

# PRECIOUS APPRAISAL

No. 7  
7<sup>th</sup> March 2022



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## MARKET SPOTLIGHT

### Russian invasion could accelerate platinum substitution into autocatalysts

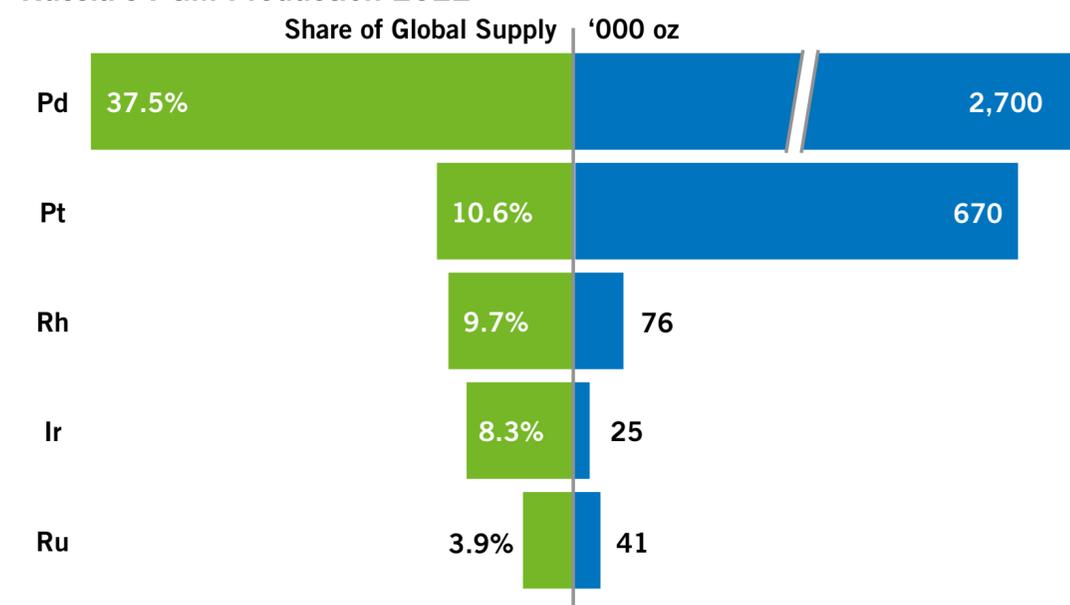
The situation in Ukraine has worsened, the palladium price has hit new highs, and gold is near \$2,000/oz. PGM prices have become volatile as the supply of Russian commodities has become a critical concern. The lack of that supply would significantly impact the PGM markets.

Sanctions have not targeted either Nornickel or PGMs and currently there is no suggestion that they would be included in any further sanctions. However, parts of the Russian banking system are being targeted and this potentially complicates the transfer of funds in payment for commodities. The closure of European airspace adds a logistical problem. Many companies have been cutting trade ties with Russia even if they have not been required to by sanctions. The auto industry has closed factories in Russia and halted vehicle exports to the country.

The platinum market is in significant surplus (ex. investment) and ruthenium is also in surplus. However, the palladium, rhodium and iridium markets were all predicted to be close to balanced or in deficit this year before the conflict started. High and volatile prices are likely for these metals until there is some clarity on whether Russian metal exports are continuing and whether automakers are prepared to use those metals. Russia produces sufficiently large quantities of PGMs, as well as nickel and aluminium, that without those exports global manufacturing would be significantly constrained.

