

# Russian PGM Stocks

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My paper this morning concerns Russian stocks of platinum and palladium. As many in the audience will know, Russia's precious metals production, consumption and inventory levels are state secrets and nowhere is Churchill's description of Russia as a "a riddle wrapped in a mystery inside an enigma" more apt than when discussing the local precious metals markets. As such, my paper this morning will inevitably rely on more inferences, estimations and assumptions than other papers presented here. Nevertheless, we believe that we have been able to draw together a broadly accurate picture of Russian production, consumption and trade in the platinum group metals.

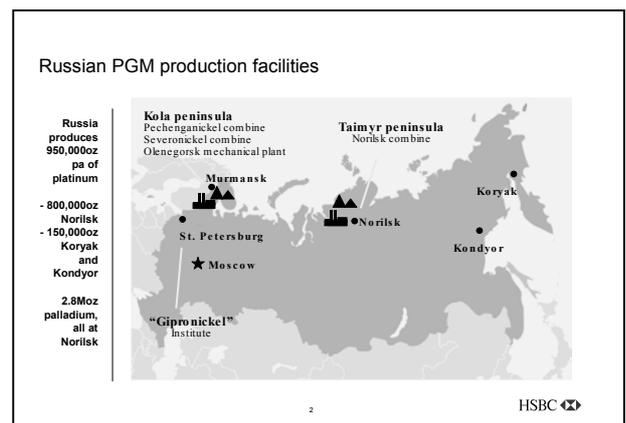
My paper today will be broadly divided into three sections – past, present and future. With respect to the past, in the 1970s and 1980s Russia accumulated significant stockpiles of both platinum and palladium. This was followed by aggressive de-stocking in the 1990s after the collapse of the old Soviet Union and the need for the new Russian government to generate badly needed foreign exchange. Confusion over the granting of export quotas and licences became the norm.

At present, as we will argue, Russian stocks of platinum have been largely depleted, although significant stocks of palladium – possibly as much as 10-12 million oz – remain.

Into the future, we expect the platinum market to remain very tight, with the industry needing all the platinum Russia can produce. Any stockpiling of platinum by the Russians could generate significant spikes in prices given the dearth of metal available to consumers. However, with the fundamentals of the palladium market continuing to deteriorate Norilsk and the Russian government will be in an increasingly difficult position and could be forced to finance ever-increasing inventories of unsold metal.

Before examining in more detail the trends in Russian PGM stocks, I think it would be useful to briefly describe Russia's PGM production facilities.

These are shown in the map below.



Russia's annual production of platinum is approximately 950,000oz, we believe, of which Norilsk Nickel accounts for roughly 800,000oz and the Siberian producers Kondyor and Koryak the balance of 150,000oz. Norilsk Nickel accounts for all of Russia's 2.8Moz annual palladium production. Norilsk's production facilities are divided between the Kola and the Taimyr peninsulas.

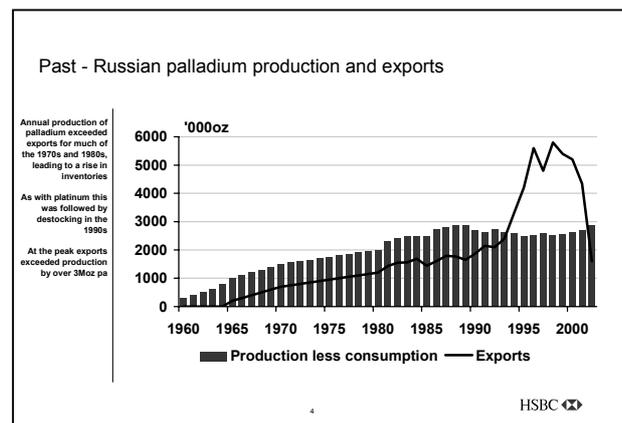
The core assets of the company reside in, or near, the city of Norilsk. At Norilsk the company operates eight mines, a primary smelter and two refineries, together with a slimes shop that sends raw materials to the Krasnoyarsk and Prioksk precious metals refineries. On the Kola peninsula Norilsk's production facilities include the Pechenganickel and Severonickel combines.

Turning first to platinum, the following chart shows the historic level of Russian production and exports.



