

# PLATINUM

Net global demand for platinum is forecast to fall by 4.4 per cent in 2009 to 5.92 million ounces. Gross automotive purchases are set to fall to 2.48 million ounces and industrial demand is forecast to drop to 1.16 million ounces. However, the low platinum price will drive net jewellery demand sharply higher to 2.45 million ounces globally. Net physical investment demand has also been strong and is expected to climb by 13.5 per cent to an estimated 630,000 oz.

## AUTOCATALYST

Gross demand for platinum from the automotive industry has been severely hit by the global slowdown in vehicle manufacturing and is expected to fall to 2.48 million ounces in 2009. This would represent a decrease of 33.0 per cent to the lowest global figure for demand since 2000.

## Europe

Demand for platinum from the European automotive sector is set to plummet by 900,000 oz to 1.07 million ounces in 2009. The sustained economic downturn will drive light duty vehicle sales across Europe 12.3 per cent lower to a forecast 15.8 million units this year. With auto makers also reducing inventories of unsold cars, production is expected to fall by 18.3 per cent.

Platinum demand has also been hit by a change in the type of vehicle purchased. Fleet purchases of new vehicles – predominantly diesel cars and vans – have been depressed throughout 2009.

The launch of incentive schemes in a number of European countries has helped to support vehicle production volumes, although the end of Germany's scrappage scheme in early September may affect sales in that country during the final quarter of 2009. However, where individual consumers have bought new vehicles under the various government incentive schemes, these have often been smaller, cheaper models, where diesel engines do not demonstrate their full economic value or where diesel variants are not available. Consequently, diesel market share fell throughout the first half of 2009 with only 45.9 per cent of all passenger cars sold in Western Europe during this period being diesel-powered, down from

52.7 per cent in calendar year 2008. Production will fall more sharply. With all diesel vehicles sold in Europe using platinum in their exhaust aftertreatment system, this will depress platinum demand.

There has also been an increase in the use of palladium in diesel oxidation catalyst (DOC) and particulate

filter (DPF) formulations in Europe. With over half of all DOCs and DPFs fitted to vehicles this year containing some palladium alongside platinum, demand for platinum will be cut further still.

However, the introduction of the first stages of Euro 5 emissions legislation – in September 2009 – for new light duty models is raising the proportion of new vehicles being fitted with platinum-containing diesel particulate filters, helping to increase platinum demand from the low levels of early 2009.

## Japan

Japanese auto makers are expected to purchase 465,000 oz of platinum this year for domestic production, a decrease of 23.8 per cent from 2008.

Production of passenger cars in Japan fell by 45.3 per cent in the first half of 2009 compared to the same period a year earlier. A large proportion of platinum bought by Japanese auto makers is used in catalysts fitted to vehicles sold into export markets with comparatively poor fuel quality. With sales in many Asian export markets such as Thailand weak, platinum demand is thus set to decline.

## North America

Platinum demand in the North American automotive sector is forecast to fall to 345,000 oz in 2009.

Production of light duty vehicles is expected to decrease by 30.9 per cent to 7.3 million units this year due to the recession in the USA. Low availability of credit, weak consumer purchasing and high inventories of unsold vehicles forced the auto makers to slash production in the first half of 2009. The US Government's scrappage scheme supported

Gross Platinum Demand: Autocatalyst '000 oz		
	2008	2009
Europe	1,970	1,070
Japan	610	465
North America	505	345
China	185	215
Rest of the World	430	385
<b>Total</b>	<b>3,700</b>	<b>2,480</b>

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the automotive market in the middle of 2009 but manufacturing will still fall sharply overall. Although few catalysts fitted here contain platinum, this decline in automotive output will drive platinum usage on light duty vehicles down to roughly 250,000 oz.

Dismal economic conditions have also weighed on the heavy duty diesel market. Few companies have invested in new trucks or in retrofitting older vehicles. Platinum demand from this sector is therefore forecast to fall by a third to roughly 100,000 oz despite some additional sales as firms renew their fleets before new emissions rules are introduced in model year 2010.

### China

Chinese light duty vehicle production is expected to climb from 8.3 million units in 2008 to 10.6 million units this year, making China the largest vehicle market in the world. Although diesel market penetration remains low in the light duty vehicle sector, total platinum demand is forecast to climb by 16.2 per cent to 215,000 oz.

New emission rules were implemented in mid-2008 with Euro 4 equivalent limits applying in the cities of Beijing, Guangzhou and Shanghai and Euro 3 equivalent regulations elsewhere in the country. These have raised average platinum group metal loadings and, since they will be in force for the whole of 2009, will provide an additional boost to demand this year.

### Rest of the World

Autocatalyst demand for platinum from the Rest of the World region is forecast to fall by 45,000 oz to 385,000 oz this year. Although there are bright spots such as Brazil and India where output will rise, vehicle production will fall in most countries. In Korea, where many diesel cars are manufactured for sale in Europe, a fall in exports has hit platinum demand.