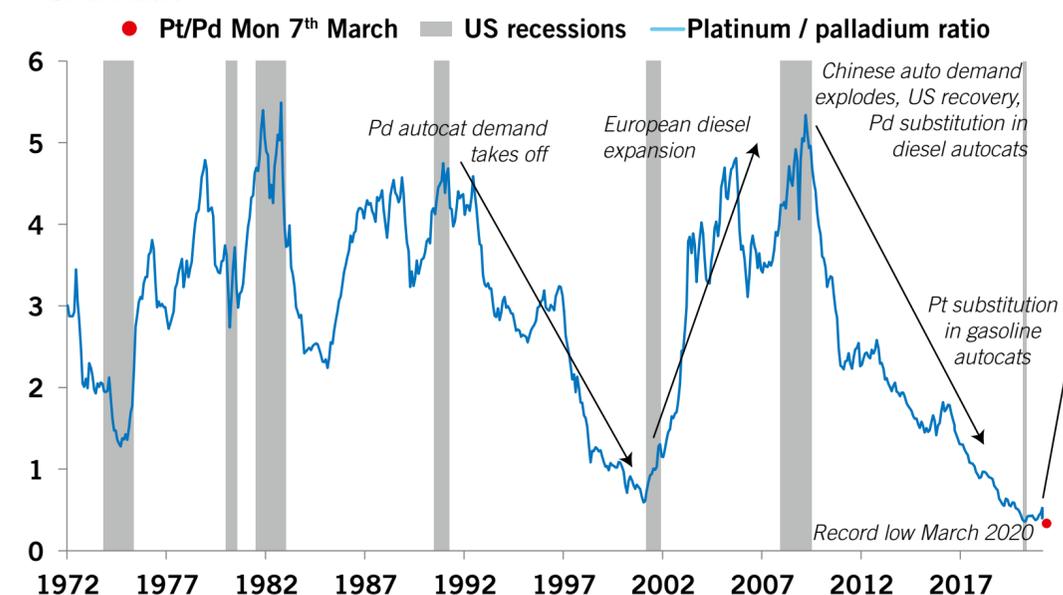
The implication of current high palladium prices could be that more platinum would be used in gasoline autocatalysts. High palladium prices over the last few years have already resulted in some platinum being substituted into gasoline three-way catalysts. With the palladium price again hitting record highs, the rollout of this technology could be speeded up which would favour platinum over palladium.

Russia's PGM Production 2022



Source: SFA (Oxford)

Pt/Pd Ratio



Source: SFA (Oxford), Bloomberg

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## PRECIOUS METALS REVIEW

### Gold



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,963	4.18%	1,966	04/03/2022	1,891	28/02/2022
€/oz	1,800	7.53%	1,801	04/03/2022	1,685	28/02/2022

**Central banks have become less hawkish** owing to the adverse economic impacts of the Ukraine conflict. The Federal Reserve chairman, Jerome Powell, visited Congress and effectively confirmed that the Fed will make one interest rate rise at its next meeting on 16 March. This is less hawkish than was expected a few weeks ago. The war in Ukraine may have increased economic uncertainty but it has also raised commodity prices, and inflation is likely to stay higher for longer. The ECB may also become less inclined to tighten policy on economic grounds. This should support the gold price, which in dollar terms is still below its record high from 2020. However, in euro terms gold has performed well, reaching a record high as the dollar has strengthened.

**The Russian Central Bank resumes gold buying** amidst a wave of sanctions. The Russian central bank has said it has resumed buying gold produced domestically. As the central bank and several other banks are currently under sanctions from most of the Western world, selling the gold internationally could be difficult. The intention appears to be to support domestic gold production and also boost its non-dollar reserves. Prior to March 2020, the bank was purchasing an average of 18 t of gold per month. Russia is the second-largest gold producer globally behind China and produced 331 t of gold in 2020. The central bank had reserves of 2,299 t as of November 2021, making up approximately 21% of Russia's total foreign reserves (source: World Gold Council).

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## PRECIOUS METALS REVIEW

### Silver



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	25.56	6.97%	25.70	04/03/2022	24.17	28/02/2022
€/oz	23.43	10.37%	23.56	04/03/2022	21.57	28/02/2022

**Russian output is 5% of total mined silver.** Commodity exports from Russia have not been sanctioned, but it is possible that the silver exports could be indirectly impacted to some extent, as flights to Europe have been stopped and companies have been cutting links to Russia. However, the loss of some silver exports would not have much impact on the market as the major bullion trading centres are unaffected and have significant stocks. The LBMA reported that there were 35,533 tonnes of silver bullion vaulted in London in January. Russian silver output in 2020 was 42.5 tonnes (source: Silver Institute).

