

PGM Mining & Supply

Wilma Swarts, Metals Focus



Metals Focus

Slippery supply slope forces PGM markets into deficit

IPMI, Orlando

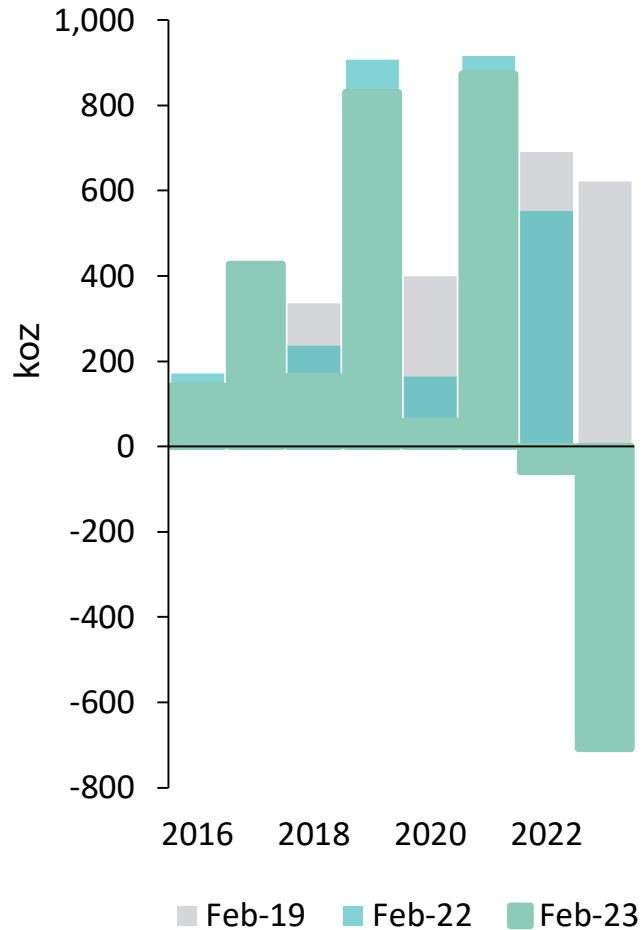
March 1, 2023

Presented by Wilma Swarts

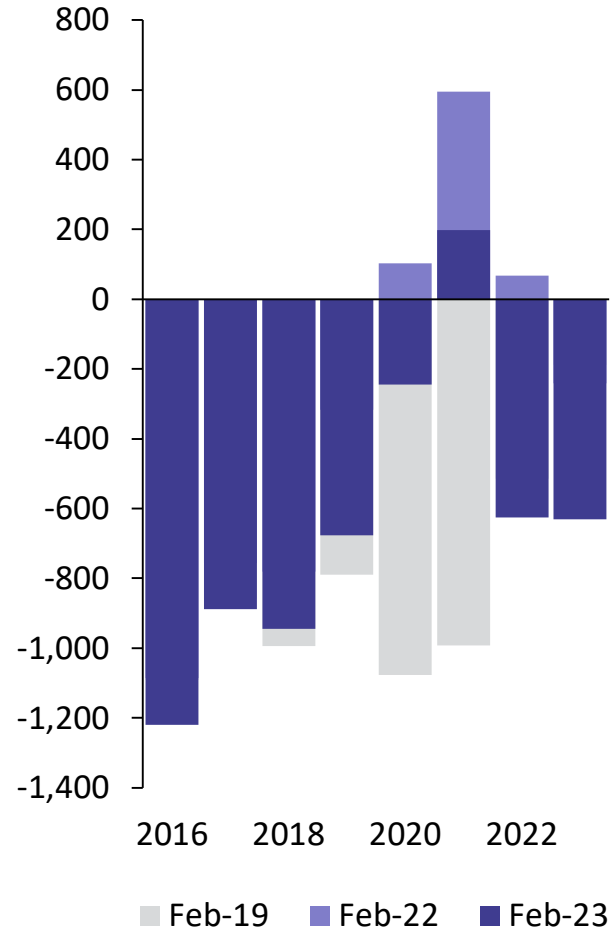


Rapidly changing landscape – changes to market balances

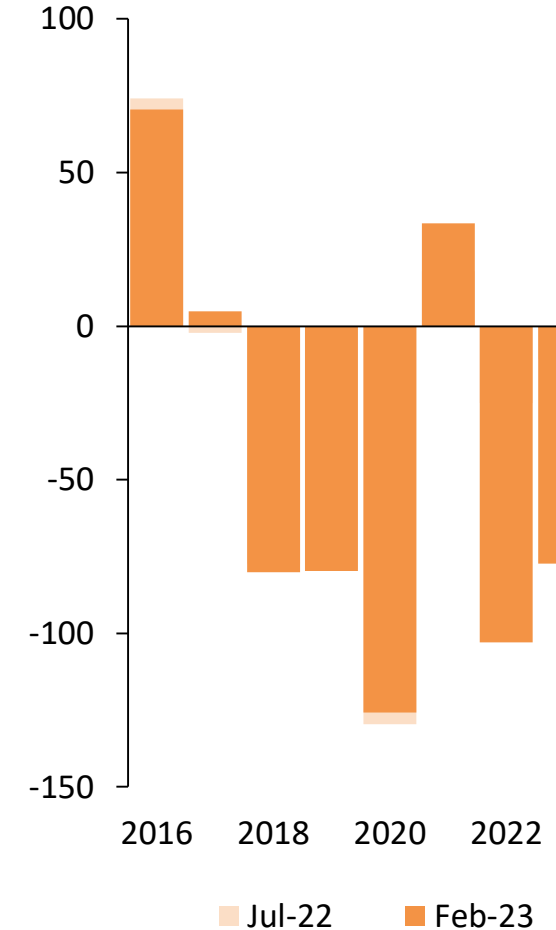
Platinum



Palladium



Rhodium

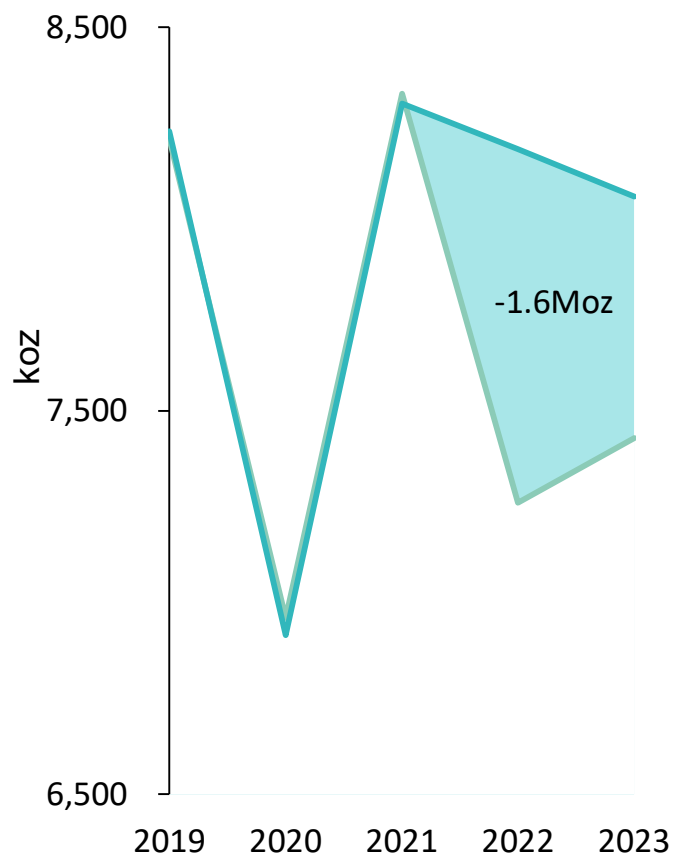


Source: Metals Focus, historical and current forecast



What shifted the market status?