### Autocatalyst Recovery

The weight of platinum recovered globally from spent autocatalysts is forecast to drop by 28.6 per cent in 2009 to only 800,000 oz. High metal prices encouraged extraordinarily high levels of autocatalyst recovery during early 2008. With these stocks having been run down last year and fewer new vehicles

being purchased, the number of scrap catalysts available for reprocessing fell. As a result, the volumes of catalyst processed in the first half of 2009 were barely half what they had been one year earlier.

Recycling rates have started to recover as the introduction of numerous scrappage schemes has increased the number of spent autocatalysts returning to scrap processors. Nonetheless, the amount of platinum recovered will not quickly rebound to previous levels.

Platinum Demand: Autocatalyst Recovery		
	'000 oz	
	2008	2009
Europe	(385)	(290)
Japan	(60)	(50)
North America	(620)	(395)
China	(15)	(20)
Rest of the World	(40)	(45)
<b>Total</b>	<b>(1,120)</b>	<b>(800)</b>



## JEWELLERY

**Despite a difficult economic climate, a fall in the platinum price compared to 2008 has reinvigorated the platinum jewellery market in China and depressed jewellery recycling in Japan. Overall, global net demand is forecast to rise by almost 80 per cent to a net 2.45 million ounces in 2009.**

### Europe

Purchases of platinum by the European jewellery industry are set to fall by 15,000 oz to an estimated 185,000 oz in 2009.

The European luxury jewellery manufacturers have struggled with the effects of the financial crisis. Despite strong exports to Asia, sales have fallen and demand for platinum will decrease. Platinum use in the Swiss watch industry will also drop, reflecting lower production of the most expensive watches. The manufacturers and distributors of these products have minimised stock levels due to the recession and demand will fall as a result.

The UK platinum jewellery market has, though, performed fairly well so far this year, supported by a robust bridal market. While disposable consumer spending has fallen, the affordability of platinum has improved. The number of pieces hallmarked in the first half of 2009 fell by only ten per cent from the same period one year earlier. Economic conditions have since started to improve and the outlook for the jewellery industry for the remainder of 2009 has

brightened, with platinum demand likely to be steady year-on-year in this market.

## Japan

Net Japanese platinum jewellery demand is expected to climb by 255,000 oz to 310,000 oz. This higher figure for net demand in 2009 better reflects the underlying health of the jewellery sector than the 2008 figure.

The amount of recycling of old jewellery will fall to an estimated 230,000 oz this year. The lower metal price has reduced the incentive for consumers to trade-in broken or old jewellery. Although a recycling infrastructure now exists, the lower price has also driven some recyclers from the market, further reducing the amount of metal recovered.

Platinum retains a strong position in the jewellery market in Japan and the fall in its price – in absolute terms and relative to gold – has increased the weight of metal sold this year. Where jewellery stores have reduced retail prices, sales of platinum jewellery have strengthened, partly at the expense of white gold. However, where retailers have maintained selling prices in order to realise a profit on jewellery purchased at higher prices, sales have remained weak.

Sales of chain – including the semi-investment Kihei chain – have also been strong. With an increasing amount of chain produced in Japan for export to China, manufacturing volumes of platinum jewellery in Japan are expected to rise marginally this year.

## North America

The jewellery market in North America has struggled with worsening economic conditions and net platinum

demand is forecast to fall 28.2 per cent this year to only 140,000 oz.

The regional economy has been particularly weak throughout 2009 and spending on all jewellery and other discretionary items has been starkly lower than in 2008. Platinum has not escaped from this wider trend and retail sales have fallen with, for instance, a noticeable drift towards lower cost materials in the men's wedding band segment. With little credit available, retailers have again reduced working stocks, further hurting demand.

## China

The lower platinum price of 2009 compared to the previous year has had a hugely positive effect on net jewellery demand within China which is expected to rise to a record 1.75 million ounces.

Retailers and wholesalers had previously minimised their stocks of platinum in response to the rising metal price of recent years. Once the price fell, they took the opportunity to replenish stocks, adding counter space and replacing white gold jewellery with platinum jewellery in many cases. Attractive profit margins also encouraged new retailers into this sector. This widespread restocking drove a dizzying increase in production by the jewellery manufacturers in late 2008 and the first half of 2009 in particular.

Consumer purchasing has also responded to the fall in the platinum price. Improved affordability and continued domestic economic growth have considerably boosted the weight of platinum sold. The low price differential between gold and platinum has also allowed platinum to recapture market share from white gold jewellery. Together, these trends increased net platinum demand in the first half of 2009 to over one million ounces in China alone.

