As we stand, only a couple of days in (at time of writing) from the inauguration of President Trump, the outlook for the domestic US auto industry, and by extension the global markets for the Platinum Group Metals is, by definition, up in the air.

So, working on the Rumsfeldian Principles, what do we know so far and what do we not know?

- 1. Known Knowns: The President's determination to rejuvenate the Internal Combustion Engie (ICE) sector and, by association, at the expense of Electrified vehicles (BEV batteries– and PHEV plug-in hybrid electric)
- Known Unknowns: likely abolition of the \$7,500 sales credit for the purchase of electrified cars; unlikely total abolition of the IRA



Rhona O'Connell
Head of Market Analysis,
EMEA & Asia; StoneX Financial Ltd

The New US Administration and the Auto Industry

3. Unknown Unknowns-Industry resistance?

The United States has, since the early 1970s, been in the vanguard of cleaning up emissions from the exhaust pipes of both gasoline-fuelled and diesel-powered vehicles, driven by the national Environmental Protection Agency and the California Air Resources Board. As far as gasoline vehicles are concerned, even after more than 40 years' research, it has proven impossible to design platinum group metals away from emission control catalysts as they are the only elements that can operate effectively in those attritional conditions, in order to clean up unburned hydrocarbons (palladium is best for that), carbon monoxide (platinum) and nitrous and nitric oxides (rhodium).

Enter, over the past five years or so, electrified vehicles which, on a global basis, will potentially carve a huge swathe through the PGM usage in the auto sector if – and "only if," the original aspiration targets for Net Zero carbon emissions are to be attained. Autos are responsible for roughly 15% of global CO2 emissions, needs to make a shift to the electrified sector.

The auto sector currently absorbs just over 40% of global platinum demand (before any scrap recovery is accounted for) and over 80% of palladium.

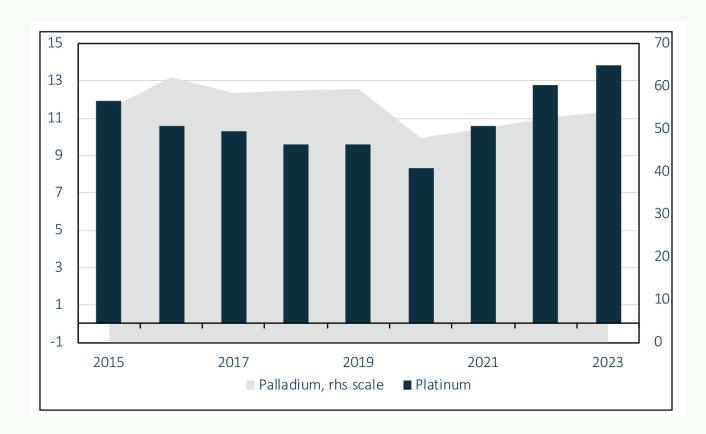
Bottom line, assuming that the global aspirational targets for net zero (different countries have different target evolutionary dates) are achieved (doubtful), then it could be possible that the amount of scrapped ICE vehicles would by the late 2030s have turned into a gross scrap supply of palladium,

while the sale of electrified vehicles might contain some platinum (fuel cells), but little if any palladium or rhodium. Subject, of course, to technological changes.

The exception at present is the plug-in-hybridvehicles, which use an ICE engine to fire things up, in tandem with a battery powertrain once the vehicle has achieved a sustainable speed.

Consumption of platinum and palladium in the US auto sector, tonnes

Platinum partially displaces palladium after the run up to a 3:1price ratio in palladium's favour in the early 202s

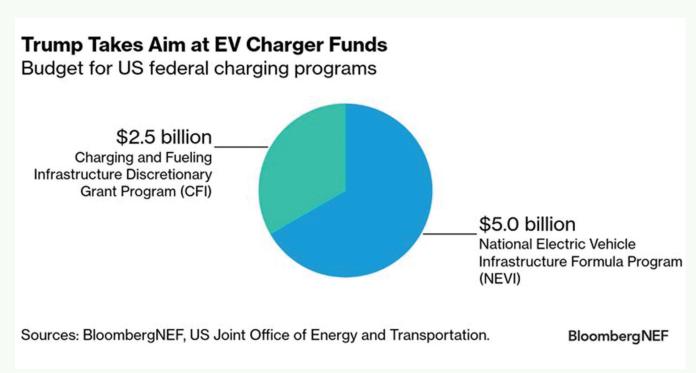


As with every new development, nothing ever fits with the original targets. For the electrification of the fleet, there was substantial original customer resistance, primarily on concerns over the achievable range of an electric vehicle. These targets, overall, were originally up to 390 miles, but that is improving quite; but drivers are still concerned about the infrastructure – i.e. the frequency of available charging points – especially in rural areas the United Sates and China. One area that looks to be making great stride is India. Of course every industrial technology evolves. Consumer resistance is easing and point-of-sale prices are dropping. Meanwhile...

The new President's preference for fossil fuels, the ICE vehicles and his apparent aversion to EVs – notable with the Executive Order this week that has potentially put a hiatus on the disbursement of over \$7.5Bn dollars that had been targeted at developing the EV Charger finding programme, adds to uncertainty,

Conclusion:

Of course it is far too early to estimate any impact on the PGM markets. Tonnage, as we speak, is irrelevant because of the level of aboveground stocks and the amount that is held inventories of scrapped emission control catalyst. The best we can do for now is to watch and wait.



Source: Bloomberg NEF