

## Platinum (Q4, 2014 and Q1, 2015)

### Insight: Business Preservation

The past six months were even more difficult than anticipated some six months ago. Platinum prices continued downwards to five year lows and consensus price estimates indicate that 2014 price levels will only be reached in 2017. Thus a challenging two years lay ahead for producers.

The focus of the South African miners, who hold about 80 percent of the world's platinum reserves and produce more than half of world's platinum supply currently, are on protection of the business for all stakeholders until the demand increases and prices recover. The strategies are all around efficiencies, cost containment and cash preservation. The focus around efficiencies is related to restructuring core operations and exiting of non-core operations. The focus around cost containments has been ongoing for a few years now and further reductions of head count are on the cards. The focus on cash preservation is linked to the prioritization of capital expenditure.

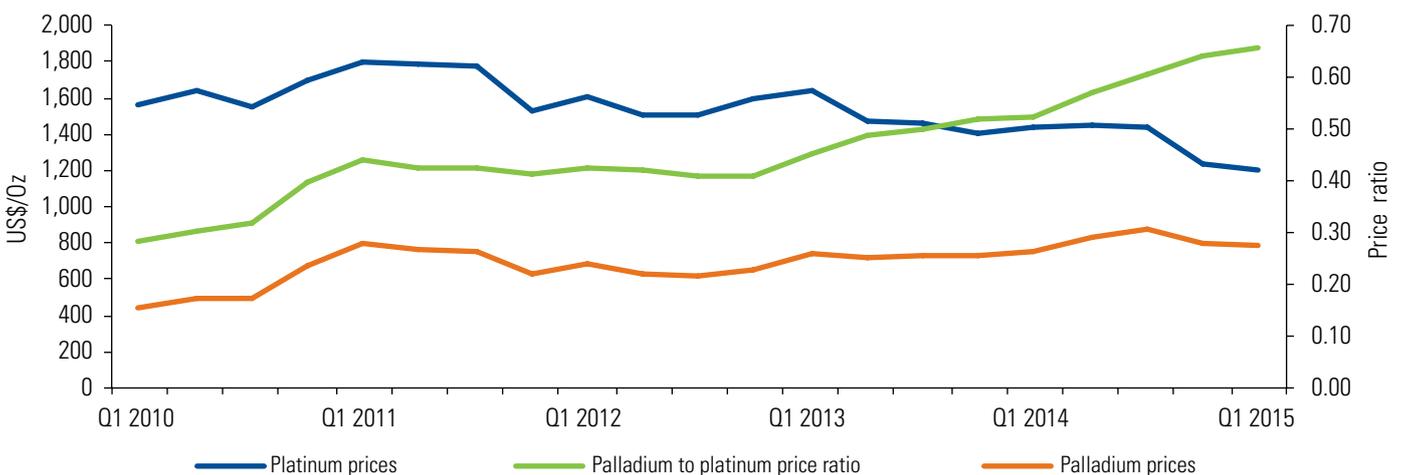
“The strategies are all around efficiencies, cost containment and cash preservation.”

**Alwyn van der Lith**  
KPMG in South Africa

An indication of the tough times in the Platinum industry is the decision by Glencore to distribute (in specie) their 23.9 percent interest in Lonmin to shareholders. Glencore indicated that a market disposal of the Lonmin stake would not be in the best interests of its shareholders and allowed shareholders to decide after distribution how they will deal with their interests in Lonmin and the Platinum industry.

### Price outlook<sup>1</sup>

**Figure 1: Platinum and palladium quarterly price trends, Q1, 2010–15**



Source: Price Charts, Platinum Today, <http://www.platinum.matthey.com/prices/price-charts>, accessed 09 April 2015

