

Palladium Watch

The out-of-favour metal

Group Economics
Macro & Financial Markets Research

Georgette Boele, tel,+31 20 6297789

2 September 2015

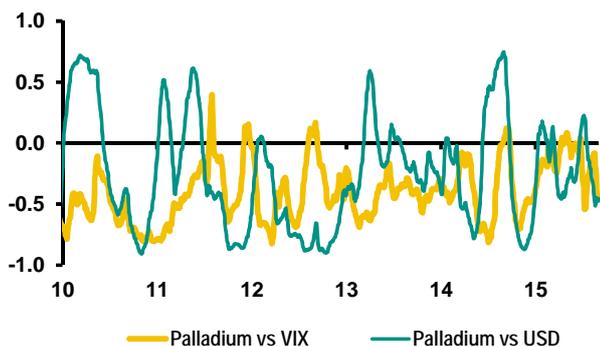
- **Palladium prices have dropped 28% year-to-date...**
- **...because of investor liquidation, weak car sales in EM and risk aversion**
- **We expect lower prices from here but the downside momentum to ease**

Palladium out of favour

So far this year, palladium has been the worst performing precious metal. Prices have dropped by around 28% year-to-date. They even lost 36% from the peak in September 2014. In this report we focus on what has contributed to this sharp fall.

Palladium's relation with USD and VIX

90-day rolling correlation



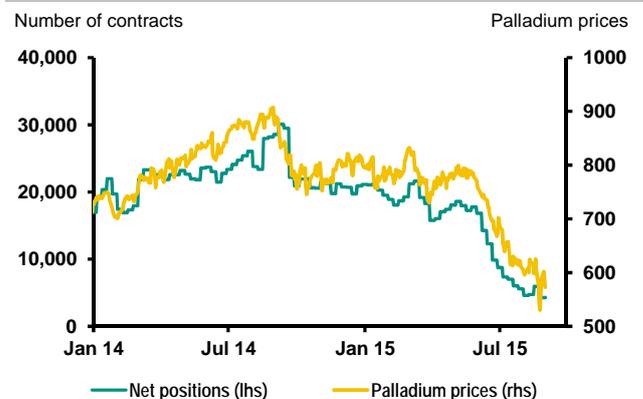
Source: Bloomberg

Investors abandoned palladium,...

Palladium has been the favourite precious metal among investors because of its supply shortage compared to demand. The fundamentals were good, so investors piled massively into this precious metal. The sky was not the limit. In September 2014 - when the peak in prices was set - investor positioning was excessive taking into account market depth. This positive outlook started to unravel bit by bit. For a start, the US dollar started its impressive rally in H2 2014 versus major currencies and emerging market currencies. This resulted in a re-think among investors about their zero-income palladium investment. Increasingly investors became more concerned about their palladium investment because palladium prices failed to rally on supportive news. Instead, prices started to come under more pressure. In general, a higher US dollar and expectations of higher US rates are negative for investments that yield close to nothing like palladium and other precious metals. Investor liquidation (non-commercial and total ETF positions) year-to-date has been 1.8 million troy ounces or close to 19% of global palladium demand (2014). This investor

liquidation has coincided with a drop in palladium of 225 USD/per ounce.

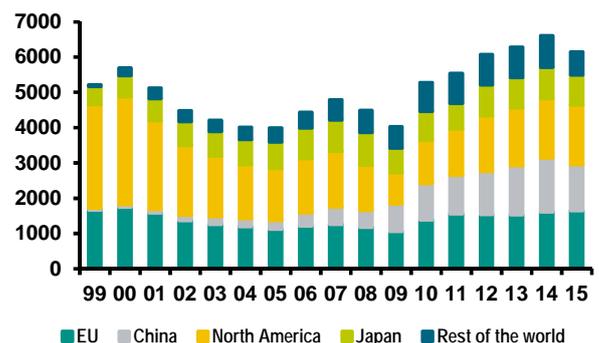
Investors dumped palladium



Source: Bloomberg

Weakening autocatalyst demand

In thousand ounces, 2015 is our forecast



Source: Thomson Reuters GFMS

...concerns about US demand...

