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Platinum Group Metals: It Begins and Ends in the Market

Richard Stewart

Platinum group metals (PGMs) are the rarest of precious metals and yet due to their unique chemical properties are driven by market forces more commonly associated with industrial fundamentals.

Demand uses for PGMs are diverse, from medical applications to jewellery. Over the past three decade's global demand for PGMs has increased substantially from approximately 8 million ounces in 1990 to a peak at approximately 18.5 million ounces in 2018. This significant increase in demand was driven by the convergence of technological advances of the tri-metal catalyst (Pt, Pd, and Rh) that significantly enhanced the emission reduction efficiency of auto catalysts and growing global regulatory frameworks to address automobile emissions.

Over the past few years, the rapid growth of battery electric vehicles (BEVs), has driven negative market sentiment towards the outlook for PGM demand. However, the economic, technical and consumer driven constraints of sustaining recent BEV market penetration rates is increasingly being recognised, and the potential roles of other disruptive technologies to automobile power trains, including hydrogen, are garnering progressively more attention.

It is highly probable that PGM markets will undergo a long-term structural change and that both demand and supply drivers over the next three decades are going to be very different to the last. In addition to evolving regulation and technological advances, the pace and nature of that change will be impacted by evolving macrotrends, including increasingly stringent requirements for responsibly sourced metals, geopolitical tensions, the impact of artificial intelligence, and the continuous drive for global decarbonisation. Consideration of these macrotrends will be critical as the industry advances future discovery, extraction, beneficiation, and market development of PGMs to ensure their unique characteristics continue to contribute positively to society for decades to come.