<sup>1</sup> Sources: Price Charts, Platinum Today, <http://www.platinum.matthey.com/prices/price-charts>, accessed 09 April 2015; Platinum Supply and Demand, Market data tables, Platinum Today, accessed 09 April 2015; J.P. Morgan Cazenove – Platinum Year 2015 – Platinum price and producers under pressure – Mechanized miners make hay, 06 February 2015; Deutsche Bank Markets Research – Platinum group metals, Platinum: cash constraints will ultimately result in supply ‘discipline’, 31 March 2015; Morgan Stanley – Metals & Mining – 2Q15 – Quarterly Global Price Deck Changes, 24 March 2015; RBC Capital Markets – RBC Metals and Mining – Favoring base metals amidst cuts in commodity price deck, 08 March 2015; UBS Research – European Mining Sector – Are Rio & BHP still Buys at spot prices?, 15 January 2015; Societe Generale – Metals and Mining – Mining sector back in favor... the rally is just starting, 25 February 2015; BMO Capitals Markets Research – Global metals and mining, February 2015; via Thomson Research/Investext, accessed 09 April 2015; “Strong dollar sends platinum to five-year low”, Financial Times, 01 October 2015, accessed 09 April 2015

Platinum prices dropped to a five-year low in March 2015 – reaching US\$1,099 – the lowest since July 2009. Prices for platinum declined by ~16 percent in Q1, 2015, as compared with the Q1, 2014 value. The drop in prices was significantly lower compared to gold and silver over the last year and also lower than forecasts discussed in our previous bulletin, due to the strengthening of the US Dollar and continued weakening of the South African Rand and the Russian Ruble – currencies of major producer nations. Other major currencies from key demand regions – such as the Euro and Japanese Yen – weakened compared to US Dollar.

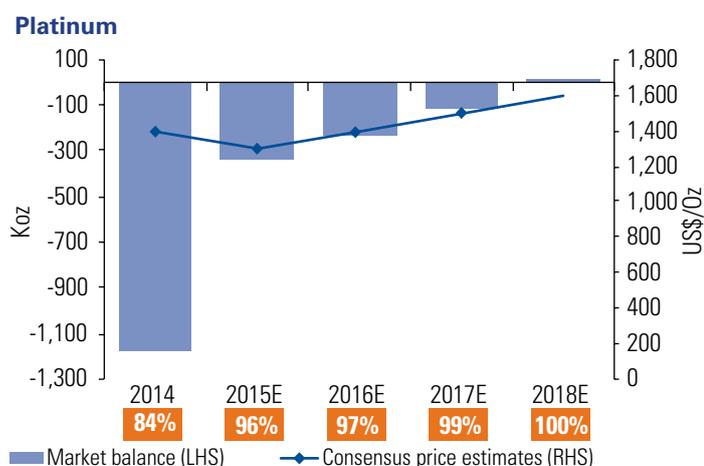
Palladium’s recent price weakness can be attributed to the weather conditions that resulted in sluggish demand for US vehicle sales. In addition, palladium prices were impacted by weakness in producer currencies of countries such as

South Africa (SA) and Russia – which collectively accounts for 60 percent of the global palladium production. Palladium is a by-product of platinum production in South Africa and therefore, its price weakness is indirectly contingent to platinum prices.

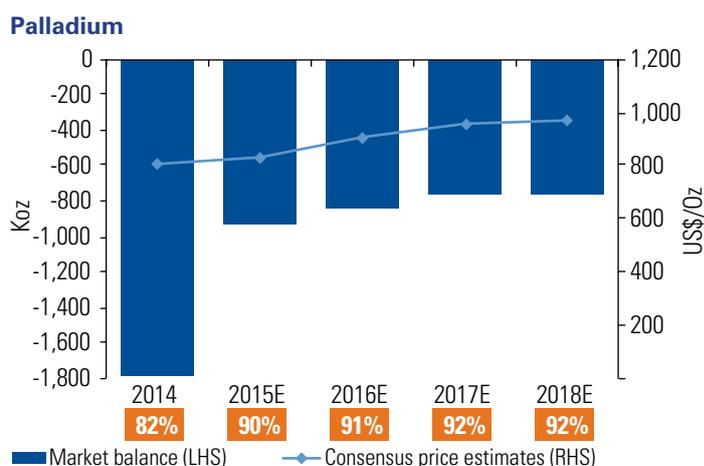
Platinum prices are projected to remain low in 2015, gaining momentum only in 2016 when controlled South Africa mine production and growing primary demand tightens the metals market. As per RBC Capital Markets, with the abundant above-ground stockpiles of platinum and relatively sluggish diesel auto catalyst demand outlook, platinum prices are forecasted to drop even further till early 2016.

However, the palladium price outlook is stronger driven by the increasing shift of diesel vehicles to gasoline, with the strict emission legislations in place.