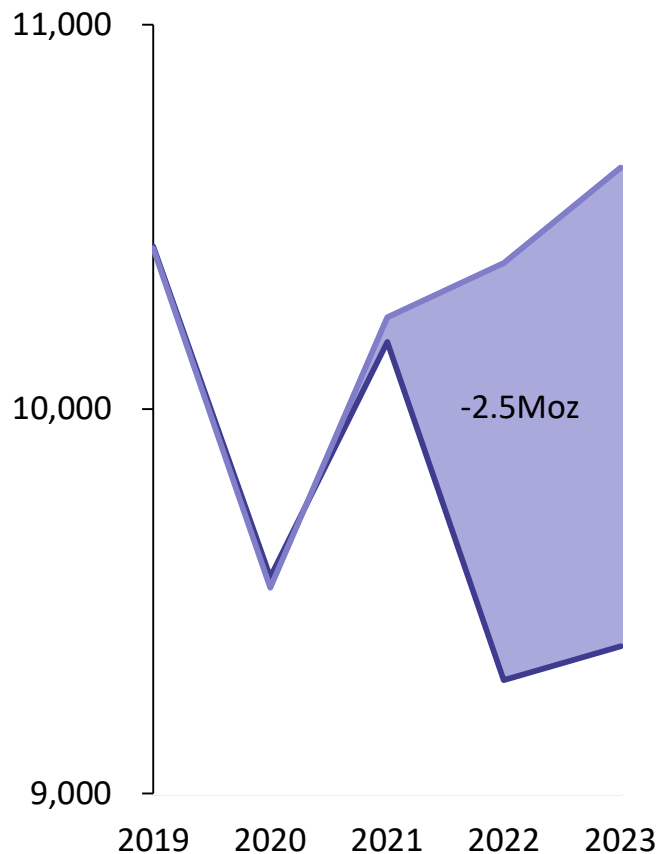
Platinum



- Forecast downgrade
- Supply Forecast - 2023
- Supply - Forecast 2022

Source: Metals Focus

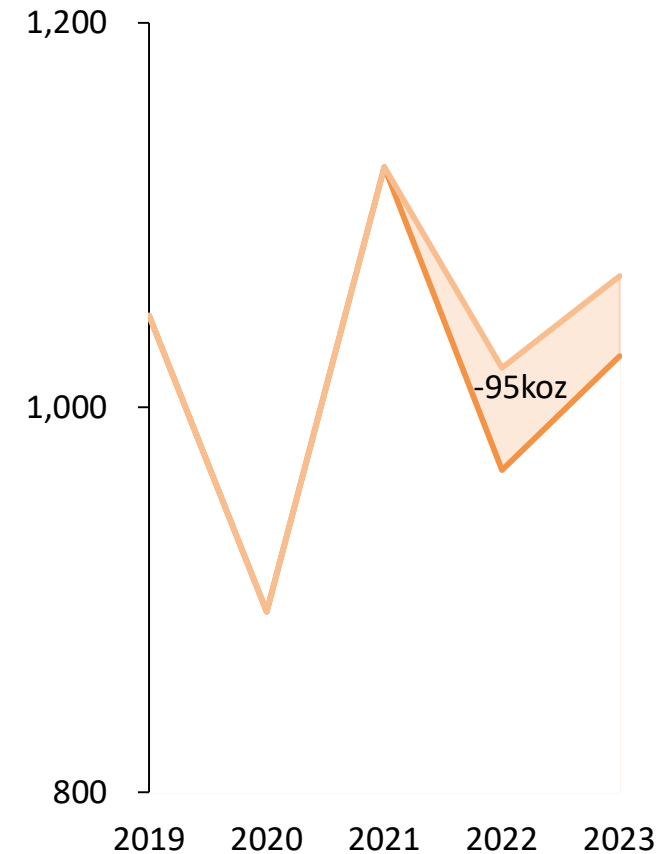
Palladium



- Forecast downgrade
- Supply Forecast - 2023
- Supply - Forecast 2022

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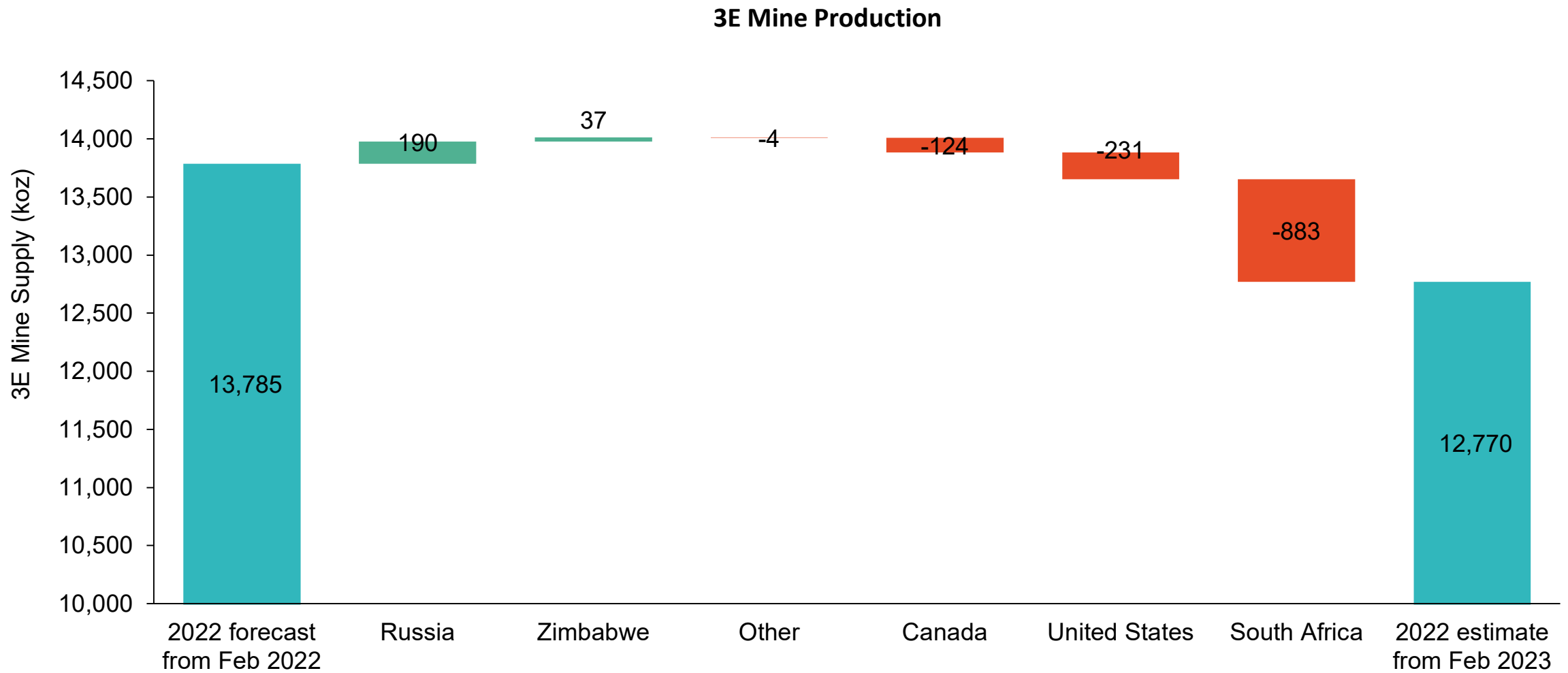
Rhodium



