

Will new car CO₂ continue to increase? Will diesel always be a drag on platinum sentiment?

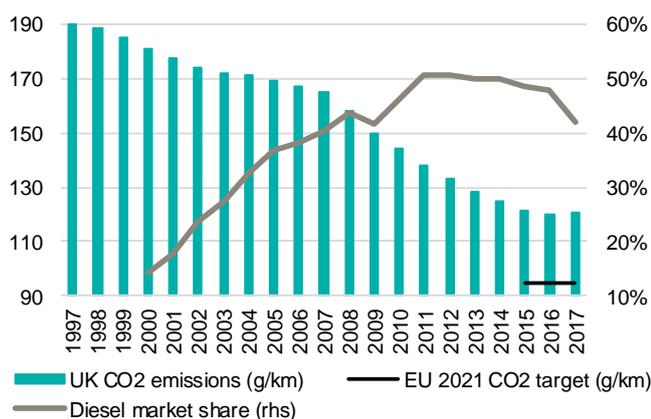
In early 2018 we have observed a more balanced view on platinum; with supply downside risks becoming front of mind again. However, European diesel is still the biggest perceived negative for platinum. We believe that 1) rising CO₂ is likely to increase concern over declining diesel share; and that 2) downside risks around diesel are well understood and are unlikely to continue to be a negative for platinum's investment case ad infinitum.

Market assumption: CO₂ targets can be met by higher Electric Vehicle (EV) penetration, despite rapidly declining diesel share.

Our view: As we have highlighted¹, we don't believe that the increased penetration of EVs will be sufficient to meet Europe-wide fleet CO₂ targets (95g CO₂/km by 2021), if diesel share continues to decline rapidly. This is contrary to common market and automaker expressed sentiment. However, data points are starting to accumulate which support our view.

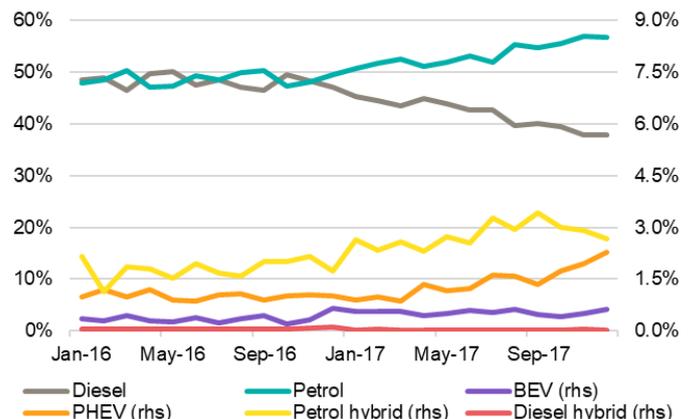
This month, the UK's SMMT² highlighted that in 2017, new car CO₂ increased y/y in 2017, after 20 years of decline. At least part of the 2017 y/y increase is likely due to falling diesel share. As shown below; **EV share is not growing by enough to offset higher CO₂ from petrol vehicles.**

UK annual new car CO₂ (g/km), UK diesel share (%), (rhs)



Source: SMMT, EC

UK powertrain market share (%)



Source: SMMT. See page 2 for acronym definitions

We believe that during 2018, it will become increasingly clear that European CO₂ targets will be missed if rapid diesel market share decline continues. Nevertheless, this factor is likely not enough to stem the diesel share decline in isolation. For diesel share to flatten or improve, the following developments are likely needed; 1) automakers to clean up diesel vehicles (which is possible, often profitable and in many cases already done); 2) government (city and national) to base policy on on-the-road emissions rather than vehicle type and 3) consumers to gain clarity on the cost and environmental implications of any vehicle they buy.

Market assumption: The European diesel trend will continue to dominate platinum's investment case in the medium term.

Our view: We have previously outlined³ that WPIC's view on diesel's outlook differs from the market's. Either way, we believe the downside risks around diesel are well understood as of today. Intuitively, there is likely to be a scenario where the diesel risk is considered to be "priced in".

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¹ Platinum Perspectives – July 2017 - "Electric" Vehicles (EVs) – Not all created equal

² SMMT - Society of Motor Manufacturers & Traders (UK)

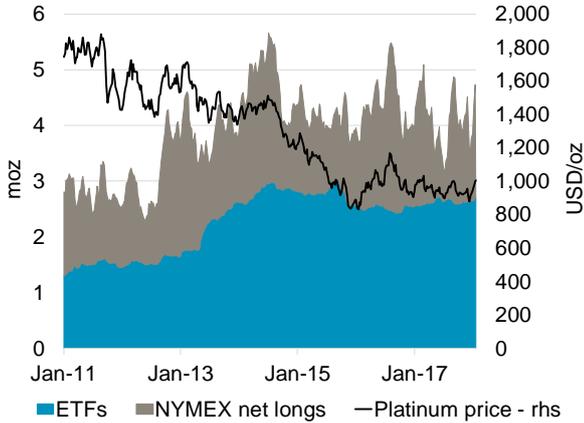
³ Platinum Perspectives – September 2017 - Will independent on-road testing arrest diesel's decline?