**Figure 2: Platinum consensus price forecasts and market balance, 2014–18E**



**Figure 3: Palladium consensus price forecasts and market balance, 2014–18E**



Sources: Price Charts, Platinum Today, <http://www.platinum.matthey.com/prices/price-charts>, accessed 09 April 2015; J.P. Morgan Cazenove – Platinum Year 2015 – Platinum price and producers under pressure – Mechanized miners make hay, 06 February 2015; Deutsche Bank Markets Research – Platinum group metals – Platinum: cash constraints will ultimately result in supply ‘discipline’, 31 March 2015; Morgan Stanley – Metals & Mining – 2Q15 – Quarterly Global Price Deck Changes, 24 March 2015; RBC Capital Markets – RBC Metals and Mining – Favoring base metals amidst cuts in commodity price deck, 08 March 2015; UBS Research – European Mining Sector – Are Rio & BHP still Buys at spot prices?, 15 January 2015; Societe Generale – Metals and Mining – Mining sector back in favor...the rally is just starting, 25 February 2015; BMO Capitals Markets Research – Global metals and mining, February 2015; via Thomson Research/ Investext, accessed 09 April 2015

Orange boxes in the above graphs represent demand fulfillment capability. Demand fulfillment capability is defined as the percentage of global annual demand of platinum/palladium, which can be met from existing global annual supply of platinum/palladium

Prices for platinum are expected to increase at a CAGR of 3.5 percent from US\$1,387/Oz in 2014 to US\$1,593/Oz in 2018. Those for palladium are expected to increase at a higher CAGR of 5 percent, from US\$805/Oz in 2014 to US\$975/Oz in 2018. Both the commodity price growth will be influenced by increasing demand from European auto industry and Asian jewelry market, particularly China and India.

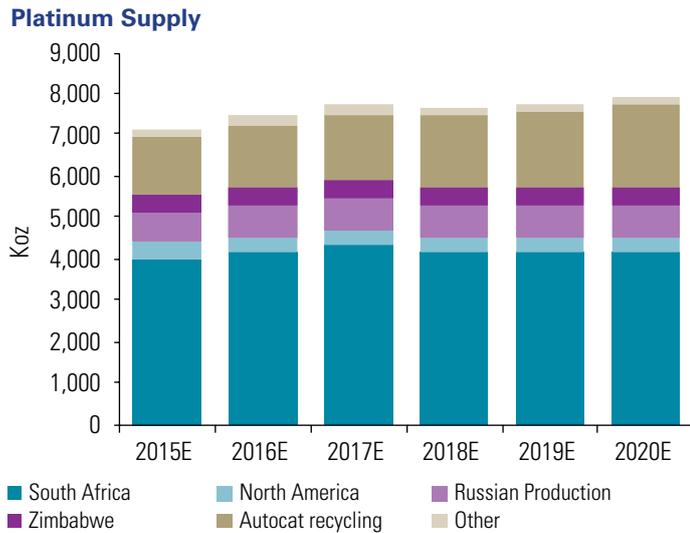
The market balance (global supply of platinum/palladium less the global demand of platinum/palladium) is expected to reach 334Koz and 940Koz for platinum and palladium, respectively (a y-o-y decrease of about 72 percent and

47 percent, respectively), in 2015. With the recovery of the South African mines production, post-strike toward the end of 2014, it is expected that the deficit will narrow down over the next few years. The autocatalyst industry accounts for the highest demand for palladium. With the increase in vehicle sales in the emerging nations (particularly China), it’s expected to grow aggressively, supported by the stringent vehicle emission standards in these nations. According to JPM, the driver for price recovery of palladium will be the rising car sales in the US and China market, along with increased investor demand as the market tightens further.