- Forecast downgrade
- Supply Forecast - 2023
- Supply - Forecast 2022



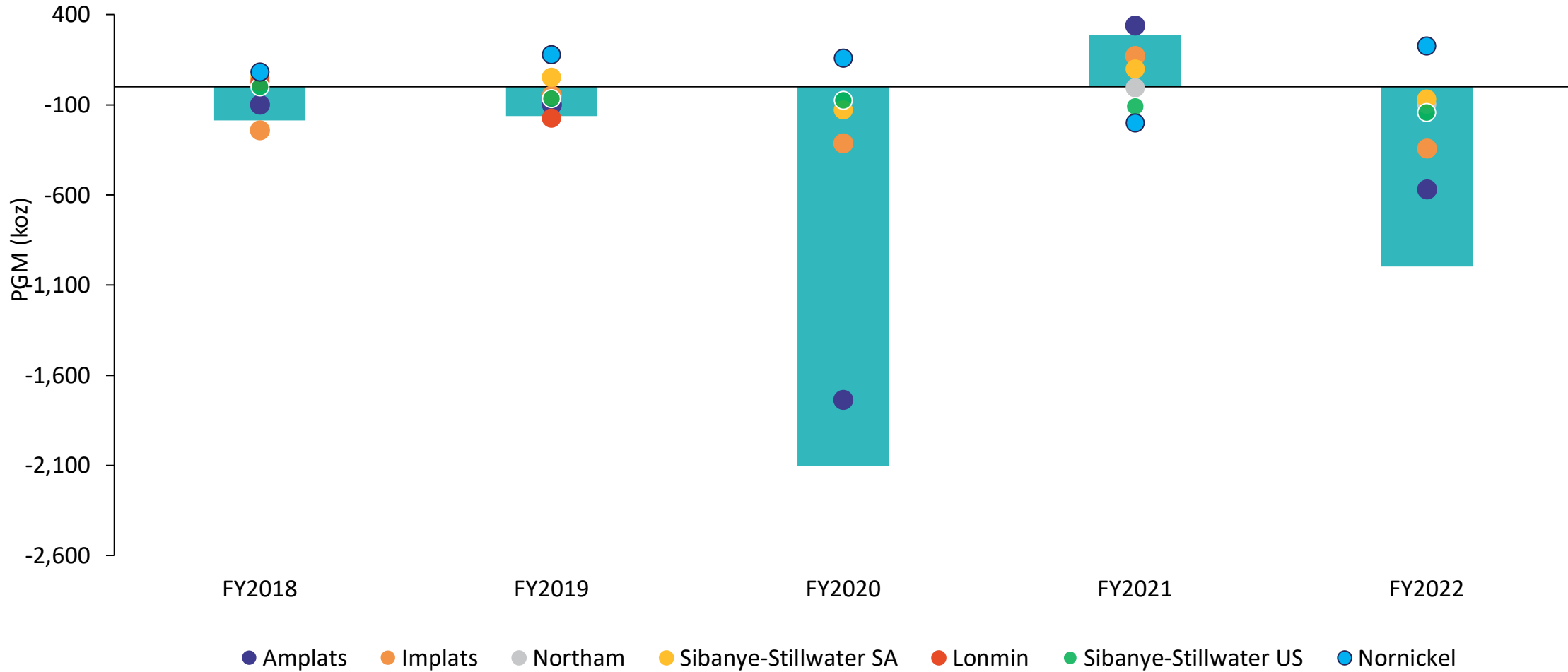
Where was the mine production shortfall?



Source: Metals Focus

PGM miners failing to achieve planned volumes

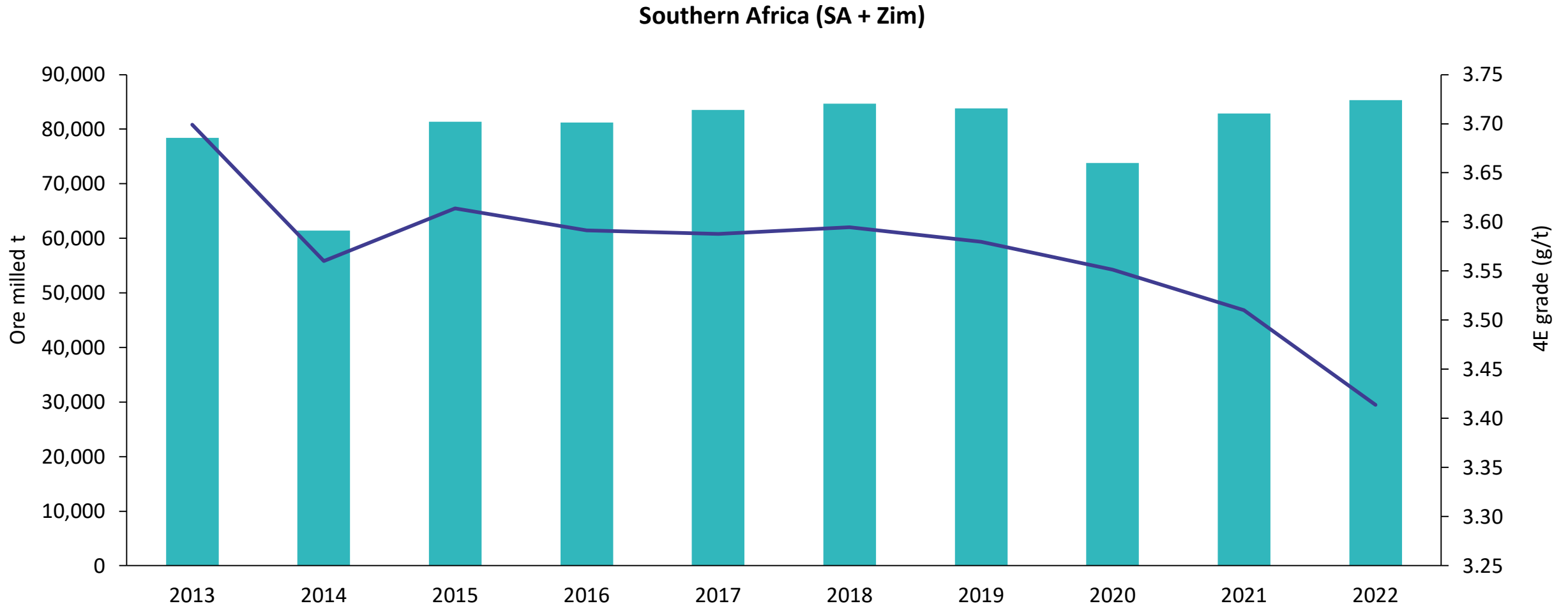
PGM Production Performance versus Guidance