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# PRECIOUS METALS REVIEW

## Platinum



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,109	5.16%	1,117	04/03/2022	1,036	28/02/2022
€/oz	1,016	8.48%	1,024	04/03/2022	924	28/02/2022

**South African platinum output won't keep up with last year.** Implats has reduced its guidance for PGM production for its financial year to June 2022. The refined platinum output was revised from 1.58-1.64 moz to 1.43-1.47 moz. This is a result of operational issues suffered at the Rustenburg and Impala Canada operations and maintenance including the rebuild of its Rustenburg smelter. Any build up in unsmelted material will likely be processed in the second half of the year. However, after a year in which the processing of stockpiled material boosted output, a modest overall decline in refined platinum production from South Africa to 4.6 moz is predicted for 2022.

**Q4 2021 was a mixed bag for platinum jewellery demand.** Chinese platinum jewellery sales lost out to gold in the last quarter of 2021. The platinum jewellery sector suffered a 23% reduction in sold ounces compared to the previous year (source: Platinum Guild International (PGI)), while its yellow metal cousin saw sales growth of 24% year-on-year. Contrasting this, in India sales of platinum jewellery by PGI's partners recorded growth of 35-40% in the quarter, owing low Covid cases and an increase in consumer confidence during the festive and wedding season. The slowdown of the Chinese jewellery market is expected to continue this year by another 5% as Chinese economic growth eases further. This will be partially offset by demand increases in Japan and India but overall global demand is forecast to dip by 2% to 1.7 moz this year.

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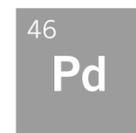
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## PRECIOUS METALS REVIEW

### Palladium



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	2,930	24.81%	2,970	04/03/2022	2,451	28/02/2022
€/oz	2,685	28.83%	2,717	04/03/2022	2,193	28/02/2022

**The Russia-Ukraine conflict is impacting the auto industry.** Automakers have shut down plants in Russia and suspended imports of cars. Truck makers have also shut down production. Russian light vehicle production was expected to be about 1.6 million units this year, but production will clearly be lower. That represented less than 80 koz of palladium, so any lost output will only have a small impact on palladium demand.

European automakers also have to contend with a shortage of wire harnesses that are assembled in western Ukraine. This has caused some car plants to be temporarily shut down affecting both internal combustion engine and battery electric vehicle production. The wiring harness market is more globally diversified and less capital-intensive than the automotive chip market. Therefore, it should be possible for the key suppliers to add capacity at other plants and production to resume, but it is too early to be clear on how long that will take and what the overall impact on car production might be.

**US light-vehicle sales performed poorly in February**, continuing the trend from January. At a seasonally adjusted annual rate sales fell to 14.5 million units, a year-on-year decrease of 11%, the lowest since 2011. Ford is one of the worst hit US manufactures, reporting a year-on-year sales decline of 21%. Supply problems are continuing to be an impediment to light-vehicle sales. However, chip supply is predicted to improve throughout the year. Overall, light vehicle sales are expected to be significantly higher this year than last year (by ~9 million units) and global palladium demand for autocatalysts is forecast to reach a record level of more than 9.0 moz.

**The palladium price is still rising on concerns about the supply of palladium from Russia.** Although metal exports are not prevented by sanctions, the ending of flights from Europe and sanctions on Russian banks are complicating the situation. At the moment, it should still be possible to export the metal, but the uncertainty means the price will remain volatile.

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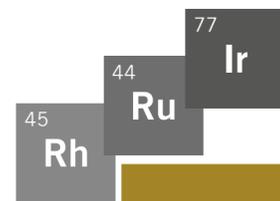
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## PRECIOUS METALS REVIEW

### Rhodium, Ruthenium, Iridium



	RHODIUM	RUTHENIUM	IRIDIUM
Reporting Week	\$22,650/oz	\$585/oz	\$5,350/oz
Previous Week	\$21,450/oz	\$575/oz	\$4,300/oz

**Sibanye-Stillwater increased production of rhodium, ruthenium and iridium in 2021.** The South African operations of Sibanye-Stillwater produced 31% more small PGMs year-on-year in 2021 as output rebounded from the Covid related impacts of 2020. Sibanye-Stillwater is aiming to keep production at a similar level in 2022, and guidance for 2022 implies rhodium production will be in the range of 158-167 koz. Overall South African production of small PGMs is expected to be slightly lower this year owing to the boost 2021 output received from Anglo processing stockpiled material.

