

LAWRIE WILLIAMS: Palladium premium over platinum to persist – Metals Focus

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We are very pleased to note that analysts at Metals Focus seem to agree with us that palladium's supply/demand fundamentals should keep it at a premium over platinum in the short to medium term at least. A number of other analysts seem to disagree with this conclusion, assuming that platinum will re-assert itself as the pricier of the two principal platinum group metals (pgms) but to us the evidence in palladium's favour looks to be overwhelming.

Metals Focus would seem to agree. In its latest Precious Metals Weekly the London-based specialist precious metals consultancy notes *"In essence, this reflects the contrast between palladium and platinum's market fundamentals. To illustrate, palladium recorded cumulative deficits of almost 2.5million ounces over 2010-16, with this shortfall in 2017 alone forecast to exceed 1.5 million ounces. Over the same period, however, there was a near-identical surplus in the platinum market. In addition, palladium so far this year has benefited from a rise in investor appetite in pro-cyclical assets following Trump's victory. By contrast, patchy gold investment, and by implication frequently rangebound prices, has hurt platinum's appeal, given its closer link to the yellow metal."*

Much of the change in the fundamental position between the two pgms has been down to the dominance of palladium in the petrol (gasoline) emission control catalyst sector for internal combustion (IC) engines – but beware, this dominance was very much metal price based with palladium in the past being far less costly than platinum prompting substantial, and ultimately successful, substitution research.

Palladium catalysts are usually manufactured in combination with a small amount of rhodium for which the price has also seen a massive surge. This will be making the autocatalyst manufacturers look at 'reverse substitution' and a return to platinum-based catalysts if palladium's price is seen as remaining at or above the platinum price for the foreseeable future. The costs and the speed of switching back and forth between the two metals in catalyst manufacture will be key here. Platinum remains the catalyst of choice in diesel engine emission control, and palladium's price surge will probably have brought any replacement research to a halt for the time being. Diesels are also falling out of favour due to the highly publicised dangers of NOx emissions, which also adds another downside problem for platinum demand. But longer term, with the likely growth in production and

usage of electric vehicles and other more environmentally-friendly technologies, the ultra-long term future of demand for all pgms looks far from positive, particularly for palladium which is not really in significant demand in the jewellery sector and perhaps has less investment appeal. There are still probably a few years of growth left in internal combustion engine demand, but this could start unwinding rapidly from the middle of the next decade as increasingly severe environmental control legislation is applied.

What Metals Focus ignores though is the potential for the higher palladium prices to generate increased output – in South Africa in particular, where the big new wide reef, but low grade, Platreef deposits to the northeast of the Bushveld Complex have a far higher palladium content than the traditional Merensky Reef-based mines. The first major Platreef mine is already under preliminary development by Robert Friedland's Ivanhoe Mines, although first production is not anticipated until 2022 and a lot can happen in price terms over a 5 year period! Also the newer miners on the main parts of the country's Bushveld Complex are increasingly exploiting the UG2 Reef horizon, which also contains higher palladium levels – and importantly has a higher rhodium content too.

In other areas, Sibanye's purchase of the always marginal Stillwater mining complex may be seen as extremely timely. Stillwater is a primary palladium producer and the higher metal price will have radically altered its profitability and its expansion options. It will also be stimulating exploration and development of other primary palladium options, although this may be too little too late in most cases given palladium's poorer ultra long term outlook and the extended time nowadays to permit and bring a new mine to production.

Overall though Metals Focus analysts see palladium's price growth as justified by its fundamentals and sees continuing price strength in the medium term (say 2-3 years) as deficits continue. We, on the other hand, think that substitution of platinum for palladium in IC engine catalysts could happen quicker than Metals Focus anticipates if palladium's positive price differential with platinum continues. This happened last time the palladium price moved above that of platinum some 16 years ago.