Source: Metals Focus



Geology remains stable, but ore body mix changed

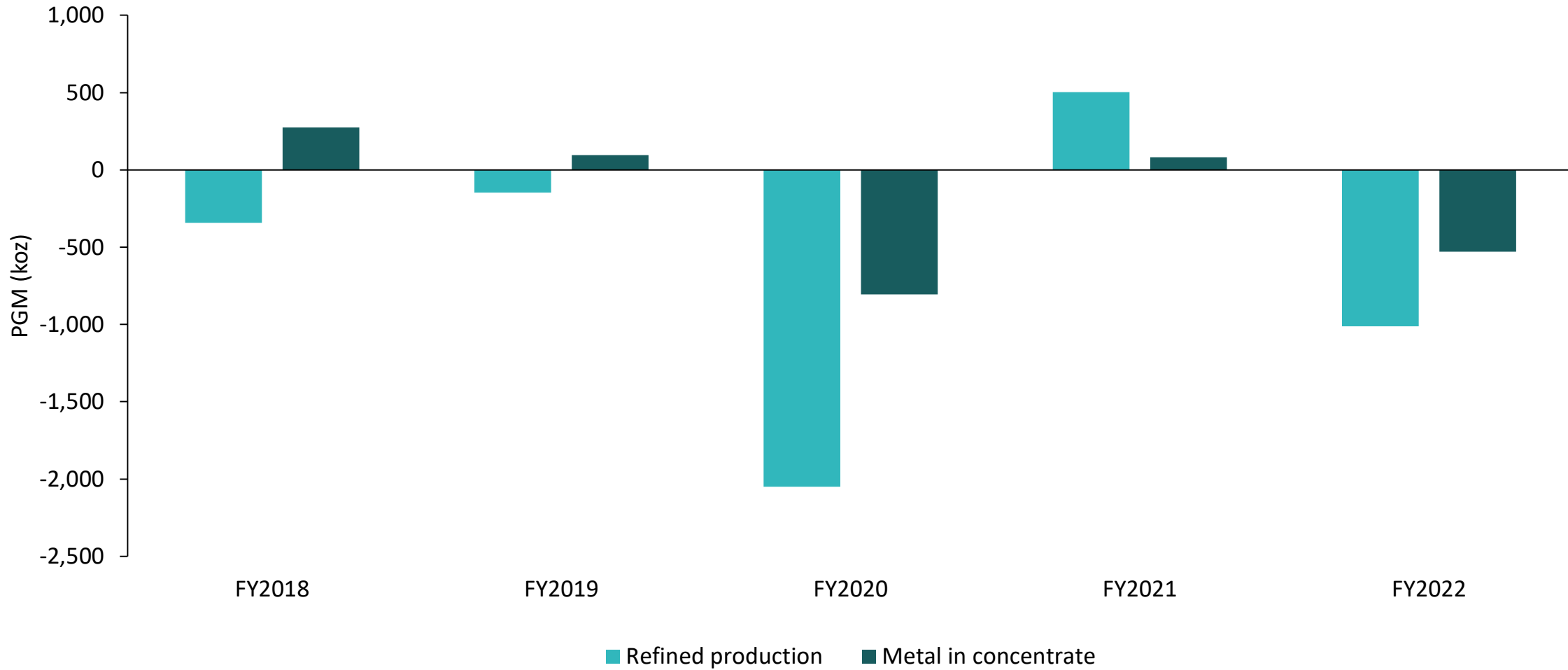


Source: Metals Focus



It boils down to smelting

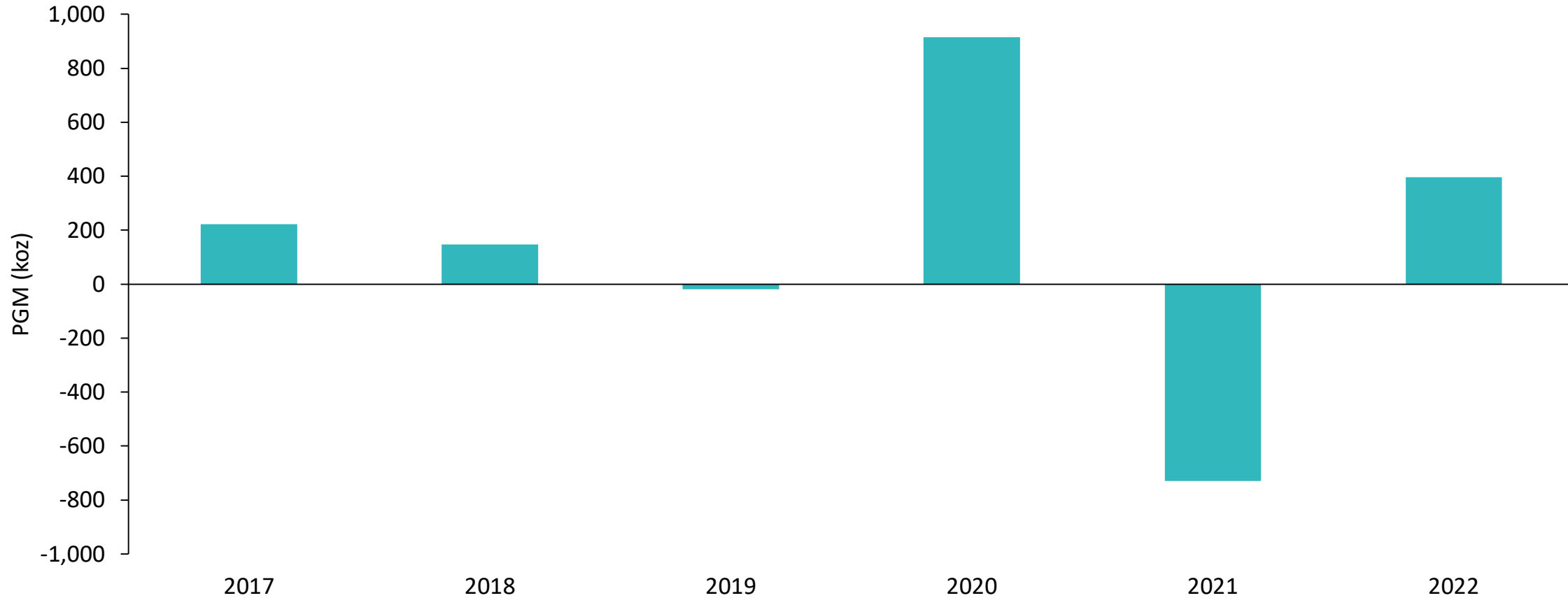
SA Integrated Producers' Performance versus Guidance