# Supply and demand<sup>2</sup>

## Supply

**Figure 4: Primary global supply of platinum, 2015E–20E**



**Figure 5: Primary global supply of palladium, 2015E–20E**



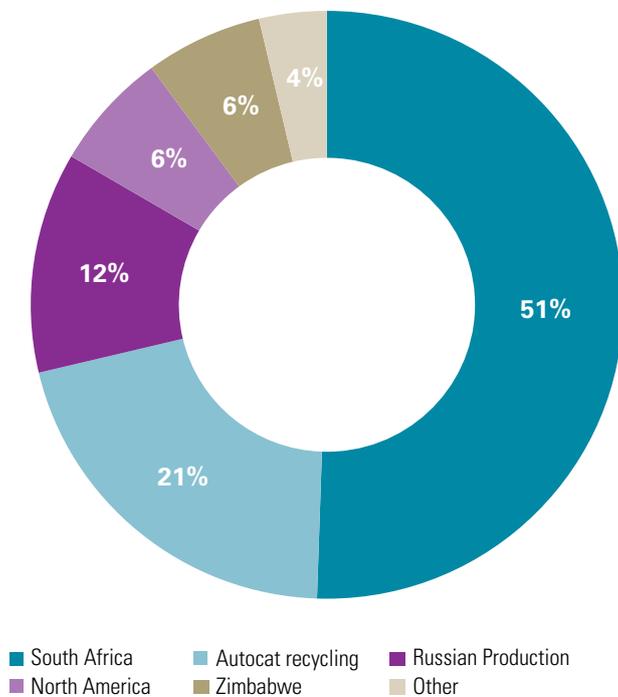
Source: Deutsche Bank Markets Research – Platinum group metals – Platinum: cash constraints will ultimately result in supply ‘discipline’, 31 March 2015, via Thomson Research/Investext, accessed 09 April 2015

- South Africa holds about 80 percent of the world’s platinum reserves and is considered to be the world’s largest exporter. The country’s platinum production witnessed a significant decline of about 29 percent in 2014, primarily attributed to the tough five-month strike

in the nation. However, the production has ramped up following the end of the strike as a result of the strong and controlled recovery, particularly at Lonmin and Amplats, which are two major Platinum Group Metal (PGM) miners.

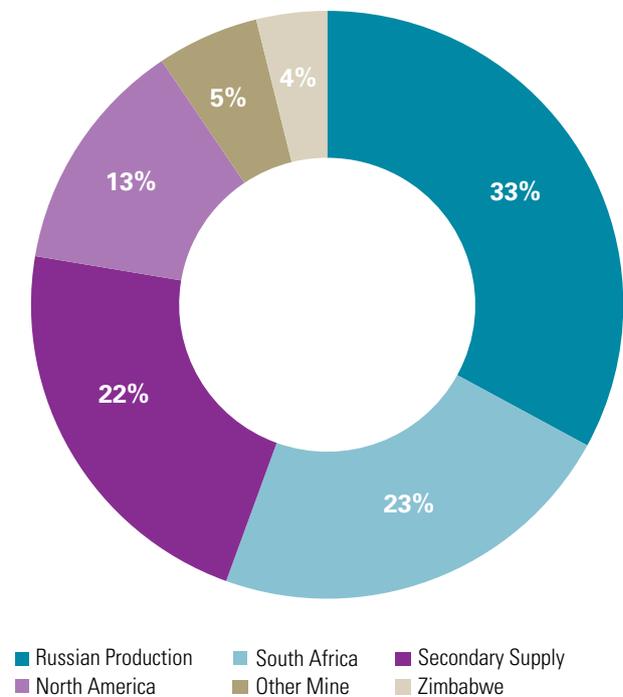
**Figure 6: Primary platinum supply breakup, 2014**

**Platinum Supply Distribution in 2014**



**Figure 7: Primary palladium supply breakup, 2014**

**Palladium Supply Distribution in 2014**



Source: Deutsche Bank Markets Research – Platinum group metals, Platinum: cash constraints will ultimately result in supply ‘discipline’, 31 March 2015, via Thomson Research/Investext, accessed 09 April 2015

<sup>2</sup> J.P. Morgan Cazenove – Platinum Year 2015 – Platinum price and producers under pressure – Mechanized miners make hay, 06 February 2015; Deutsche Bank Markets Research – Platinum group metals – Platinum: cash constraints will ultimately result in supply ‘discipline’, 31 March 2015; via Thomson Research/Investext, accessed 09 April 2015