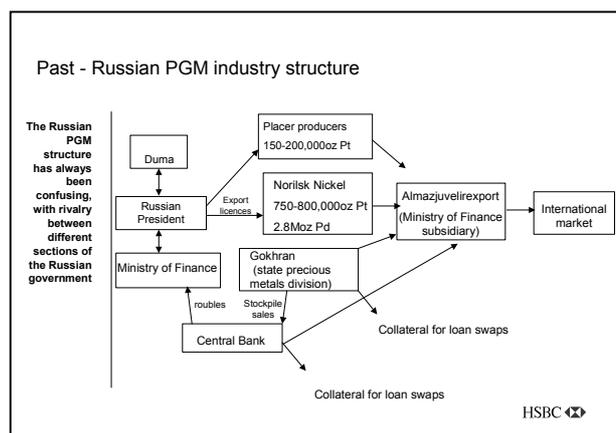
As I mentioned earlier, the common perception has it that Russian production of platinum group metals is a state secret and this is certainly the case. However, in the past the Russians have occasionally disclosed historic production data. This has not always been deliberate. In the late 1980s, for example, Russian platinum production levels were disclosed in the draft prospectus for a Eurobond issue, the data was strangely omitted from the final document. This, together with other data we have been able to assimilate, has formed the basis of the production levels shown in the chart.

We estimate Russian platinum production this year will be about 950,000oz. This is considerably higher than the levels seen in the early 1990s, but still below the highs of the late 1980s when Russian output topped 1Moz. Russian platinum consumption, which was considerable in the 1970s and early 1980s collapsed to nothing, leaving all of the production available for export. During the 1970s and 1980s Russian exports were significantly below Russian production levels, leading to an increase in domestic stockpiles. This stockpiling of inventory was reversed in the 1990s, depressing the international market.



With respect to palladium, Norilsk Nickel is Russia's sole producer of the metal, with annual production around 2.8-2.9Moz. Until 1993 exports were considerably lower than annual output, leading to an ongoing increase in inventories of unsold metal. However, 1993 marked a sea change in Russia's attitude to palladium exports, with the beginnings of a massive dumping of metal onto the international markets. At the peak, exports exceeded production by over 3Moz in 1998.

The change in the early 1990s from stockpiling to aggressive destocking was a direct result of the need of the government's budget financing requirements. The Finance Ministry, through its subsidiary Gokhran, controlled most of the platinum and palladium inventories held by the Russian government. Some of the inventory was sold directly to the Western markets through Almazjuvelirexport (Almaz), the official Russian export agency.

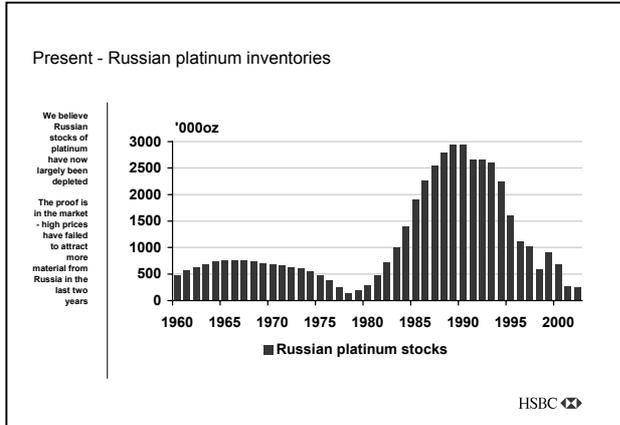


The Finance Ministry also sold metal to the Central Bank in exchange for roubles to cover monthly budget deficits. In doing so, the Russian Central Bank accumulated an inventory position separate to that controlled by the Finance Ministry. The Central Bank tried to negotiate some palladium swaps in the earlier years, but did not succeed until 1999. Any profits from such transactions could be retained by the Central Bank for twelve months, and then half of which had to be repaid to the state treasury. Sales from Norilsk were also handled by Almaz, although export quotas and licences were only granted on an annual basis, at least that is until 1998 when a 10-year quota for palladium exports was granted.

However, with export quotas and licences still needing to be passed by the Duma, the Finance Ministry and the president, a complex web of interdependency and rivalry developed. This

resulted in repeated disruptions to exports on an annual basis, culminating in the farce of “Clause 19” that resulted in severe disruptions to shipments in 1999. In turn, with the Western markets increasingly reliant on Russian material, platinum and palladium prices became increasingly volatile.

inventory overhang of approximately 9-10Moz, we believe. This accords with comments made by Valery Rudakov of Gokhran in 2000 that central bank stocks of palladium were 2-300 tonnes (6-10Moz).



So much for the past, but where does that leave Russian platinum and palladium inventories at the moment? With respect to platinum, we believe that Russian stocks have now largely been depleted, and that at most a residual stockpile of maybe 2-300,000oz remains in the hands of the Russian government. In this respect it should be noted that despite the high level of platinum prices in the last two years, Russian platinum sales have been broadly in line with underlying production levels. Even the high platinum lease rates seen at times over recent months has failed to attract any significant lending activity, again suggesting that Russian platinum stocks have been drawn down to minimum acceptable levels.



