unfabricated metal stocks within the industry.
- <sup>2</sup> Recycling represents the amount of retailer stock and consumer jewellery recycled whether the metal is re-used within the jewellery industry or sold back to the market.
- <sup>3</sup> Net demand is the sum of these figures and therefore represents the industry's net requirement for new metal.

Reflecting the international spot price of platinum, which traded at a discount to gold all year apart from six days in March, the manufacturers' selling prices for platinum jewellery were lower than for gold jewellery throughout 2012.

Conversely, jewellery retailers – who by and large price jewellery by weight rather than per piece – maintained a relatively slender premium in the per gram price of platinum relative to gold. This had multi-fold effects that combined to help boost consumer demand for platinum in 2012.

Principally, it allowed retailers to benefit from even greater relative profit margins in platinum, compared to gold, than would ordinarily have been the case. Naturally, this translated into a retail sales strategy that tended to emphasise platinum jewellery in cases where the consumer was ambivalent towards the two metals.

At the same time the retail price of platinum was historically close to that of gold, making it easier to 'up-sell' platinum to consumers, who were finding for the first time that platinum was not very much more expensive than gold. Platinum jewellery was more affordable, particularly for the more price conscious younger consumers in lower-tier cities, with lighter weight designs also helping to boost sales in some regions. The fact that platinum maintained a retail premium, albeit only marginally, continued to reinforce the perception of platinum's exclusivity in the minds of many consumers.

Consequently, retail sales of platinum jewellery remained robust through the first three-quarters of 2012, if not necessarily keeping pace with the growth in retail stocks. In the final three months of the year the culmination of several successive quarters of deteriorating economic growth, combined with higher average precious metals prices, had an adverse impact on retail platinum jewellery sales.

Poor sales around the Mid-Autumn Festival and National Day in early October, traditionally a vibrant time of year for retailers, signalled the downturn. Accordingly, total new metal acquired by the trade for manufacturing in the fourth quarter declined by close to one-fifth on the previous three months of the year.

Despite this relatively weak end to 2012, the retail market as a whole exhibited strong growth, with platinum continuing to do well in both the bridal and fashion sectors. There was more consistent demand throughout the year for gem-set platinum jewellery: a lower platinum price, allied to a move by manufacturers to set smaller stones in platinum, helped to make diamond-set platinum jewellery more competitive with white gold pieces.

With recycling of scrap platinum jewellery rising by

Platinum jewellery distribution continued to spread in China last year.



145,000 oz in 2012 to 600,000 oz, year-on-year growth in net demand was pegged to 10%, reaching 1.35 million ounces for the year as a whole.

### Rest of the World

Demand in the Rest of the World region grew impressively in 2012, rising by 24% on the previous year to 155,000 oz. Most of this was due to continued expansion in the relatively young Indian market, which accounted for more than 70% of Rest of the World region demand.

Demand in India was driven primarily by further growth in the retail network. In a sign that platinum is playing an increasingly important and sustainable role in the Indian market, many large retail chains are incorporating bespoke retail space for platinum into the design of new outlets.

Profit margins on platinum jewellery at retail level in India were already greater than gold prior to 2012, prompting retailers to enter the platinum market. With platinum trading at a discount to gold on the international spot market throughout almost all of 2012, platinum was more competitively priced relative to gold than previously, leading to increased consumer offtake.

Effective marketing has helped to convert increased levels of stock into higher consumer purchases. The Platinum Guild's 'Platinum Day of Love' campaign in particular has been keenly received by the core 20-35 year age group in India. Even niche markets that have yet to benefit from sustained targeted promotion, such as men's jewellery, have shown promising signs of growth.

### INDUSTRIAL DEMAND

Demand for platinum in industrial applications fell by 405,000 oz in 2012 to 1.57 million ounces. This was largely the effect of changing conditions in the glass industry, where excess production capacity, combined with the use of platinum from decommissioned plants and existing inventories, led to a fall in purchases of metal. In the electrical industry, inventory adjustments and weaker demand for hard disk drives impacted purchases of platinum. Demand from the chemical sector was slightly lower than in 2011 while demand for platinum in medical, petroleum refining and other applications was stable.

### Chemical

Demand for platinum in the global chemical industry fell by 20,000 oz in 2012 to a total of 450,000 oz.

Platinum Demand: Chemical '000 oz			
	2010	2011	2012
Europe	110	120	110
Japan	50	35	35
North America	100	95	105
China	80	100	90
Rest of the World	100	120	110
<b>Total</b>	<b>440</b>	<b>470</b>	<b>450</b>

Platinum curing catalysts used in the manufacture of silicones make up the biggest area of demand for platinum in the chemical sector. Platinum is used in niche applications where fast, low temperature curing is required or where the end product has medical applications and relies on the biocompatibility of platinum. The mature markets of Europe, Japan and North America have previously led the growth in use of platinum cured silicones. Demand in these regions has reached a plateau, but fast growth is now taking place in China and the rest of Asia, although this as yet contributes only a small portion to total platinum demand.