- Recycling accounted for about 21 percent of the global platinum supply in 2014 and has eventually become a major supply source globally – comprising more than half of the South Africa production. According to Deutsche Bank, autocatalyst recycling is likely to witness growth of 7 percent over 2015–2017.
- South Africa’s platinum production growth is likely to remain weak for the next few years, due to high production costs, depleting reserves and ongoing labor challenges, which continues to push for higher wages in the near future.
  - Platinum mining cost difference between South Africa and other regions indicate the unsustainable levels for this region. Stillwater Mining – North America-based PGM producer – generated cash costs less than one-third of Amplats (South Africa-based PGM producer) cash costs.
  - In the Bushveld complex of South Africa, 20–40 tons of ore has to be processed to gain 1 ounce of platinum – historically, this amount required was just 10 tons for 1 ounce of platinum, which proves PGM ore grades have gradually declined in the complex.
- Laying off workers has exposed mining companies to government and union resistance in South Africa. This has resulted in mining companies expanding production in countries with a more-flexible labor market and lower wage costs.
- Zimbabwe has three operational mines for platinum and has the second-largest reserves for platinum worldwide. With the government’s decision to establish a platinum refinery by 2016, platinum exports from the country are expected to be on the rise and will provide additional jobs for the sector as well.
- Russia is considered as the largest palladium supplier globally. With the gradual depletion of the Russian state stockpiles, the market is expected to be balanced over the short-term. Further, the Russian Central Bank has decided to sell some of the palladium stockpiles to a pool of investors, led by Norilsk Nickel – the world’s largest palladium producer. However, according to Deutsche Bank, this holding has been accounted in the above-ground stocks and will not have a significant impact on the global supply-demand environment.

## Demand

Figure 8: Platinum global demand, 2015E–20E

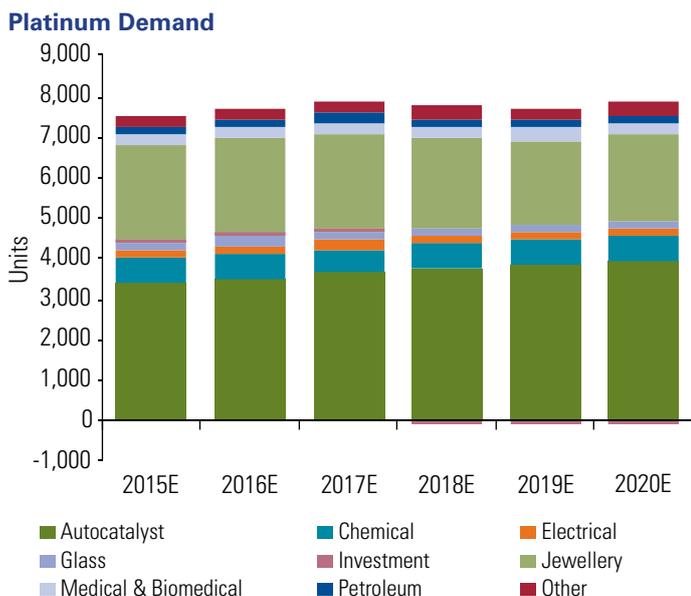
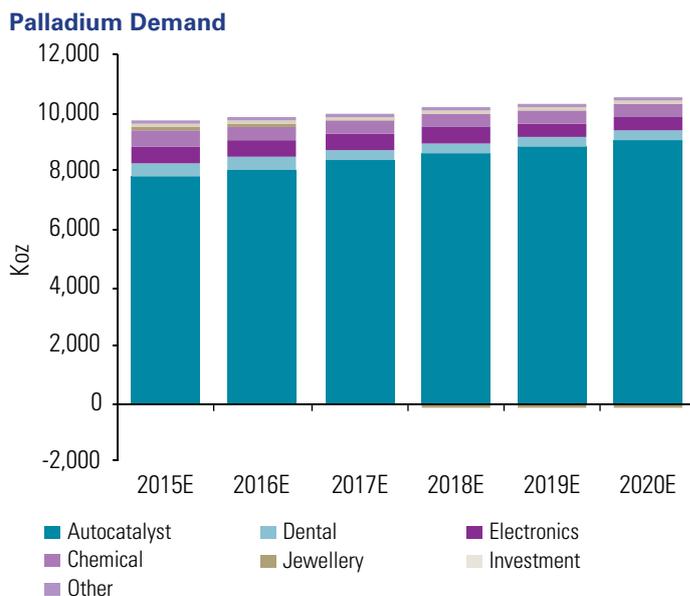


