

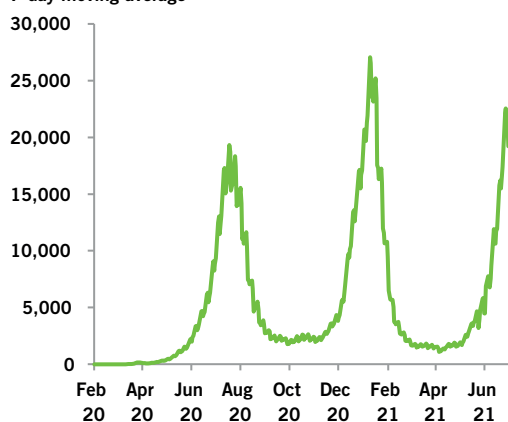


MARKET SPOTLIGHT

PGM mines endure South Africa's third-wave lockdown

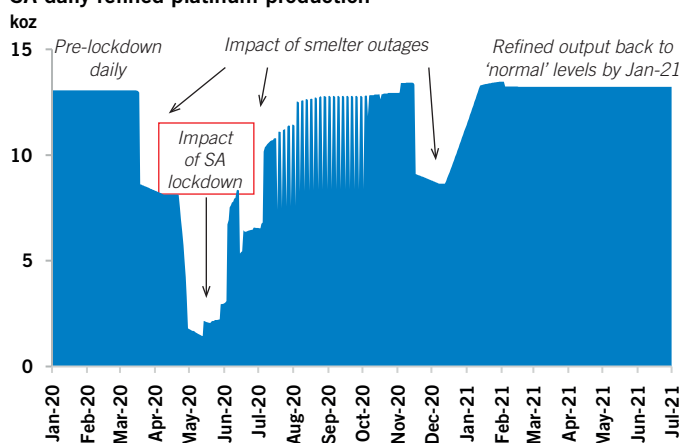
South Africa's president, Cyril Ramaphosa, raised the country's coronavirus alert status to its second-highest level last week – Adjusted Alert Level 4. The government has imposed new restrictions to control the sharp rise in Covid cases, which has been driven by the spread of the more transmissible Delta variant and a slow roll-out of vaccinations. The rise in infections during the southern hemisphere winter months was predicted, but this third wave is now expected to exceed that of earlier waves in South Africa. The seven-day moving average of new cases has already overtaken the peak of the first wave in July 2020.

SA coronavirus new cases
7 day moving average



Source: Bloomberg

SA daily refined platinum production



Source: SFA (Oxford). Note: daily output is adjusted to the metallurgical pipeline.

South Africa's PGM mining industry currently remains operational. During the national three-week lockdown in March-April 2020, mines were forced to close and daily refined platinum production fell to a record low of <2 koz. Full-year PGM output last year declined by around 15% relative to 2019, although this was partly due to the impact of smelter outages unrelated to the pandemic. Despite rising Covid cases, it is unlikely that the government will impose another lockdown on the mining industry – it simply cannot afford to. South Africa's mining industry contributed ZAR361.6 billion (8.2%) to GDP last year and employs more than 450,000 people (source: Minerals Council South Africa).

The third wave of coronavirus is expected to slow South Africa's economic recovery. Economic activity in the country has rebounded quicker than anticipated over the last couple of months, and Oxford Economics recently revised its GDP growth outlook for 2021 to 3.1% (from 2.5% previously). However, on top of a third wave, the slow vaccination drive and ongoing electricity blackouts are likely to weigh on economic activity this year.

There is a minor risk to the PGM industry that rising cases could impact productivity levels, and therefore refined output. An outbreak of Covid in a condensed mining area such as the Western Limb could result in the closure of the shaft where the outbreak occurred. Given the proximity of neighbouring mining operations and the labour-intensive nature of working, it is likely that other mines in that region would also be affected. However, throughout the pandemic, PGM mining companies in South Africa have demonstrated effective Covid risk mitigation and have good systems in place moving forward. At present, the material risk to PGM supply is very low but the next 3-4 weeks will be essential to observe.



PRECIOUS METALS REVIEW

79 Au Gold

	Close	Weekly change	High	Date	Low	Date
\$/oz	1,783	0.20%	1,795	02/07/2021	1,751	29/06/2021
€/oz	1,505	0.98%	1,514	02/07/2021	1,473	29/06/2021

Strong supply growth projected for gold. High gold prices are expected to incentivise growth in gold supply over the medium term. Fitch predicts gold production this year to achieve its fastest growth rate in three years, with continued growth out to 2025. The credit rating agency forecasts gold production to increase from 109.4 moz in 2021 to 141.7 moz by 2030, representing CAGR of 3.2%, compared to the 0.8% CAGR over the past four years. Between 2016 and 2020, the gold price averaged \$1,387/oz, but has risen to \$1,804/oz in 2021 so far.