Catalysts containing platinum are used in the synthesis of paraxylene, a raw material in the production of purified terephthalic acid (PTA), which is used to make polyethylene terephthalate (PET), mainly for polyester textile and plastic containers. Over the past few years growth in paraxylene capacity has been driven predominantly by new plant builds and expansions in China. However, the same levels of capacity increases cannot be anticipated going forward.

Demand for platinum as a gauze catalyst for the conversion of ammonia to nitric acid remained solid in 2012, with increased demand for fertilisers and explosives in Asia and South Africa more than offsetting a decline in European demand.

### Electrical

Gross demand for platinum in the electrical industry declined by 28% to 165,000 oz in 2012, with 95% of this reduction coming from the hard disk sector. Hard disk drives, which use platinum-containing disks to store data in personal computers, DVD players and other devices, are under increasing threat from solid state storage technologies which do not require pgm, such as those found in tablet computers and smart phones.

Consumer personal computer (PC) sales declined in 2012, due to a combination of economic uncertainty in several key markets and the technology shift to new computing devices, i.e. smart phones and tablets, which are now performing the majority of tasks previously requiring a PC or laptop. Hard disk manufacturers also sought to use existing inventories of platinum wherever possible, further reducing demand for metal last year.

Despite demand for platinum via the mobile and PC sector being under significant threat, growth in demand for hard drives in the business storage sector remains strong, driven by increasing digital content and larger file sizes.

Moving into 2013, demand for platinum is expected to increase as consumer purchasing improves and the trend to install more disks per drive continues in order to meet higher storage requirements.

Hard disks will continue to provide the best value data storage for many years to come and their use in combination with solid state memory as hybrid drives will continue to provide firm demand for platinum in the consumer market. 2013 sees the introduction of a new 5mm form factor hard disk drive, which is thin enough to fit the latest ultra-books.

Platinum Demand: Electrical '000 oz						
	Gross		Recycling		Net	
	2011	2012	2011	2012	2011	2012
Europe	20	15	(5)	(5)	15	10
Japan	25	20	0	0	25	20
North America	25	20	0	0	25	20
China	30	25	(5)	(5)	25	20
Rest of the World	130	85	0	0	130	85
<b>Total</b>	<b>230</b>	<b>165</b>	<b>(10)</b>	<b>(10)</b>	<b>220</b>	<b>155</b>

Hybrid drives will combine the benefits of fast solid state drive (SSD) power-up ability with the large storage capacity of the traditional hard disk.

## Glass

Platinum demand in the glass sector fell from 515,000 oz in 2011 to 180,000 oz in 2012, a decline of 65%. Excess production capacity in the glass fibre segment resulted in few new projects added during the year, while sales of platinum back to the market from redundant facilities further affected demand. Except in China, the display glass industry also suffered from overcapacity and experienced a sharp reduction in purchases of platinum, exacerbated by glass producers having stocks of metal to draw on.

Platinum Demand: Glass '000 oz			
	2010	2011	2012
Europe	10	30	5
Japan	90	130	10
North America	10	(5)	10
China	130	10	70
Rest of the World	145	350	85
<b>Total</b>	<b>385</b>	<b>515</b>	<b>180</b>

Compared with 2011, when purchases of platinum for glass were at a record, demand in 2012 fell by 335,000 oz to 180,000 oz. Demand for glass fibre used in lightweight, high-strength reinforcements for construction, transport and consumer goods markets, increased by more than 5% last year to reach 4.5 million tonnes. Despite this rise, average global capacity utilization of only 70% in glass fibre production plants, the result of a surge in new plant construction by Chinese manufacturers in 2007 and 2008, limited the need for platinum. An added negative effect on demand for new metal came from the recycling and reuse of platinum from decommissioned glass fibre plants using the less efficient 'marble melt' process.

Demand for platinum to produce display glass was also weaker last year. Although LCD televisions, which are a key driver of display glass production, continued to gain market share from both CRT and plasma display TVs, global sales of televisions fell by 6% in 2012 and sales of LCD TVs were slightly lower year-on-year. The rate of expansion in flat glass manufacturing capacity slowed in response, growing by only 11% last year compared with 13% annual growth in 2011 and 32% growth in 2010. Much of this demand was met by improvements to manufacturing processes that resulted in

higher output rates from existing equipment. However, Chinese manufacturers added seven new flat glass production lines in 2012 in pursuit of their goal to source all components for LCD TV production domestically. No additional capacity was added in Japan and the Rest of the World region.