Figure 9: Palladium global demand, 2015E–20E

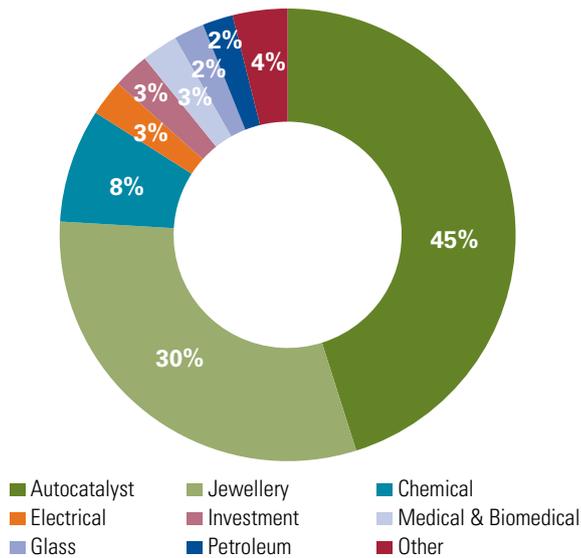


Source: Deutsche Bank Markets Research – Platinum group metals – Platinum: cash constraints will ultimately result in supply ‘discipline’, 31 March 2015, via Thomson Research/Investext, accessed 09 April 2015

- Platinum demand is expected to increase by 3 percent, reaching about 7.5 million ounces (Moz) in 2015 as compared with 2014, driven by the growth in the automotive and industrial segments. As per JPM, China and Europe are considered to be the dominant markets for platinum, accounting for 31 percent and 24 percent of the global demand, respectively. Continued recovery in the European auto sales, along with the implementation of Euro VI emission legislation, are the key drivers of demand growth for platinum. A majority of the diesel engine-powered cars in Europe are loaded with platinum-based auto catalysts, while gasoline-powered vehicles employ palladium-based devices. However, with the gradual substitution of the expensive platinum with the comparatively cheaper palladium, the latter has gained share in the diesel pollution-control devices. Presently, the ratio stands at about 0.7Pt:0.3Pd, which could witness change over the next few years.

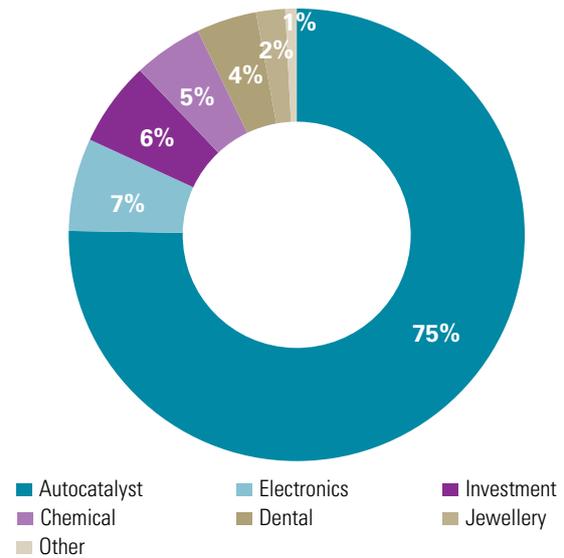
**Figure 10: Demand distribution for platinum, 2014**

**Platinum Demand Distribution in 2014**



**Figure 11: Demand distribution for palladium, 2014**

**Palladium Demand Distribution in 2014**



Source: Deutsche Bank Markets Research – Platinum group metals – Platinum: cash constraints will ultimately result in supply ‘discipline’, 31 March 2015, via Thomson Research/Investext, accessed 09 April 2015

- One of the major challenges that the platinum market faces is the increase in recycling volumes. Autocatalyst ceramic recycling volumes are expected to increase globally by 25 percent, from 48 tons to 60 tons, by 2018. This forecasted growth is expected to decline the net autocatalyst volumes by 2–3 percent per annum, as the recycling will eventually exceed the demand growth.
- The US accounts for 25 percent of the global palladium demand, largely driven by the automotive segment due to its use in auto catalysts. As per JPM, the US and China are considered to be the primary gasoline markets with car sales expected to increase by 2.4 percent and 6 percent, respectively, in 2016. However, the recent US auto sales have been weak, attributed to the tough weather conditions, particularly in February 2015.

