

# PLATINUM DEMAND TO GROW FROM 2025 ONWARDS

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## Key Points

- Global platinum demand declined ~18% in the past decade.
- Consumption nadir will be reached during 2025.
- Decline in diesel vehicle sales has plateaued.
- Industrial/chemical demand to exceed autocatalyst by 2035.
- Platinum prices to remain flat for the foreseeable future.

Forecasting commodity prices is a complex challenge. In July 2020, we predicted palladium would outperform platinum, with Russian producers using the opportunity to replenish stockpiles. Our analysis anticipated that surplus platinum supply would flood the market, depressing prices. However, by early 2021, we had to close several PGM Shorts, as global vehicle sales declined only 16.5% instead of our predicted 50%. With rapid technological changes, particularly in electric vehicles (EVs) and hybrids, reshaping demand, it is crucial to reassess the platinum group metals (PGM) market. Our analysis now updates platinum's outlook, with a separate report on palladium forthcoming.

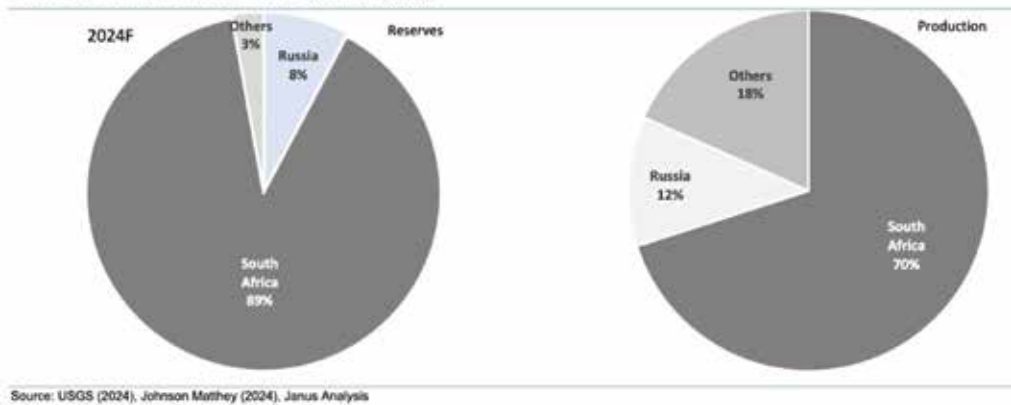


### Supply

Platinum supply is highly concentrated, with about 89% of primary production originating from South Africa.

The remaining sources include Russia, mainly for palladium, and Zimbabwe's Great Dyke deposits.

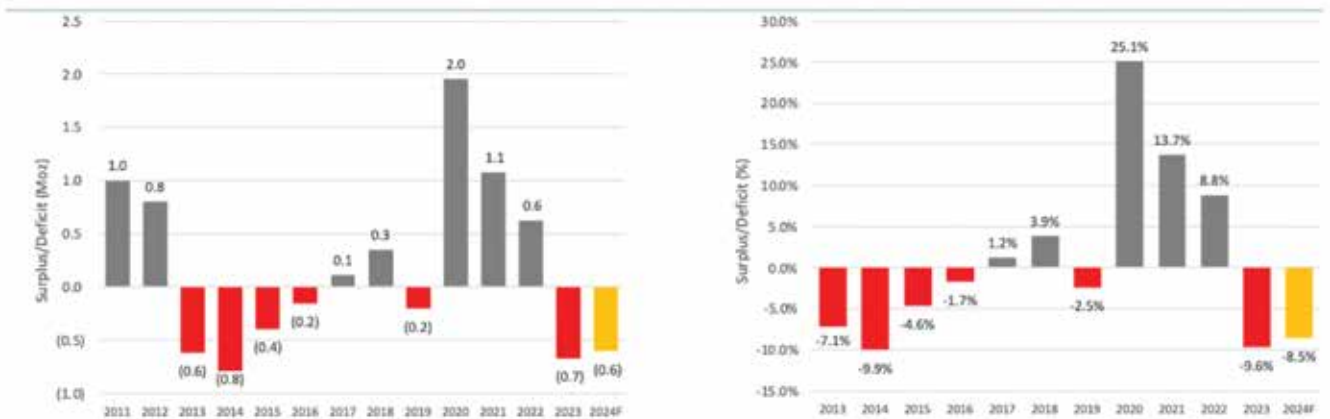
**Figures 1 & 2:** Global PGM reserves (left); and largest global primary PGM producers are predominately South African based miners, followed by Nor Nickel's Russian nickel operations (right).