In August 2001 Norilsk took the unusual step of declaring that it had suspended sales of palladium into the spot market, as a response to the slump in palladium prices. Having peaked at almost USD1,100/oz in February 2001 palladium prices slumped to what was then a two year low of under USD400/oz. The announcement helped temporarily to boost sentiment in the palladium market, after which prices continued their almost unrelenting decline. Since August 2001 we believe that Russian palladium stocks have risen by almost 2Moz, taking aggregate inventories to around 11-12Moz.



Much of the 2Moz of inventory that Norilsk has accumulated in the last two years have already been committed. Last year Norilsk used somewhere between 1-1.5Moz to repay a loan from the Ministry of Finance dating back to 1994, transferring the metal to the state treasury Gokhran. In addition, Norilsk has shipped 877,000oz of palladium to London against part payment of the share purchase of Stillwater Mining, announced late last year. These two transactions should eliminate Norilsk’s existing inventory. The Finance Ministry has little material, with the exception of the metal it received from Norilsk. The bulk of the palladium stocks in Russia are still under the control of the Central Bank, we believe.

With respect to palladium, however, a different story emerges. Between 1993 and 2001 we estimate that approximately 18Moz of palladium were sold from Russian stocks onto the Western markets. However, this still left a remaining

So much for the past and the present; what about the future? The starting point has to be an examination of the future output of PGMs in Russia. Earlier this year Norilsk published its “Strategy until 2015”, which replaces the pre-existing “Development Plan to 2010”. The new strategy is based on four principles, namely

adjusting metal production in line with expected market demand, increasing the efficiency of production and recovery rates, ensuring the sustainability and cost efficiency of the company's operations and finally addressing the environmental impact of the company's operations.

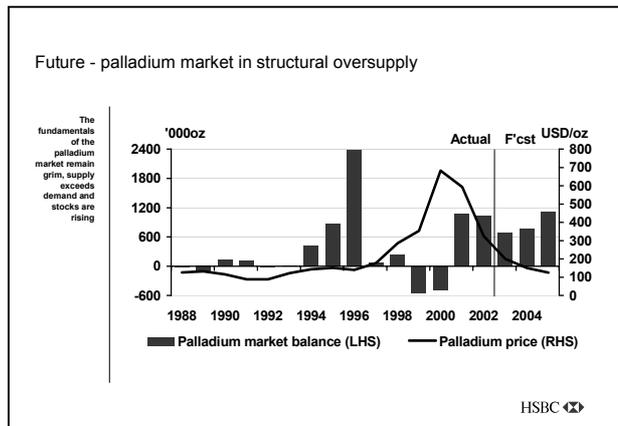
With respect to metal output, it is impossible to manage mine output such that production of nickel, copper, platinum and palladium are all at optimum levels. Norilsk appears to be targeting nickel production, by raising output of cuprous ores. This should leave output of PGMs roughly stable. Given the widely held belief that the fundamentals of the nickel market are the strongest of any of the base metals, Norilsk's strategy seems to be to operate as a nickel mine, with production of copper and PGMs effectively as a by-product.

Keeping platinum production flat and with little if any inventory to act as a 'safety valve', the platinum market remains vulnerable to the possibility of damaging price spikes, we believe, given the underlying strength of the market fundamentals.

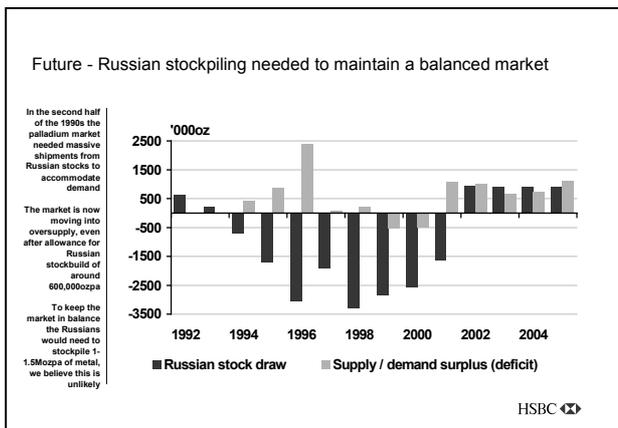


The platinum market has been in deficit in five of the last six years as good demand from the autocatalyst and jewellery sectors has outpaced rising mine production. We see little reason for this to change. Offtake from the auto industry remains strong, notwithstanding the current price differential between platinum and palladium which is encouraging car manufacturers to substitute the cheaper metal where possible. Jewellery demand in China also remains firm, with huge potential gains to be made if future marketing campaigns are as successful as past. On the supply side the South African producers have struggled to meet ambitious production targets. With industry stocks of platinum having been drawn down there is a real possibility of the platinum price spiking higher over the coming

months. Although the all time highs of over USD1,000/oz are probably out of reach, a return to the 23-year high of USD710/oz seen earlier this year is a possibility, if not probability.