Over the forecast period, supply from China (the world's major producer) is estimated to slow but will be more than offset by strong growth in Canada and Australia, with each bringing 175-200 koz of additional annual output online by 2030 (source: Fitch Solutions). The gold price moved little last week as it continued its consolidation following the sharp drop earlier in June. In the short term, more sideways to lower price action is possible, but ultimately a recovery is expected.

47 Ag Silver

	Close	Weekly change	High	Date	Low	Date
\$/oz	26.40	1.36%	26.53	02/07/2021	25.53	29/06/2021
€/oz	22.29	2.15%	22.38	02/07/2021	21.49	29/06/2021

Smartphones and silver: the chips are down but 5G is up. Despite the chip shortage, global mobile phone shipments are forecast to grow by 7% year-on-year in 2021, driven in part by the strong uptake of 5G. By the end of the year, 5G subscriptions globally are expected to reach 580 million, growing to 3.6 billion by the end of 2026 and accounting for around 40% of all mobile subscriptions at that time (source: Ericsson). The speed of 5G uptake is much higher than it was for 4G, which is largely a result of strong engagement in China. So far, more than 160 communications service providers have

launched 5G services and over 300 5G smartphone models have been announced or launched commercially. Last year, 5G-related silver demand was estimated to account for around 7.5 moz, with further proliferation of 5G set to boost silver demand again this year. By 2025, 5G applications are projected to account for 16 moz of silver (source: The Silver Institute). If inflation runs hotter and for longer than anticipated, silver could finally push higher, but until that becomes clear the price is likely to continue to trade sideways.

78 Pt Platinum

	Close	Weekly change	High	Date	Low	Date
\$/oz	1,089	-1.62%	1,116	28/06/2021	1,052	29/06/2021
€/oz	919	-0.87%	934	28/06/2021	884	29/06/2021

A place for green hydrogen in heavy industry. Industrial processes, including ammonia, steel, cement and ethylene production, currently account for ~45% of industrial CO2 emissions globally, so the proliferation of green hydrogen as feedstock stands to drastically transform these sectors. Electrolyser company, Nel, has entered into a collaboration with partners Ovako, Volvo, Hitachi ABB and H2 Green Steel for a fossil-fuel-free hydrogen facility in Sweden to support green steel production, making it the first project in the world to heat steel with hydrogen prior to rolling. To date, most of the

larger-scale, commercial electrolyzers have been based on alkaline electrolysis (which does not contain PGMs), but the growth in polymer electrolyte membrane (PEM) electrolysis, which uses a platinum-based technology, is positive for PGMs. From a very low base, platinum demand from expanding PEM electrolyser capacity is expected to begin to ramp up from this year and accelerate in the second half of the decade. Resistance at \$1,110/oz held last week, so the price may continue to trade sideways to lower in the short term.



PRECIOUS METALS REVIEW

⁴⁶ Pd **Palladium**

	Close	Weekly change	High	Date	Low	Date
\$/oz	2,782	5.56%	2,812	02/07/2021	2,636	28/06/2021
€/oz	2,348	6.36%	2,372	02/07/2021	2,210	28/06/2021

Chip shortage leaves US carmakers in the slow lane.

Ford Motor Co. has announced further cuts to its North American vehicle production this month due to the ongoing semiconductor chip shortage. The automaker will idle production across eight plants, including six in the US, throughout July and into early August to prioritise the completion of vehicles that it has been assembling without parts while awaiting chips. Pick-up vehicle factories in Michigan, Kentucky and Missouri are among those affected by production cuts. Ford has been one of the worst-affected carmakers by the chip shortage after running at around 55% capacity utilisation during the first six months of the year. It is estimated that 37% of Ford's lost volume in that period was accounted for by its pick-up and SUV segments (source: LMC Automotive). Earlier this year, Ford estimated that the chip shortage would see 1.1 million fewer vehicles produced. AutoForecast Solutions has calculated losses in excess of 4 million units globally already this year, although

some of this is likely to be recouped in the second half of the year. However, if the shortages prevail into Q3, the recovery in light-vehicle output is expected to be pushed into 2022, and even 2023. Global palladium automotive demand is forecast to be reduced by more than 250 koz this year owing to the impact of the chip shortage on vehicle production. However, the palladium price is well supported by a deficit market this year owing to reduced supply from Russia.