Source: USGS (2024), Johnson Matthey (2024), Janus Analysis

Secondary supply from recycling accounts for 17-18% of platinum availability. This comes primarily from repurposing catalytic converters, jewelry, and electronic waste. Recycling volumes are highly price-sensitive, with higher prices encouraging greater recycling activity. Despite current platinum deficits, surplus metal accumulated during the COVID-19 pandemic has not yet been exhausted.

**Figures 3 & 4:** Global platinum market balance (left); and apparent platinum deficit/surplus in percentage terms (right).

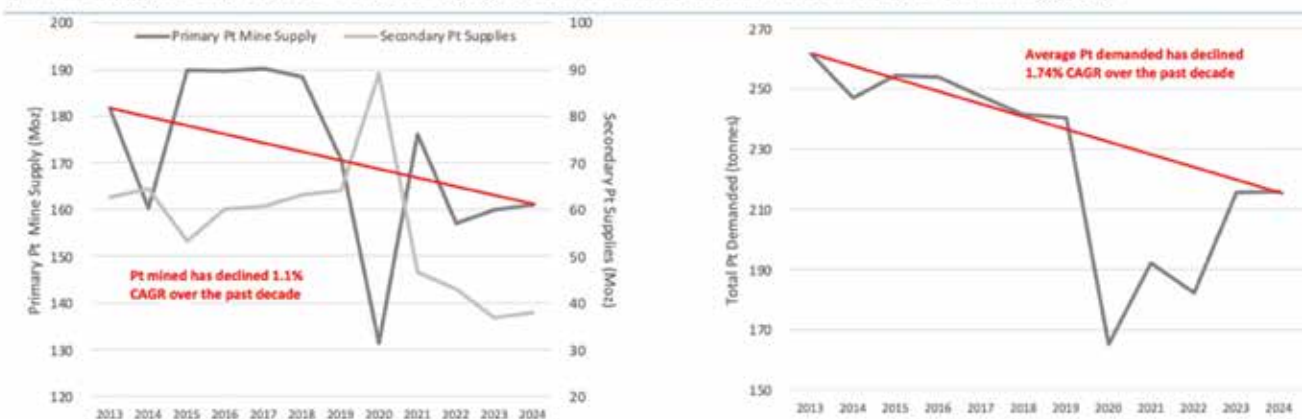


Source: Johnson Matthey (2024), Janus Analysis

### Demand

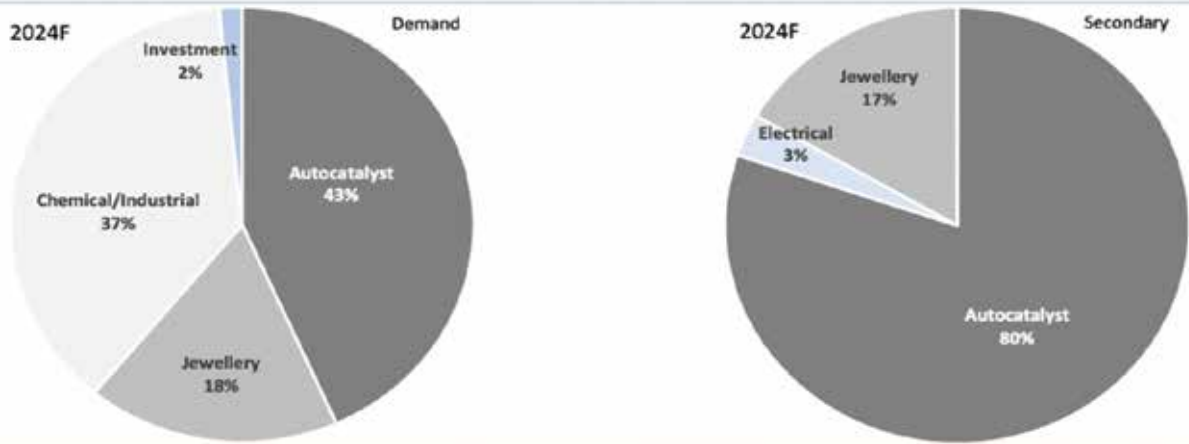
Platinum demand has been in steady decline, shrinking by about 17-18% over the last decade. A key reason for this is that most industrial applications of platinum involve catalysts that are used but not consumed. Once installed, platinum-based catalysts in plants require only minimal top-ups over time.

**Figures 5 & 6:** Although impacted by covid, global platinum demand has declined 17.6% over the past decade (left); interestingly, primary platinum supply has only declined 11.4%, underlying the structural robustness and cost efficiency of S.A. mining (right).



Source: Johnson Matthey (2024), Janus Analysis

Figures 7 & 8: Primary Platinum demand (left); and secondary Platinum sources, dominated by used autocatalyst recycling (right).