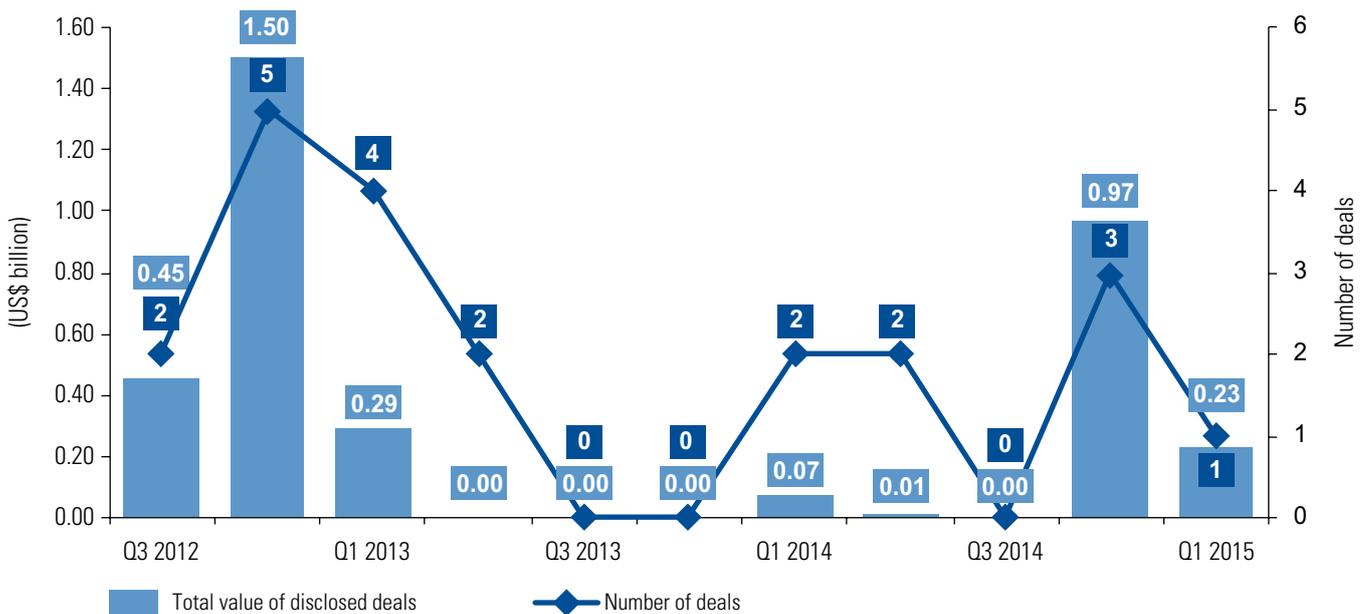
## Key developments

### Ownership changes<sup>3</sup>

The platinum industry witnessed three deals in Q4, 2014 and one in Q1, 2015. Those in Q4, 2014 were valued at

US\$969 million, while the single deal in Q1, 2015 was valued at US\$225 million. None of the deals were completed over the reported period.

**Figure 12: M&A deal number and valuations, Q4, 2014–Q1, 2015**



Source: Deals: Search, Mergermarket, accessed 14 April 2014; KPMG analysis

<sup>3</sup> Deals: Search, Mergermarket database, accessed 14 April 2014

**Table 1: M&A deal activity, Q4, 2014 and Q1, 2015**

Date announced	Target	Target nation	Acquirer	Acquirer nation	Status	Value of transaction (US\$ million)	Stake (%)
06-Jan-15	Eastern Platinum Limited (South African Platinum group metal business)	South Africa	Hebei Zhongbo Platinum Co. Limited	China	Announced	225	100
22-Oct-14	Northam Platinum Ltd.	South Africa	Black Economic Empowerment (BEE) SPV	South Africa	Announced	543 <sup>4</sup>	31.37 <sup>5</sup>
17-Oct-14	Tati Nickel Mining Company (Pty) Ltd. Nkomati Nickel and Chrome Mine	Botswana	BCL Limited	Botswana	Announced	337	Tati Nickel Mining Company (Pty) (85 percent) Nkomati Nickel and Chrome Mine (50 percent)
02-Oct-14	Aquarius Platinum (South Africa) (Pty) Limited (Everest Mine)	South Africa	Northam Platinum Ltd.	South Africa	Announced	39	100

