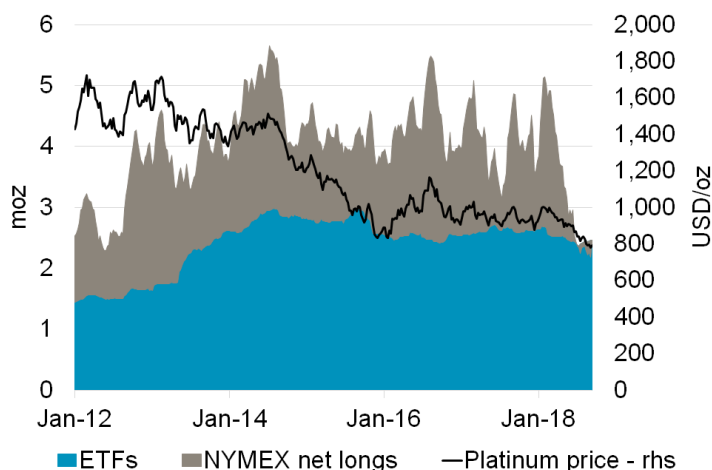


Platinum ETFs: an essential element of demand

Platinum ETFs, being physically backed, form an essential part of annual platinum demand as the vaulted allocated platinum bars backing them are purchased in the spot market. These ETFs, listed in North America, Europe, Asia and South Africa, have, on average, increased by over 240koz per annum since 2007 when the first platinum ETF was listed. Despite the total holdings of these ETFs remaining steady during the sustained and significant fall in the platinum price, many market commentators still suggest they represent a 'price threat' or overhang that justifies the low platinum price; some ignore them completely.

The annual net change in Platinum ETF holdings, or ETF demand, has averaged 245koz per annum with a peak of 985koz in 2013. The peak was due to the launch of a South African ETF at a time when local investment rules and a weakening currency greatly stimulated uptake. However, some analysts in the market do not include net investment into annual supply and demand numbers for platinum. Their reason for this is that investment flows are difficult to forecast with any degree of accuracy since this entails guessing what investors might do in the future. Consequently, analysis of the platinum market is sometimes defined in terms of an "**industrial supply and demand balance**". This definition excludes all investment flows of metal, so the result most often indicates a 'surplus'. This may make certain participants feel comfortable, as the platinum price has declined over the last few years and this theory could be seen to provide back-up, but it does feel like an artificially produced relationship.

Platinum ETFs holdings



Source: Bloomberg, ETF Providers, WPIC Research

Platinum ETF balances have grown steadily since 2007 and despite some concerns that they could be temporary in nature and rapidly flow back to the market, no major flow-back has occurred, despite extremely low prices. Actually, ETF ounces seem to be more long-lived than exhaust system ounces, c50% of which come back within 16 years, on average (due to recycling). It is not at all apparent from ETF holdings history that this metal is an overhang.

We anticipate that a rising platinum price will result in increased ETF holdings (as has happened in the past), and we do not expect them to be liquidated easily given the sticky nature of these holdings.

Trevor Raymond
Director of Research
+44 203 696 8772
traymond@platinuminvestment.com

Brendan Clifford
Manager, Investor Development
+44 203 696 8778
bclifford@platinuminvestment.com

World Platinum Investment Council
www.platinuminvestment.com
64 St James's Street
London SW1A 1NF

26 September 2018

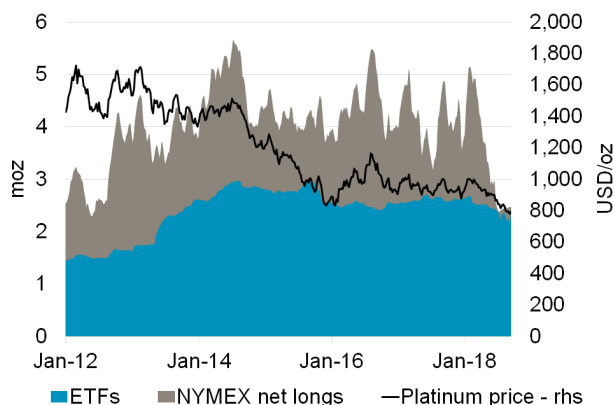
“Physically backed platinum ETFs hold c2.5Moz of metal currently. These holdings have been relatively stable despite the falling price in recent years.”