Source: Metals Focus

Semi-finished inventory dictating PGM supply

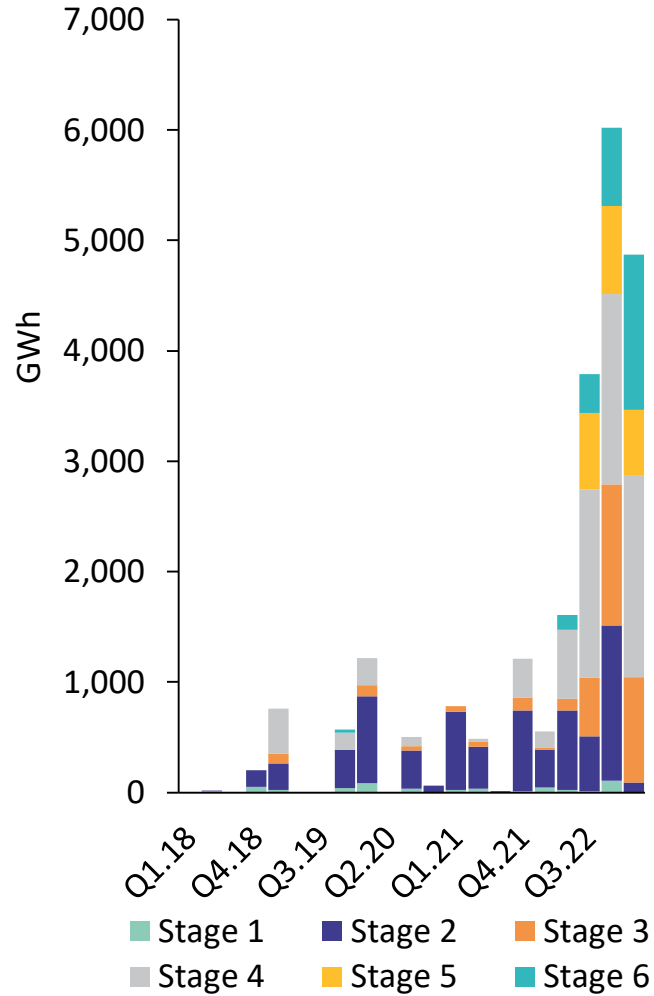
Semi-Finished Inventory Movement



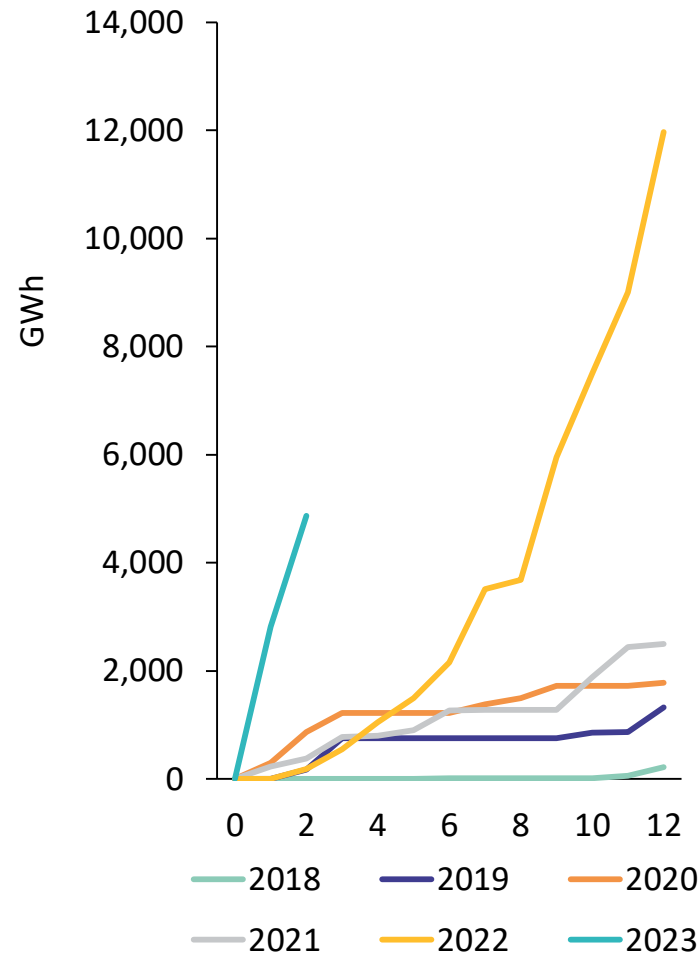
Source: Metals Focus

Eskom increasing uncertainty

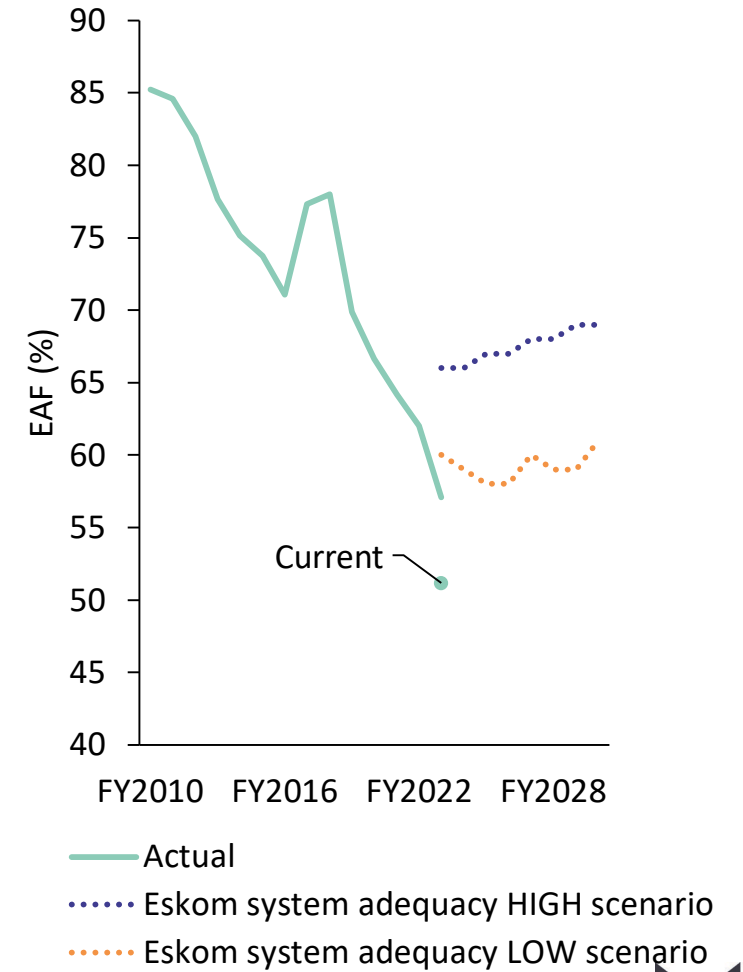
Announced Load Shedding Stages



Cumulative Monthly Announced Load Shedding



Eskom Energy Availability Factor Trajectories