Source: USGS (2024), Johnson Matthey (2024), Janus Analysis

The automotive industry accounts for approximately 43-44% of annual platinum consumption. Platinum is primarily used in catalytic converters, which help reduce vehicle emissions. While it remains an excellent hydrogen ignition catalyst with strong resistance to sulfur, phosphorus, and lead, it has lower efficiency in reducing NOx emissions compared to palladium. Platinum has been the preferred choice in diesel vehicle emissions control, as the oxidizing environment of diesel exhaust maintains its effectiveness. Jewelry demand, historically a significant contributor to platinum consumption, has sharply declined. From 2.9Moz in 2021, global platinum jewelry demand fell to approximately 1.3Moz in 2024, the lowest level since the 1980s. This trend is especially

evident in China and Japan, where consumers have shifted preferences toward gold. Investment demand for platinum has also plummeted, making up just 4% of the levels seen five years earlier.

Industrial and chemical applications now represent the second-largest segment of platinum demand, with an annual growth rate of 3-4%. Key uses include refining processes for high-octane fuels, ammonia oxidation for nitric acid production (used in fertilizers), hard disk drive storage layers, and LCD glass fabrication. Platinum is also crucial in medical equipment, such as turbine engine oxygen sensors and chemotherapy drugs.

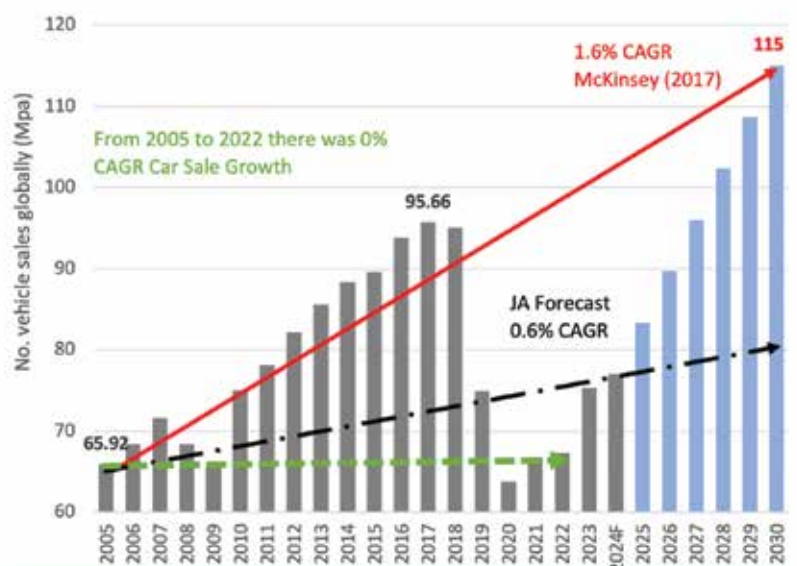
### Global Vehicle Sales & EV/Hybrid Transition Assumptions

The outlook for platinum demand is heavily influenced by global vehicle sales. Our revised projections suggest that total vehicle sales for the rest of the decade will be more than 30% lower than previous consensus estimates. We use these projections to model platinum and palladium demand across different vehicle types.

The transition away from diesel began in 2016, even before EVs became a viable alternative. A decade ago, diesel vehicles dominated European roads, but their market share has since plummeted. The rise of hybrids has been the most significant trend in the shift away from diesel, with battery electric vehicles (BEVs) growing more slowly than expected despite government incentives.

Notably, the shift from diesel to hybrids has been largely consumer-driven rather than a result of regulatory pressure. While governments have heavily subsidized BEVs, these incentives create short-term distortions in consumer preferences rather than fostering sustainable demand growth. Policymakers in Europe, Japan, Canada, and Australia continue to push for net-zero emissions, but practical challenges remain. In contrast, the U.S. may withdraw from the Paris Agreement under a future administration, potentially altering global climate policy.

Figure 9: Actual and projected global car sales.