Platinum in six charts – September 2018

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

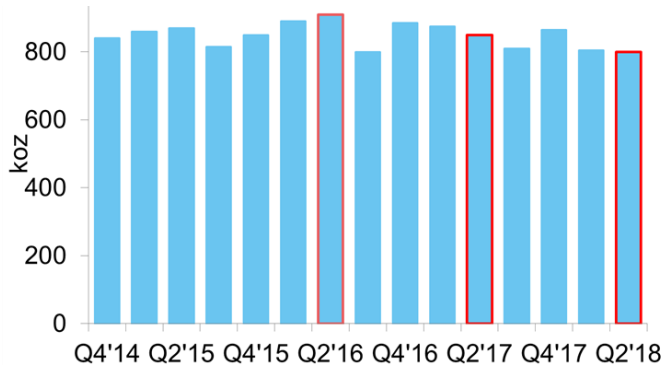
- Supply demand fundamentals are robust and ETF holdings are stable, despite price volatility
- Risks of supply declines are underestimated - cost pressure and falling mining investment continue
- Downside risks to platinum automotive demand are overestimated
- Futures positioning follows sentiment with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

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



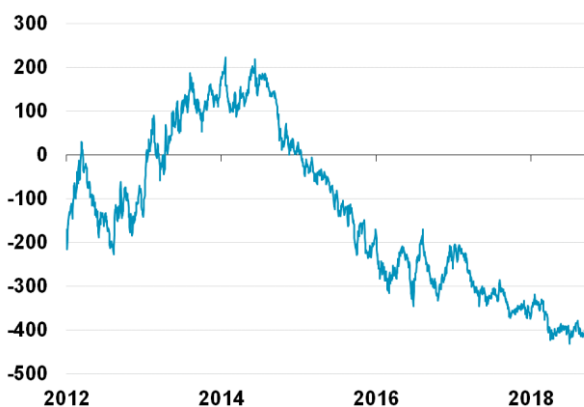
Source: Bloomberg, ETF providers, WPIC Research

Figure 4: Automotive demand being impacted by falling European diesel car sales (koz)



Source: WPIC Platinum Quarterly Q2 2018, SFA (Oxford)

Figure 2: Platinum discount to gold at an all-time high of c\$400/oz



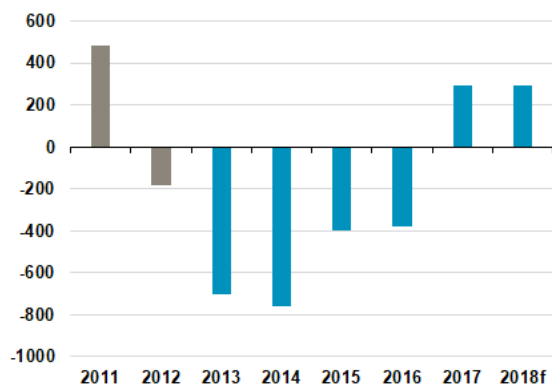
Source: Bloomberg, WPIC research

Figure 5: Pt:Pd substitution ratio in gasoline cars of 1:1 drove price parity (90% of mined Pd is by-product) (\$/oz)



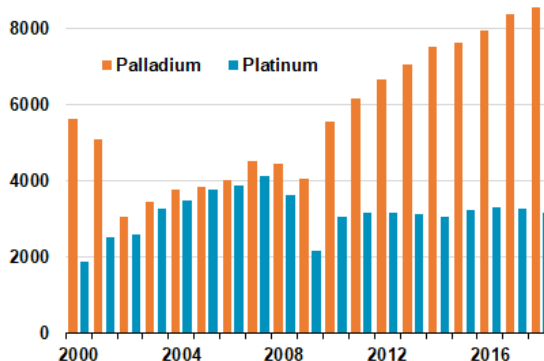
Source: Bloomberg

Figure 3: Platinum supply/demand balance (koz)



Source: Johnson Matthey, WPIC Platinum Quarterly Q2 2018, SFA (Oxford)

Figure 6: Platinum and palladium autocatalyst demand (koz) showing trends in use and substitution



Source: Johnson Matthey

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