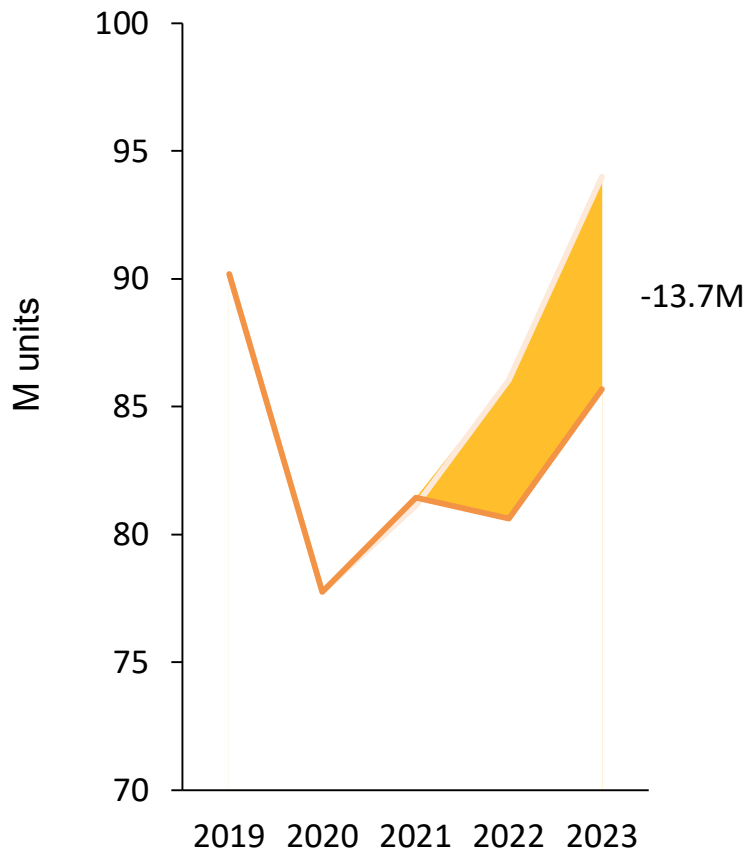


Source: Eskom, Metals Focus

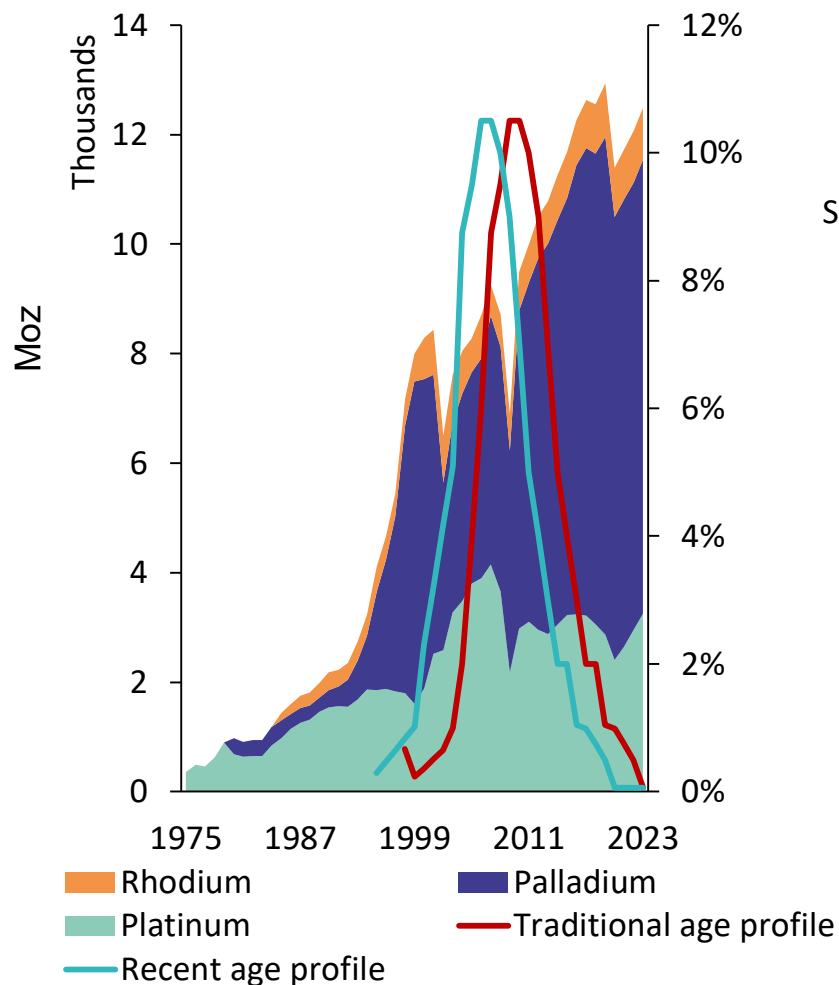


Secondary supply facing challenges

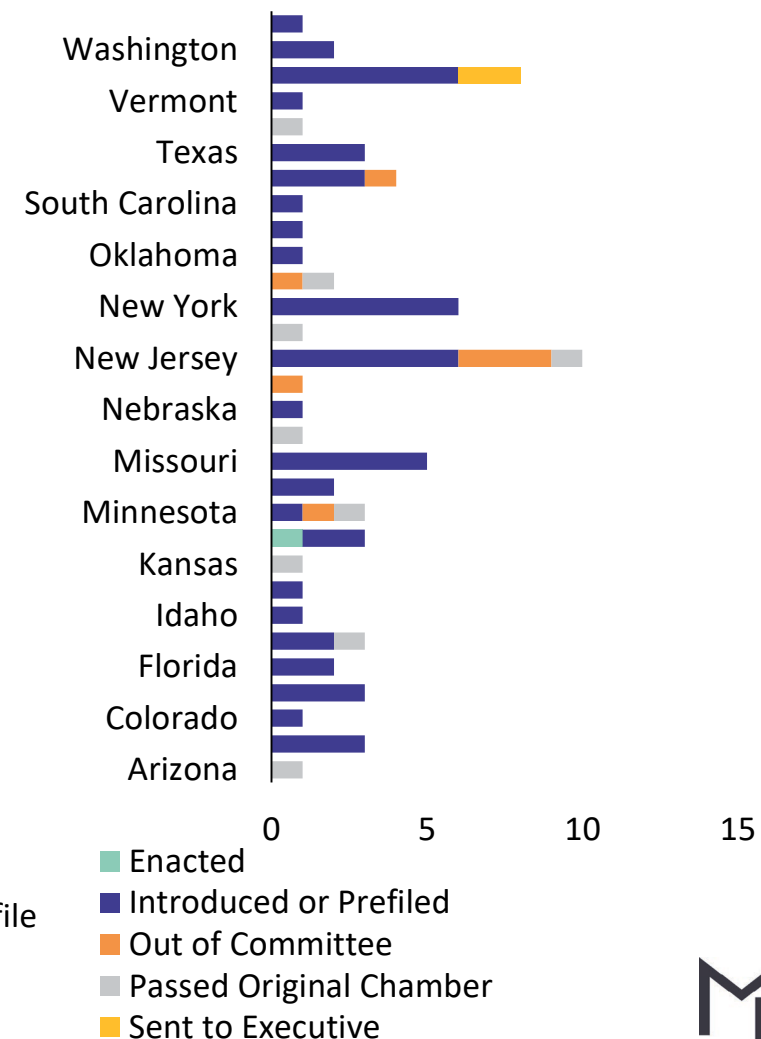
Global Vehicle Sales



Older Vehicles, Lower Loadings



Introduction of regulation/bills for spent catalyst processing

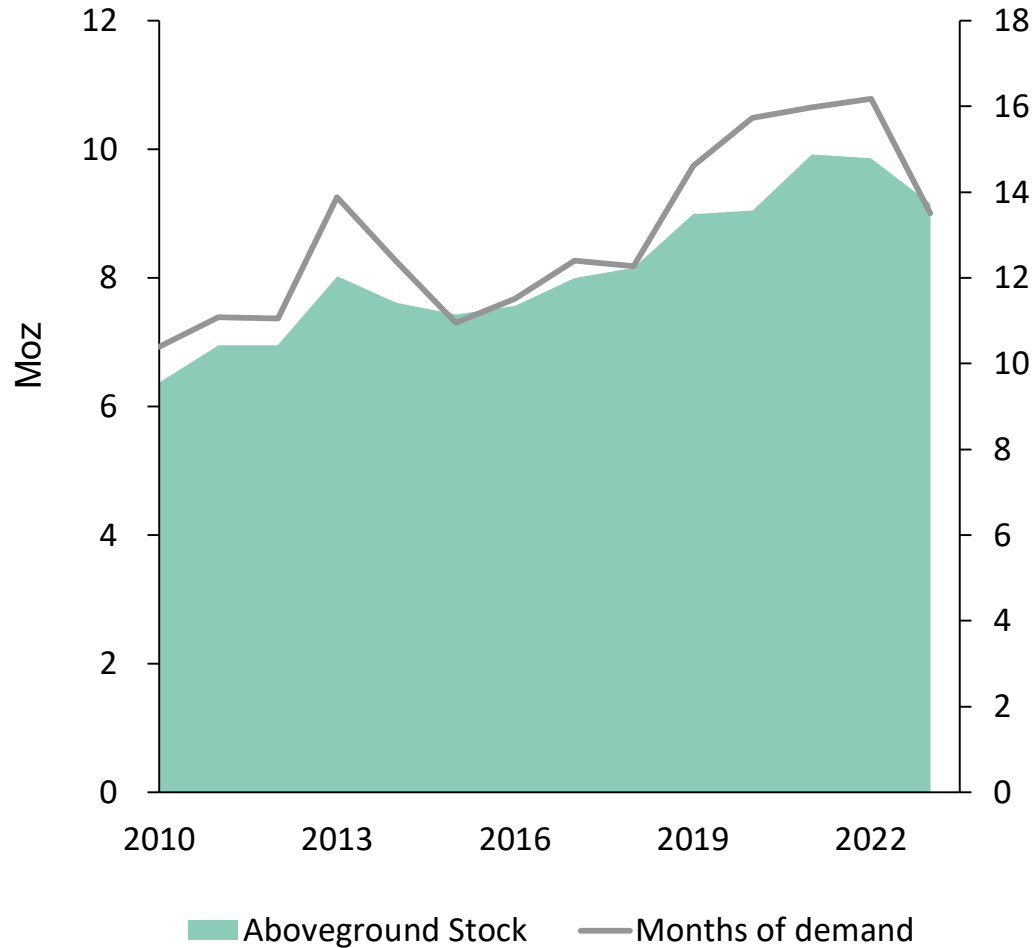