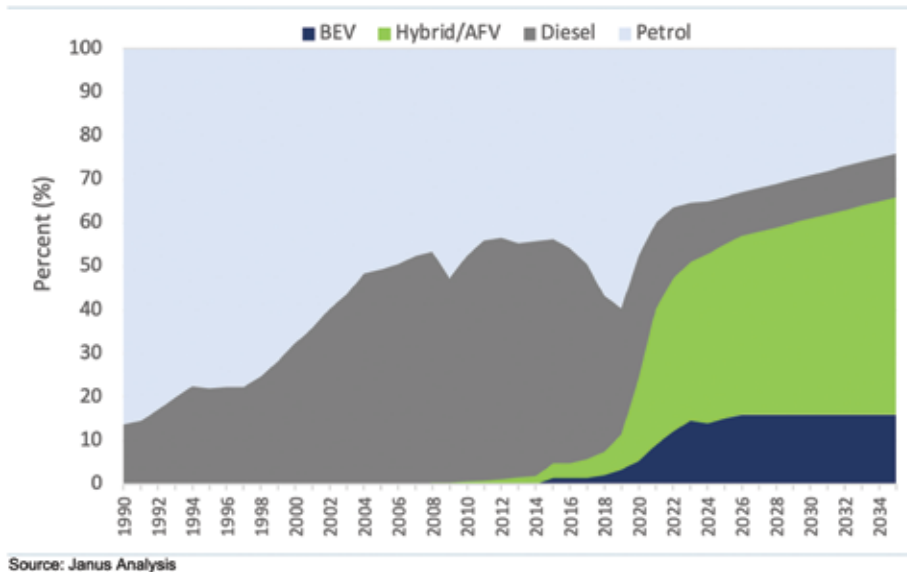


Source: Janus Analysis

### Platinum Forecast

Platinum consumption trends are relatively stable compared to other commodities, allowing for a reliable long-term forecast. However, price forecasts remain uncertain due to various external factors beyond the scope of this report.

**Figure 10: EU car registration by fuel type.** Using a sigmoidal growth curve as our guide, in our projection out to 2030, we have assumed that EU trends are a guide to global adoption rates and trends.



Source: Janus Analysis

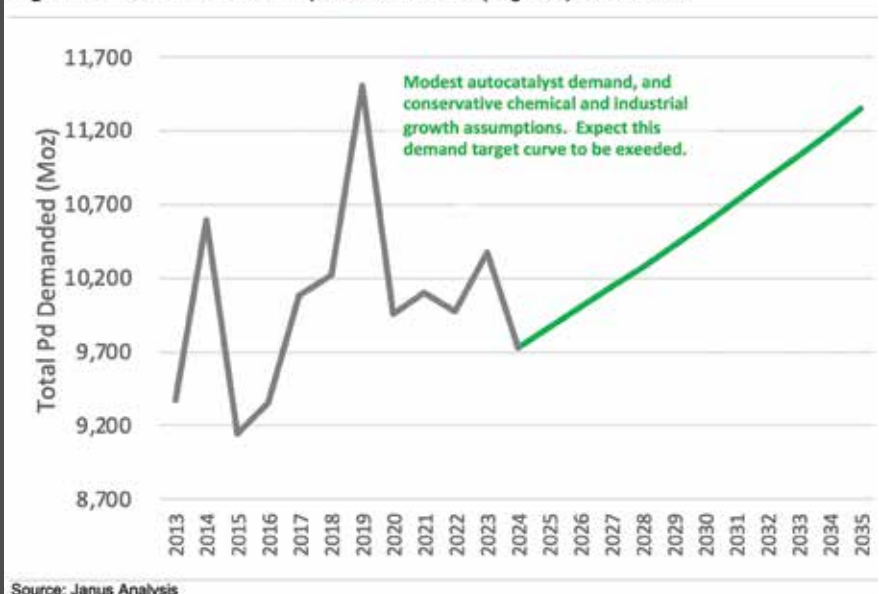
### Key Assumptions

- **Diesel demand stabilizing:** Diesel vehicle sales have declined significantly since their peak, reaching levels last seen in 1998. Our model suggests that, in absolute numbers, diesel vehicle sales will stabilize at their current levels, with a modest annual growth rate of 0.7%. The percentage of diesel-powered vehicles may continue to decline, but total numbers will remain steady due to increasing overall vehicle sales.
- **Diesel’s operational benefits remain unmatched:** Diesel engines offer advantages in torque, range, and longevity that BEVs cannot replicate due to fundamental limitations in battery chemistry.
- **Geopolitical factors influencing supply chains:** China’s dominance in minerals processing raises concerns about long-term supply security. Nations are increasingly considering policies to reduce reliance on Chinese supply chains, potentially impacting material availability.
- **Industrial and chemical demand growth:** Over the past decade, industrial and chemical platinum demand has grown by about 21%. We project a steady 2% compound annual growth rate (CAGR) through 2035.

### Conclusions

- **Platinum demand is set to recover from 2025 onwards:** After a decade of decline, global platinum consumption is expected to reach its lowest point in 2025. Following this nadir, demand should begin a steady recovery.
- **Industrial and chemical applications will overtake automotive demand:** By 2035, platinum demand from industrial and chemical sectors will match that of the auto sector, eventually surpassing it.
- **Prices likely to remain stable:** Platinum prices are expected to stay flat in real terms over the foreseeable future. While demand recovery is anticipated, existing above-ground stockpiles will keep prices from surging.

**Figure 11: Actual and forecast platinum demand (in green) out to 2035.**



Source: Janus Analysis