Palladium spared from Russia's export tax. Russia will introduce an export duty on ferrous and base metals starting from 1 August and extending until the end of the year. The proposed measure will apply to exports of some steelmaking raw materials, e.g. nickel, as well as copper and aluminium. PGMs are currently exempt from the proposed measures, but Nor Nickel's nickel revenue will be affected.

⁴⁵ Rh ⁴⁴ Ru ⁷⁷ Ir **Rhodium, Ruthenium, Iridium**

	Rhodium	Ruthenium	Iridium
Reporting week	\$19,950/oz	\$795/oz	\$6,150/oz
Previous week	\$19,950/oz	\$795/oz	\$6,150/oz

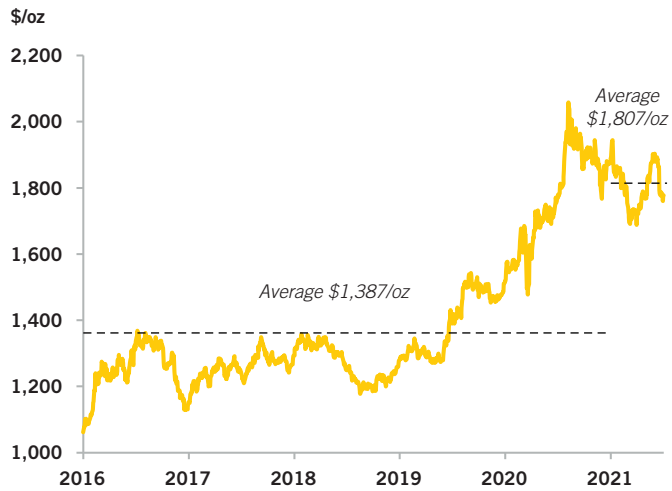
The rhodium price rallied in the first half of the week but slipped back to \$19,950/oz again by the end of the week. The iridium and ruthenium prices have remained unchanged for several weeks and it seems that the market has adjusted to the recent easing of liquidity. A stock

release from Anglo American Platinum in the latter part of 2021 is expected to act as a buffer to the shortfall from Nor Nickel, which should prevent the prices of all three small PGMs from returning to the record levels seen earlier this year.



TRENDS AND INVESTMENTS

Gold price



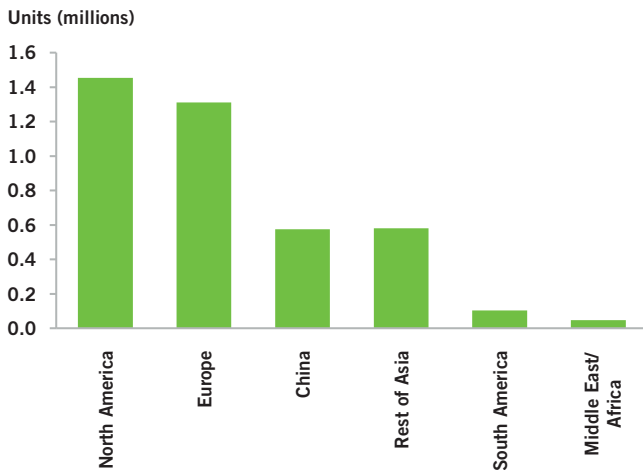
Source: SFA (Oxford), Bloomberg

Platinum price



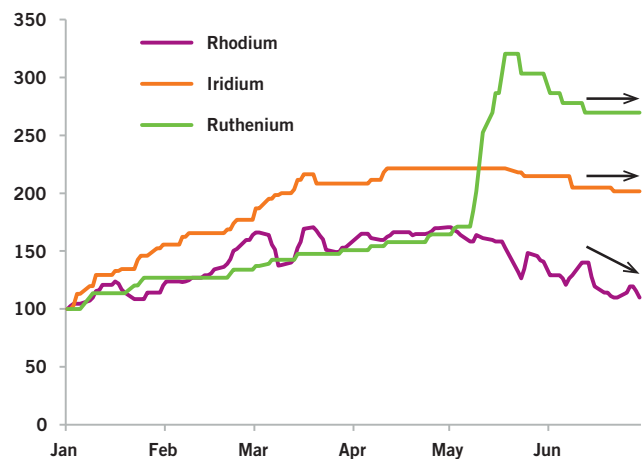
Source: SFA (Oxford), Bloomberg

Chip shortage: lost vehicle production



Source: AutoForecast Solutions, AutoNews. Note: announced losses only.

Small PGM price performance YTD



Source: SFA (Oxford), Heraeus. Note: prices indexed to 100, 1 Jan 2021.

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