Source: LMC Automotive, Metals Focus, National Insurance Crime Bureau 10

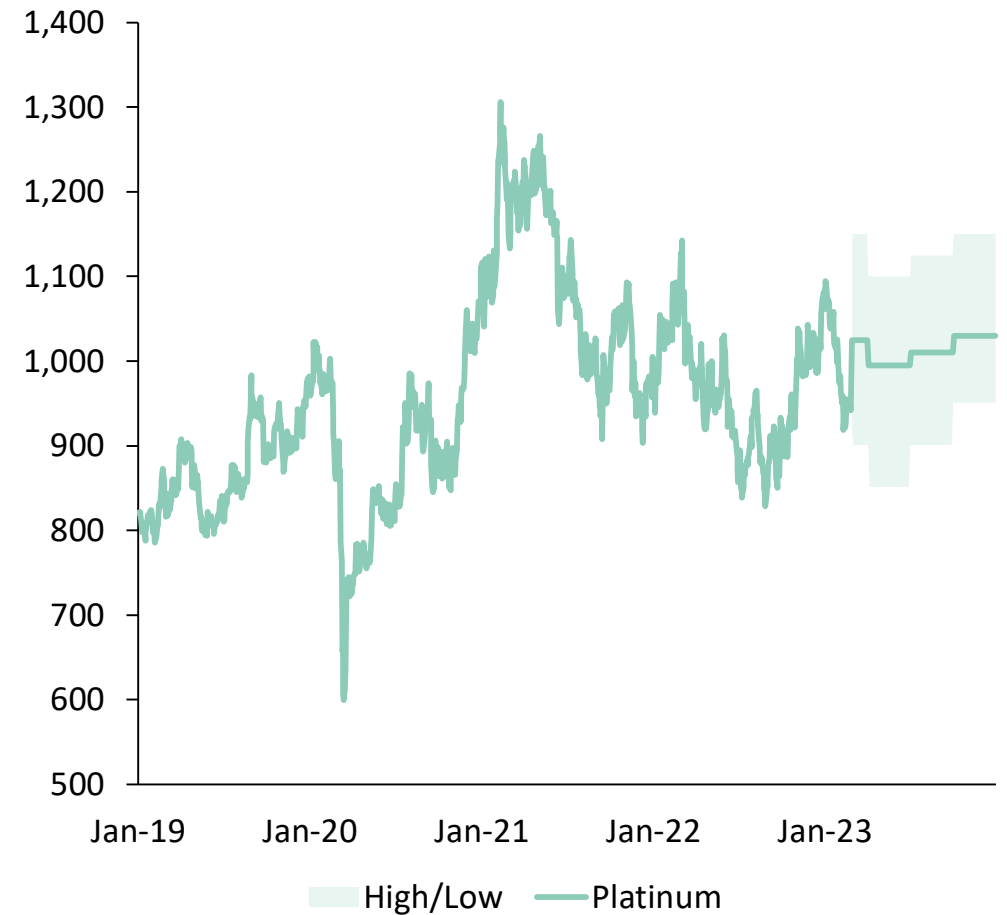


Platinum – above-ground stock and price outlook

Platinum Above-Ground Stocks versus Months of Demand Cover



Platinum Historical Price and Outlook

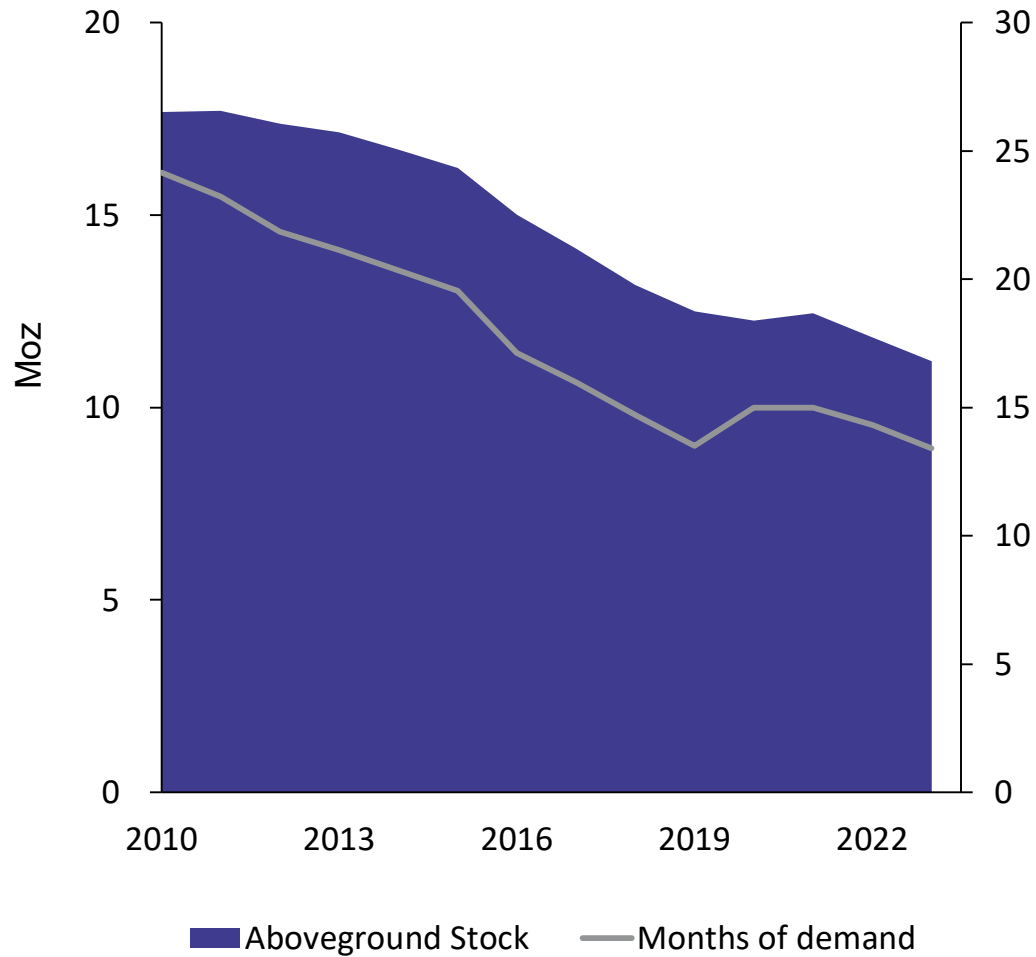


Daily actuals with quarterly forecast averages Q4.22-Q4.23
 Source: Metals Focus (forecast), Bloomberg (history)