The opposite is, unfortunately, true of the palladium market, where the fundamentals of the market look almost unreservedly grim, even allowing for a switch from platinum into palladium in the autocatalyst sector. We expect the market to move into structural oversupply, with ongoing downward pressure on prices as a result. On the demand side, offtake from the electronics sector has collapsed to only a third of the level enjoyed two years ago, while in the auto sector ongoing de-stocking by the car companies will depress purchases. On the supply side, the output of by-product palladium in South Africa is rising sharply as the producers raise output from the UG2 reef, while a huge surge in scrap supplies appears imminent. Price risks remain on the downside.



Indeed, we believe that the only way for the palladium market to remain in balance is for the Russians to accrue an ever-increasing stockpile of palladium. We estimate that the Russians would need to stockpile somewhere between 1-

1.5Moz of production annually over the coming years to keep the palladium market in balance. This is in sharp contrast to the 1990s, when the market required significant deliveries of metal from Russian stockpiles. Our base case scenario assumes that the Russians stockpile roughly half of this, leaving the market in ongoing oversupply and prices under pressure.

The possibility of the Russians stockpiling over 1Moz each year of palladium is remote, we believe, and this view is confirmed by the terms of the proposed deal between Norilsk and Stillwater Mining. The agreement was reached late last year, but still has to be ratified. The principal terms of the transaction are shown in the table.

Future - Norilsk/Stillwater transaction	
<b>Stillwater to sell 51% stake to Norilsk Nickel for</b>	<ul style="list-style-type: none"> <li>• USD100M cash</li> <li>• 876,000oz palladium (USD241M at USD275/oz, USD141M at USD160/oz)</li> <li>• Norilsk may purchase an additional 10% of Stillwater</li> <li>• 6 months after completion Stillwater to buy up to 1Mozpa from Norilsk</li> </ul>
<b>For Stillwater ensures viability and capital for expansion plans</b>	
<b>For Norilsk offers access to established distribution channel</b>	<ul style="list-style-type: none"> <li>• Reduces palladium stockpile</li> <li>• Encourages auto companies to believe in security of supply</li> <li>• Raises Norilsk from current status as supplier of last resort</li> <li>• Access to Stillwater hedge book</li> <li>• Increases exposure to US investors</li> </ul>
<b>But will ensure palladium market remains adequately supplied and prices under pressure</b>	
	HSBC 

Briefly, Norilsk Nickel will take a 51% stake in Stillwater for USD100M in cash and 876,000oz of palladium. At the time the deal was announced this inventory was worth approximately USD241M, but has since declined alongside the palladium price to around USD140M at current prices. Norilsk have the option of purchasing a further 10% stake in Stillwater and, although this has to be ratified, Norilsk will ship up to 1Moz of palladium to Stillwater each year to be marketed in North America.

For Stillwater the deal allows the company to shore up its battered balance sheet and provides working capital and access to Norilsk's technical team. For Norilsk, the deal offers the chance to remove almost 1Moz from inventory and, more importantly, offers access to Stillwater's distribution network while assuring the car companies of security of supply.

The insurance policy is that Norilsk now has access to the Stillwater hedge book. The deal also raises Norilsk's profile with US investors, which in turn may help raise the rating on the company's ADR (American Depositary Receipts). For the palladium market, however, the sales from Norilsk through Stillwater, together with their sales into Europe and the Far East should ensure the market remains more than adequately supplied with metal for the foreseeable future.

To conclude, Russian policy towards PGM stockpiles changed in the early 1990s as the previous policy of stockbuilding was replaced by one of stock drawdown. We estimate that almost 3Moz of platinum stocks were sold into the international market, leaving stockpiles close to exhaustion. With the underlying supply/demand fundamentals still so strong, and with little industry inventory available, there remains the possibility of a damaging price spike in the platinum market. By contrast, despite palladium sales of more than 15Moz in the 1990s, an overhang of 10-12Moz remains. Moreover, this overhang is rising as Norilsk has suspended sales into the spot market. True, Norilsk is managing to sell more metal on a contract basis, but unfortunately, with the fundamentals of supply and demand still so weak, the outlook for palladium prices remains depressed. Palladium looks set to resume its historic role of being a by-product of platinum and should be priced accordingly. ■