Price movements have also impacted upon jewellery recycling. The fall in the price of platinum during the second half of 2008 reduced the economic incentive for both consumers and retailers to recycle old jewellery – whether for cash or in part exchange for a new piece of jewellery. The proportion of recycled platinum used in jewellery manufacturing dropped from a peak of fifty per cent in early 2008 to below ten per cent at the start of 2009. However, recycling volumes have since increased as metal prices have

Platinum Demand: Jewellery '000 oz						
	Gross <sup>1</sup>		Recycling <sup>2</sup>		Net <sup>3</sup>	
	2008	2009	2008	2009	2008	2009
Europe	205	190	(5)	(5)	200	185
Japan	530	540	(475)	(230)	55	310
North America	200	145	(5)	(5)	195	140
China	1,060	2,050	(210)	(300)	850	1,750
Rest of the World	65	65	0	0	65	65
<b>Total</b>	<b>2,060</b>	<b>2,990</b>	<b>(695)</b>	<b>(540)</b>	<b>1,365</b>	<b>2,450</b>

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### NOTES TO TABLE

<sup>1</sup> Gross demand is equivalent to the sum of platinum jewellery manufacturing volumes and changes in unfabricated metal stocks within the industry.

<sup>2</sup> Recycling represents the amount of old stock and old jewellery recycled whether the metal is re-used within the jewellery industry or sold back to the market.

<sup>3</sup> Net demand (our headline figure) is the sum of these figures and therefore represents the industry's net requirement for new metal.

risen and the amount of metal recovered from old jewellery is forecast to climb to 300,000 oz.

Although the platinum price has risen since the start of 2009, retail prices remain some way below the levels of late 2008, suggesting that consumer purchasing should stay close to its current elevated level. However, with the amount of recycled metal being used in jewellery manufacture rising, and with restocking essentially complete, we expect net demand for the second half of the year to be closer to 700,000 oz.

### INDUSTRIAL

**Industrial demand for platinum is forecast to drop by 31.5 per cent to 1.16 million ounces in 2009 due to weak production and inventory reductions in many sectors in the first half of the year in particular.**

The chemical industry is expected to purchase 355,000 oz of platinum this year, 45,000 oz less than in 2008. Falling commodity prices have hurt demand for nitric acid and demand from this sector will decrease. Lower capital investment will mean less construction of new chemical facilities, denting demand for platinum for use in process catalysts too. The petroleum refining industry will also be affected by a decline in capital investment and demand here will fall to 205,000 oz.

Demand for platinum from the glass industry is set to tumble from 320,000 oz in 2008 to 35,000 oz in 2009. The fibre glass industry has suffered from overcapacity this year and few new facilities have been constructed, even in China, and platinum demand will be very much lower than in 2008. The closure of further CRT glass production facilities will also return some metal to the market. Platinum demand for the production of LCD glass for flat screen televisions will decline too as few factories are built during the economic downturn.

Platinum Demand: Industrial '000 oz		
	2008	2009
Chemical	400	355
Electrical	225	175
Glass	320	35
Petroleum	240	205
Other	500	385
<b>Total</b>	<b>1,685</b>	<b>1,155</b>

Platinum demand from the electrical sector is forecast to fall from 225,000 oz to 175,000 oz. Sales of electronic devices were very weak during early 2009 but have since rebounded: PC sales, for instance, are likely to reach a similar level to last year. However, the market share of notebook and laptop computers, which use smaller hard disks,

has grown, reducing the platinum content of a typical device. Together with destocking of materials and components earlier in the year this has driven platinum demand lower.

### INVESTMENT

**Net investment demand for platinum is forecast to rise to 630,000 oz in 2009, some 75,000 oz above the already extraordinarily high figure for 2008.**

Investors in Exchange Traded Funds (ETFs) are expected to purchase a net 355,000 oz of platinum in 2009, rather more than last year's 105,000 oz. Investment flows into the Swiss-based fund have been relatively steady throughout the year but investment into the London-based fund has been more volatile with periods of heavy buying in March and April.

The London-based fund obtained a cross-listing in Japan in August, generating a small amount of additional buying interest which is included in our European demand figure. The launch of a separate Australian-based fund in January 2009 has so far led to below 5,000 oz of incremental investment which is included in our Rest of the World figure. Plans to launch a US fund were revealed in April 2009 but there is currently no indication of when this might occur.

Japanese investors are also expected to purchase a net 170,000 oz of metal through accumulation plans and in the form of over-the-counter sales of large bars this year. The sharp fall in the platinum price and worries over the global economy drove very strong purchasing of platinum as a "safe haven" investment at the end of 2008 and in early 2009. However, as the world's economy has stabilised, buying interest has subsided and physical investment demand will be lower than last year in Japan.

Demand for coins and small bars is set to rise to 95,000 oz in 2009 due to increased interest in investing in precious metals in North America. However, although the Royal Canadian Mint and the Australian Mint have produced platinum coins this year, the US Mint did not offer any Platinum Eagle coins for sale in the first three quarters of 2009.

Platinum Demand: Investment '000 oz		
	2008	2009
Europe	105	355
Japan	385	170
North America	60	100
China	0	0
Rest of the World	5	5
<b>Total</b>	<b>555</b>	<b>630</b>