Platinum in six charts – January 2018

We believe there are many reasons supporting consideration of platinum as an investment asset:

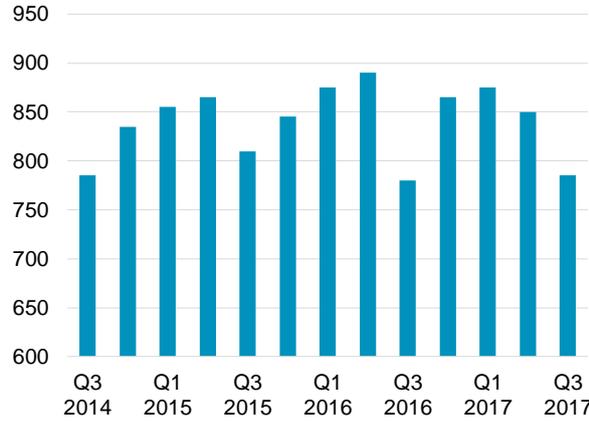
- Supply demand fundamentals are strong and ETF holdings are stable, despite price volatility
- Risks of supply declines are underestimated - cost pressure and falling mining investment continue
- Downside risks to platinum automotive demand are overestimated
- Futures positioning follows sentiment with high correlation to price
- Platinum is undervalued against its past, its production cost, against gold and against palladium

Figure 1: ETF holdings stable despite price volatility; correlation between futures positioning and price



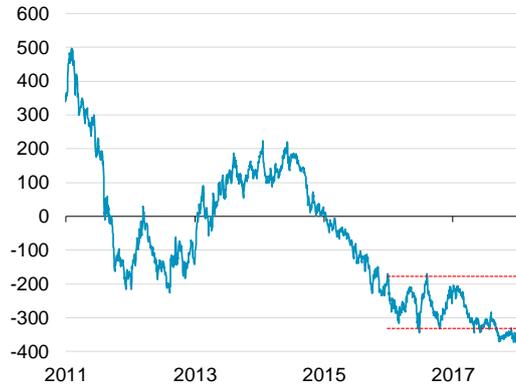
Source: Bloomberg, ETF providers, WPIC Research

Figure 4: Automotive demand starting to be impacted by European diesel share falls plus usual Q3 weakness (koz)



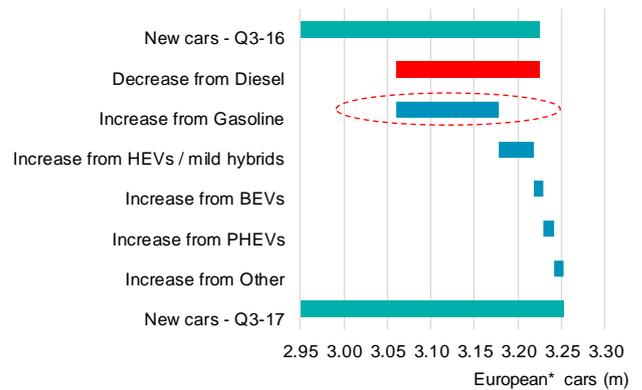
Source: WPIC Platinum Quarterly Q3 2017, SFA (Oxford)

Figure 2: Platinum discount to gold at an all-time high of c\$360/oz



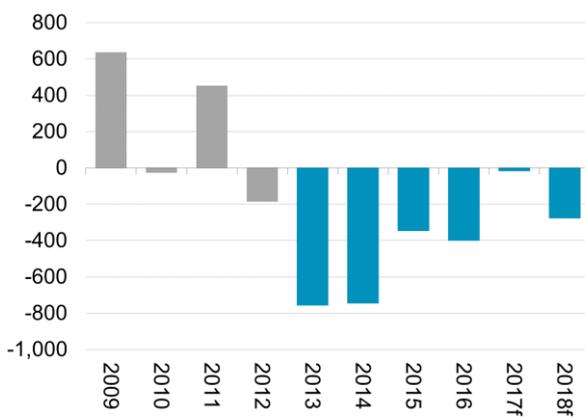
Source: Bloomberg, WPIC research

Figure 5: Diesel vehicles lost continue to be replaced by gasoline more than hybrid or battery vehicles



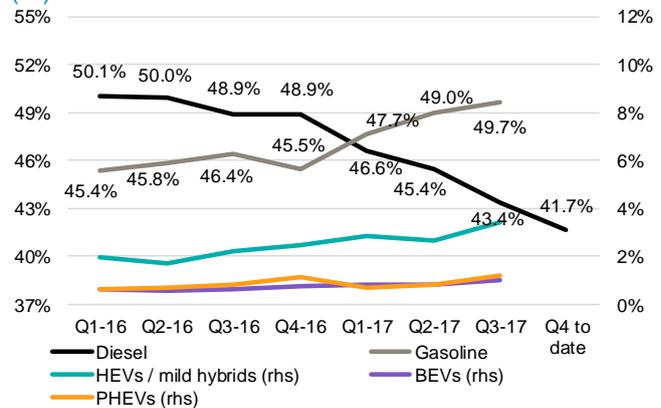
Source: LMC, ACEA, WPIC research

Figure 3: Platinum supply demand balance (koz)



Source: Johnson Matthey (2009-12), SFA (Oxford) (2013-18)

Figure 6: European* passenger powertrain market share (%)



Source: LMC, ACEA, WPIC research

* Europe includes passenger vehicles in Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, UK, Norway and Switzerland (based on the availability of both diesel market share data and Alternative Fuel Vehicle data). HEVs – Hybrid Electric Vehicles; BEVs – Battery Electric Vehicles; PHEVs – Plug-in Hybrid Electric Vehicles

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