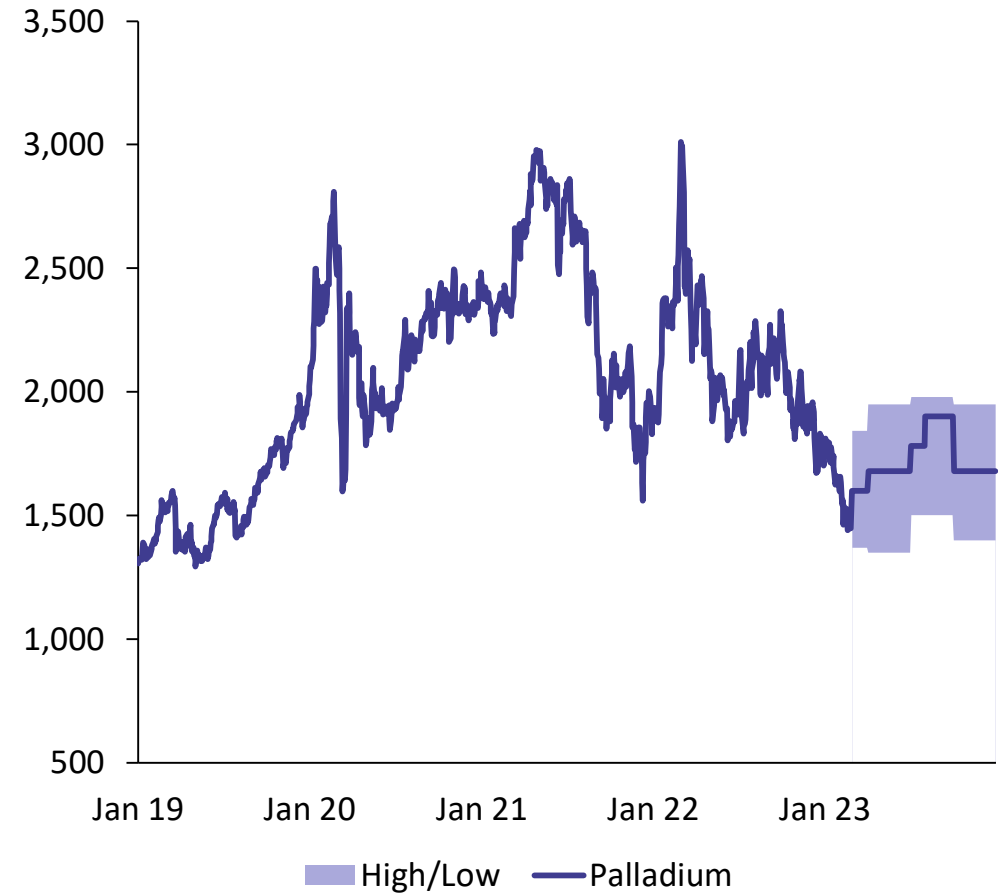


Palladium – above-ground stock and price outlook

Palladium Above-Ground Stocks versus Months of Demand Cover



Palladium Historical Price and Outlook

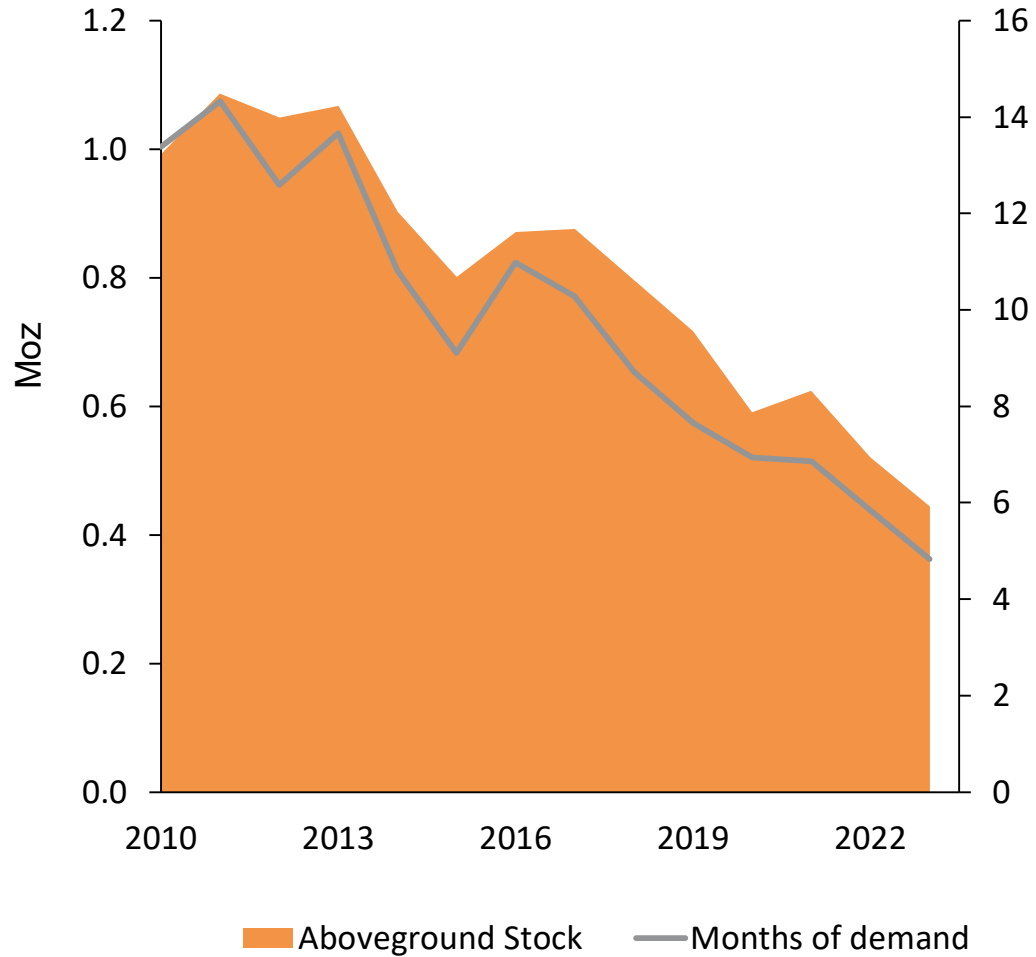


Daily actuals with quarterly forecast averages Q4.22-Q4.23
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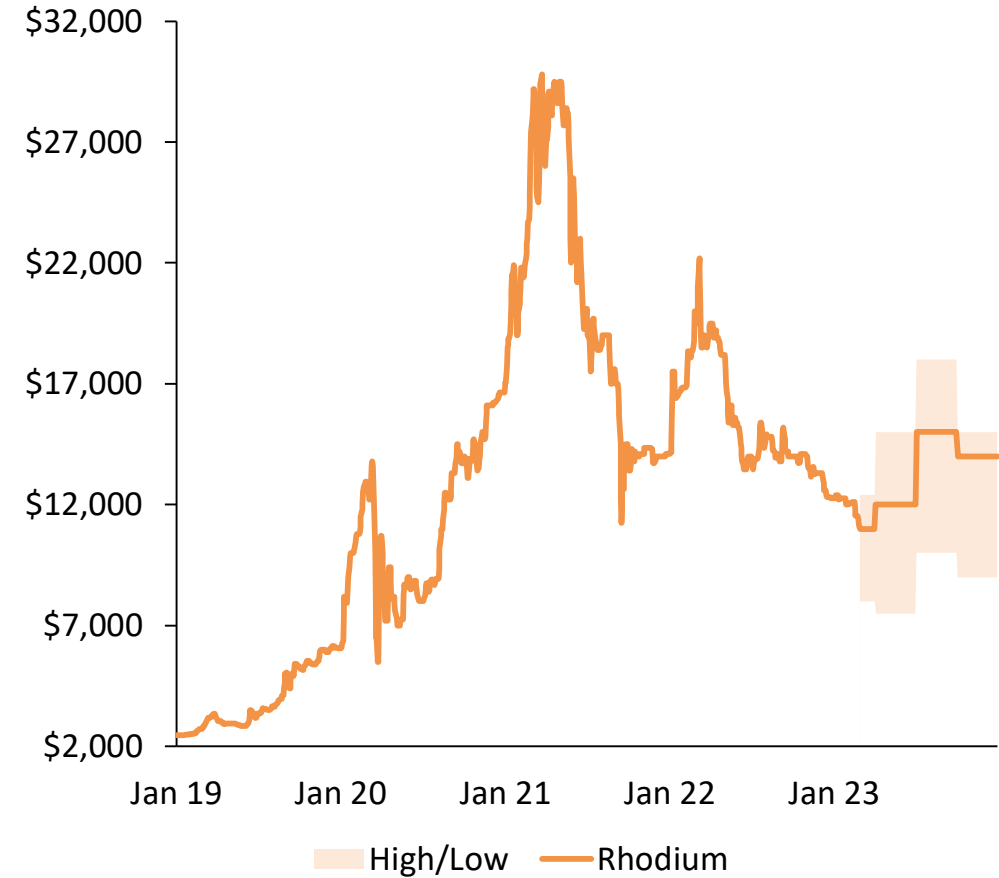


Rhodium – aboveground stock and price outlook

Rhodium Above-Ground Stocks versus Months of Demand Cover



Rhodium Historical Price and Outlook



Daily actuals with quarterly forecast averages Q4.22-Q4.23
 Source: Metals Focus (forecast), Bloomberg (history)



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