The rhodium price has continued to climb, gaining \$1,200/oz last week. Iridium went up by \$1,050/oz and the ruthenium price has now started to move higher adding \$10/oz.

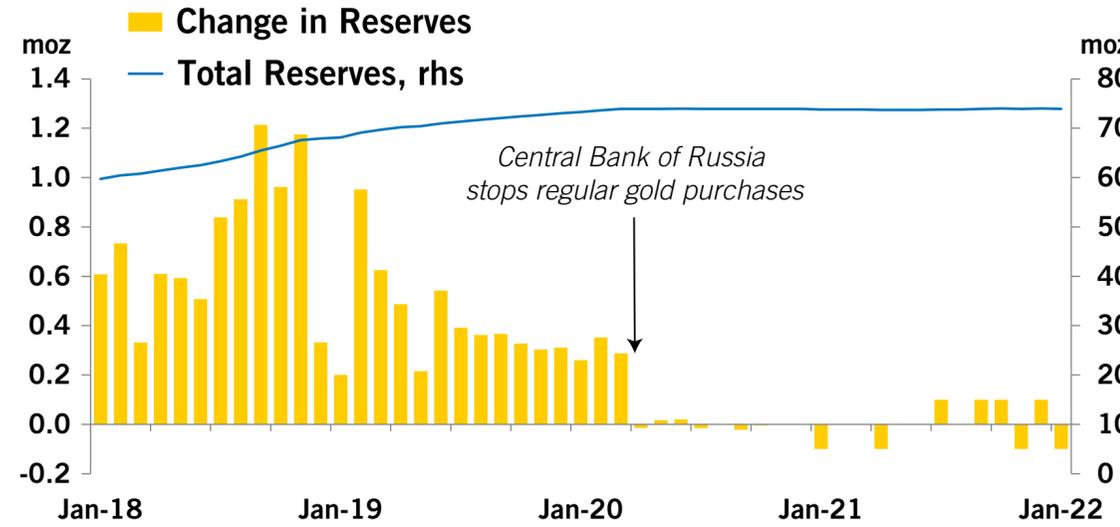
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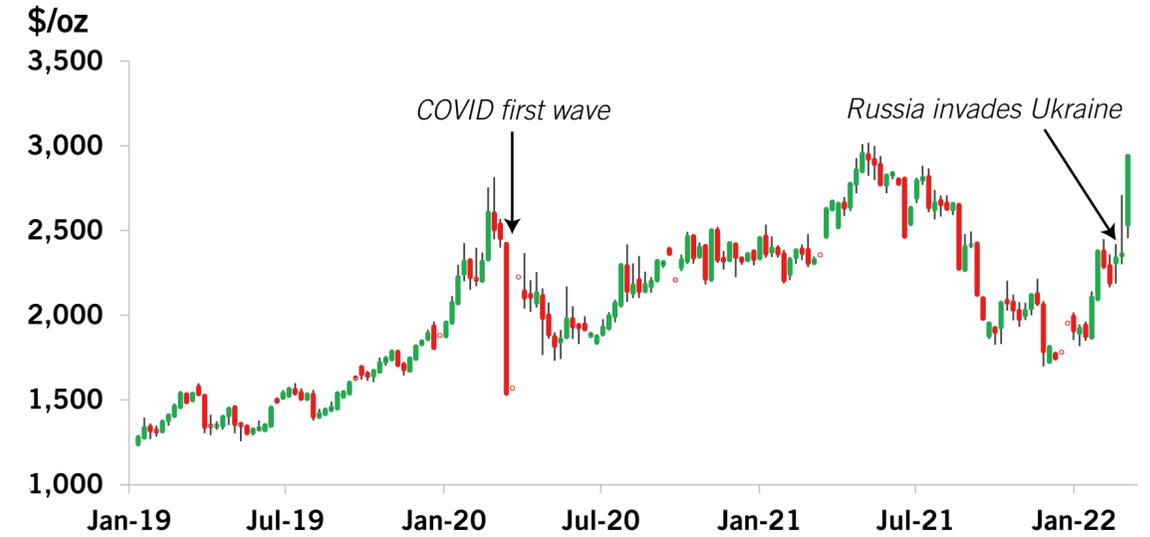
## TRENDS AND INVESTMENTS