## INVESTMENT

**Net identifiable physical demand for platinum reached 455,000 oz in 2012, 5,000 oz lower than in the previous year. Demand for platinum exchange traded funds (ETFs) was marginally higher compared to 2011. Significantly lower net purchasing of large bars in Japan was largely offset by a combination of an increase in demand for coins and small bars and the acquisition of metal for the launch of a new physically-backed product in North America.**

ETF investment throughout 2012 was strongly and positively correlated with price, more so than in any previous year. Around three-quarters of all growth in ETFs during the year occurred in a rising price environment, while over 80% of liquidation accompanied a falling price. Greater conviction from investors when the market was rising ensured that net ETF investment remained positive for the year at 195,000 oz, 5,000 oz higher than in 2011.

The year began strongly as ETF investors responded to a surge in the platinum price by buying close to 115,000 oz in the first two months, making up for most of the net disinvestment which had taken place in the final four months of 2011. There followed a three-month period during which the early gains in price were entirely relinquished and investors liquidated positions heavily. This included nearly 45,000 oz of platinum sold in May, the fourth largest monthly liquidation of ETFs on record. After a period of relative inactivity, the strong price response to the mining strikes in South Africa reignited investor interest, leading to over 105,000 oz of additional demand for platinum in August alone, the fourth largest monthly net inflow on record. Further net investment in September drove ETF

Platinum Demand: Investment '000 oz			
	2010	2011	2012
Europe	140	155	135
Japan	45	250	100
North America	465	10	190
China	0	0	0
Rest of the World	5	45	30
<b>Total</b>	<b>655</b>	<b>460</b>	<b>455</b>

platinum holdings to a new peak of over 1.7 million ounces, surpassing the previous record set 12 months earlier. In the fourth quarter, modest profit-taking occurred as the price weakened in response to easing tensions in South Africa, leaving total fund holdings by year-end at 1.65 million ounces.

In contrast to 2011, when two-thirds of net ETF demand emanated from the Zurich-based funds, net investment demand in 2012 came mainly from a return to strong growth in the two largest funds, based in London and New York. Net investment of over 95,000 oz in the ETF Securities London product signalled the first annual increase in holdings since 2009, while growth of 60,000 oz in its New York fund represented a four-fold increase on the modest net investment the previous year. November 2012 also marked the launch of a new ETF listed in Hong Kong, although by year-end it had yet to gain any significant momentum, net investment amounting to less than 2,000 oz.

Investors in the Japanese large bar market largely reverted to type in 2012, namely by investing in a falling price environment and selling on price upturns. However, there were three months in the year in which this pattern was reversed. Net investment increased during January and August while the price of platinum was rising, because both months were preceded by a period of sharply falling local prices. Conversely, in November the local platinum price was on the decline, but investors were able to sell at a profit due to the price having increased strongly during the preceding months. In all, the greater conviction of investors during periods of weaker prices ensured that the market recorded net positive investment for the fifth consecutive year although, at 100,000 oz, the total was 135,000 oz lower than in 2011.

Movements in the yen-dollar exchange rate added to price volatility throughout 2012. Starting the year at ¥76.7 to the dollar, close to record lows, the yen weakened during February and March, accentuating the platinum price rise in local currency terms. Several consecutive months of yen appreciation then exacerbated the subsequent reversal in the platinum dollar price. Towards the end of the year, the anticipation and eventual confirmation of the return to government of a Liberal Democratic Party promising stronger action to weaken the currency helped the yen to depreciate significantly, reaching ¥86.6 to the dollar at the end of December. This left the yen price of platinum 24% higher than at the start of the year, whereas the difference in the dollar price was only 10%.

December saw the launch and enthusiastic take-up by investors of the Sprott Physical Platinum and Palladium Trust, a fully-allocated closed-end trust listed on the New York Stock Exchange (NYSE Arca) and Toronto Stock Exchange (TSX). Full allocation of the 28 million units in the initial offering at an opening price of \$10 each enabled the fund to amass just over 80,000 oz of physical platinum.

2012 was a relatively strong year for small platinum bar and coin demand. In the most significant development, the Royal Canadian Mint restarted one-ounce Platinum Maple Leaf bullion coins early in the year, adding to the 30,000 limited mintage of one-ounce Platinum Platypus bullion coins from the Perth Mint. The US Mint also issued the fourth American Eagle Proof coin in its six-year annual commemoration of American democracy, adding another 15,000 oz to demand. Including some other numismatic releases, small bar and coin demand grew to 80,000 oz, more than twice the size of demand in the previous year.