Source: Deals: Search, Mergermarket accessed 14 April 2014; KPMG analysis

## Regulatory updates

**Table 2: List of recent regulations in the Platinum and Palladium mining industry**

Country	Regulation	Description
Canada <sup>6</sup>	Unique agreements between Yukon first nations and the mining companies	<ul style="list-style-type: none"> <li>Yukon has a rich mining heritage with an effective regulatory framework. Therefore, for any mining operation, an agreement between the Yukon First Nations government and the mining company has to be prepared.</li> <li>Through legislations such as the Yukon Environmental and Socioeconomic Assessment Act, the government will ensure that the mineral resources as well as labor are utilized in a sustainable manner.</li> <li>The First Nations have established developmental corporations that encourage collaboration between the First Nation communities and the mining companies.</li> </ul>
US <sup>7</sup>	Violation of 'Clean Water Act' for discharge of pollutants from the Platinum Creek mine	<p>XS Platinum and five of its officers have been charged by the US Department of Justice in a conspiracy to Clean Water Act, for the discharge of pollutants from the Platinum Creek mine.</p> <p>Under the mining and Clean Water Act permits, it is responsible to recycle all of its wastewater, resulting in zero discharge. However, the company and its defendants reported forged statements and even conspired to hide their discharge violations in 2010 and 2011.</p>

<sup>4</sup> Currency exchange conversion rate: 1 South African Rand (ZAR) = 0.08235 US Dollar (US\$) as of 22 April 2015

<sup>5</sup> The percentage share is the stake that historically disadvantaged South African (HDSA) shareholders will hold after this transaction. Combined with the existing HDSA profit share of 4 percent by way of the Toro Trust, the total stake in Northam will increase to 35.4 percent

<sup>6</sup> "Yukon: Paving the way for Canada's North," 1 November 2014, via Factiva, accessed April 2015

<sup>7</sup> "XS Platinum, officials facing charges over Alaskan mine discharges, false statements," 24th November 2014, via Factiva, accessed April 2015

## Cross section of global platinum projects<sup>8</sup>

**Table 3: Cross section of global platinum Greenfield projects**

Project	Country/Region	Operators	Potential start year	Platinum production (Koz per annum)
Twickenham Platinum Mine	South Africa	Anglo American Platinum	Full production by 2020	3Mtpa* Incremental production of 180 Koz per annum
Bakubung Platinum Mine	South Africa	Wesizwe Platinum	Full production by 2021	420 <sup>#</sup>
Western Bushveld Project No. 1	South Africa	Platinum Group Metals Ltd	2015	275 4E***
Garatau PGE Deposit	South Africa	NKWE Platinum	First production 2015 (steady state 2017)	330
Waterberg discovery	South Africa	Platinum Group metals Limited	2020	655

**Table 4: Cross section of global platinum Brownfield projects**

Project	Country/Region	Operators	Potential start year	Platinum production (Koz per annum)
BRPM (Phase 3)	South Africa	Anglo American Platinum	2017	70
Styldrift 1 shaft	South Africa	Anglo American Platinum	2015	220
Bathopele Platinum Mine phase 5	South Africa	Anglo American Platinum	2017 Full production by 2017	136 Koz Platinum per annum
Ngezi mine phase 2	Zimbabwe	Zimplats	2015	270 <sup>9</sup>
Styldrift Merensky phase 1	South Africa	Anglo American Platinum	Q2 2017 Full production will start in 2018	245

Source: Company data accessed April 2015

\* Ore processing capacity

\*\* Most projects mentioned above are under review and expected to be delayed because of the persistent low-price environment

\*\*\* Combined content of the four most valuable precious metals: platinum, palladium, rhodium and gold

# 4E Steady State production of PGM Metals per year

<sup>8</sup> The list is not exhaustive and contains only a limited number of projects

<sup>9</sup> "Zimplats expansion programmes hinge on world markets," 21 November 2014, via Factiva, accessed April 2015

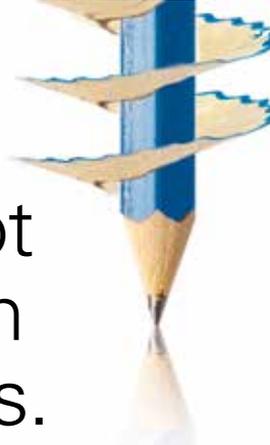


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