### Central Bank of Russia buying and selling



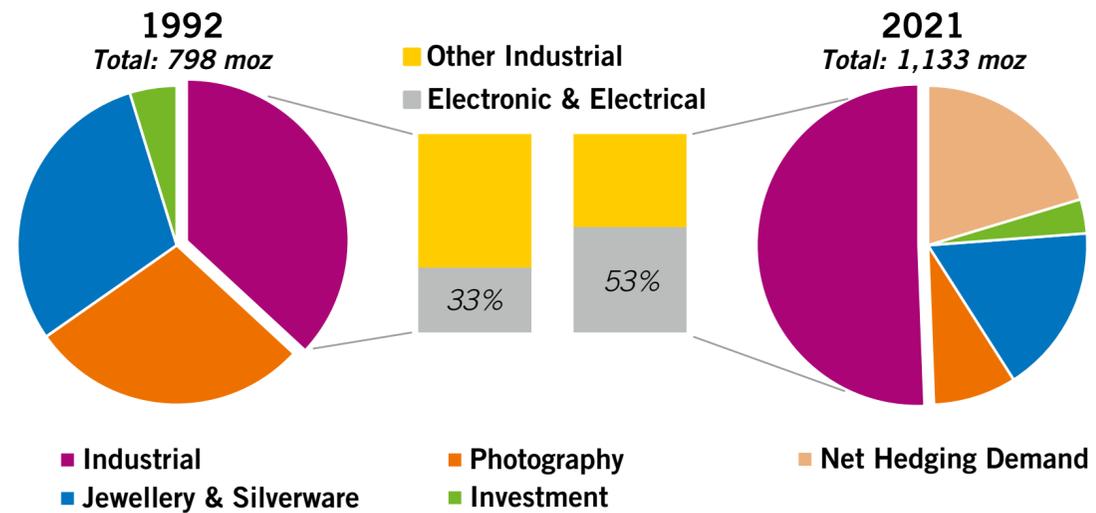
Source: SFA (Oxford), IMF

### Palladium price



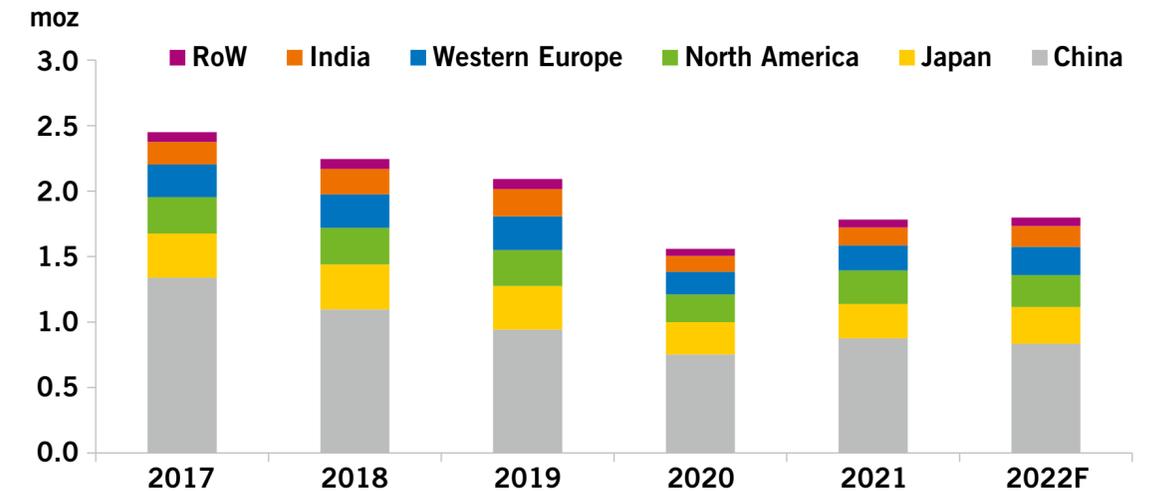
Source: SFA (Oxford), Bloomberg

### Silver demand split



Source: SFA (Oxford), The Silver Institute

### Platinum jewellery demand



Source: SFA (Oxford)

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