Moreover, weaker-than-expected economic growth in the US at the start of the year added pressure to the palladium price outlook. The US is an important market for palladium autocatalyst demand (see graph above). In addition, the deterioration in investor sentiment also played a role. Usually growth worries result in a deterioration of investor sentiment

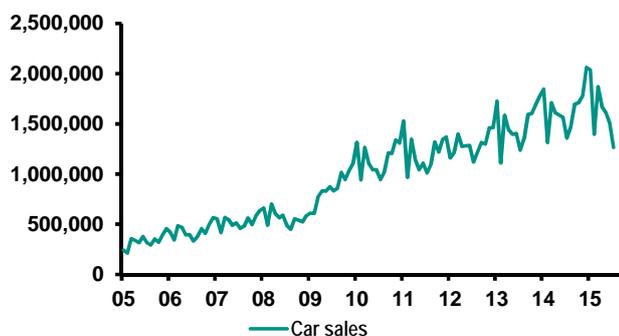
with is often reflected in higher equity volatility (VIX). Palladium prices tend to weaken if the VIX rises (see graph 1).

...and sharp falls in Brazil's and China's car sales

What has made things worse is the sharp deterioration in economic outlook in emerging markets, especially China and Brazil. Vehicle sales volume in Brazil dropped by a staggering 45% from 370'000 units to 200'000 units so far this year. In China car sales (volume) dropped by 38% year-to-date (see graph below) and dropped by 6% yoy in July. China accounts for 23% of global autocatalyst demand and 16% total annual palladium demand (2014).

China's car sales down 38% ytd

Volume



Source: Bloomberg

Lower prices but downside pressure is easing

We expect palladium prices to drop further this year. However, we see downward pressure on palladium prices easing. On the one hand, autocatalyst demand from emerging markets, especially China and Brazil, will remain weak. We expect the trend in weaker car sales in China to continue into the first half of 2016. Moreover, investor positions in ETF related products remain close to all-time high levels and there is a substantial risk that investors will also start liquidating these positions if US interest rates rise and the US dollar rallies. On the other hand, the most sensitive investor positions (non-commercial positions in the futures markets) have been sharply reduced and we expect investor sentiment to improve. The latter is in general position for palladium prices. In addition, we remain positive about the US and eurozone economy, which should support industrial and autocatalyst demand. If we take all the above into account, downside risks for this year and the start of 2016 remain. Therefore, we have lowered our palladium forecasts.

Our forecasts

End-of-period and average forecasts

End period	02-Sep	Close 14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16
Gold	1,137	1,185	1,184	1,172	1,050	1,000	950	900	850	800
Silver	14.6	15.7	16.6	15.7	14.5	15.0	15.5	16.0	16.5	17.0
Platinum	1,010	1,216	1,141	1,081	950	1,000	1,050	1,100	1,150	1,200
Palladium	581	798	736	674	550	525	500	525	550	600

Average	Q1 15	Q2 15	Q3 15	Q4 15	2015	Q1 16	Q2 16	Q3 16	Q4 16	2016
Gold	1,218	1,193	1,111	1,025	1,137	975	925	875	825	900
Silver	16.7	16.4	15.1	14.8	16.0	15.3	15.8	16.3	16.8	16.0
Platinum	1,194	1,129	1,015	975	1,078	1,025	1,075	1,125	1,175	1,100
Palladium	786	759	600	538	700	513	513	538	575	534

Source: ABN AMRO Group Economics

Find out more about Group Economics at: <https://insights.abnamro.nl/en/>

This document has been prepared by ABN AMRO. It is solely intended to provide financial and general information on economics. The information in this document is strictly proprietary and is being supplied to you solely for your information. It may not (in whole or in part) be reproduced, distributed or passed to a third party or used for any other purposes than stated above. This document is informative in nature and does not constitute an offer of securities to the public, nor a solicitation to make such an offer.

No reliance may be placed for any purposes whatsoever on the information, opinions, forecasts and assumptions contained in the document or on its completeness, accuracy or fairness. No representation or warranty, express or implied, is given by or on behalf of ABN AMRO, or any of its directors, officers, agents, affiliates, group companies, or employees as to the accuracy or completeness of the information contained in this document and no liability is accepted for any loss, arising, directly or indirectly, from any use of such information. The views and opinions expressed herein may be subject to change at any given time and ABN AMRO is under no obligation to update the information contained in this document after the date thereof.

Before investing in any product of ABN AMRO Bank N.V., you should obtain information on various financial and other risks and any possible restrictions that you and your investments activities may encounter under applicable laws and regulations. If, after reading this document, you consider investing in a product, you are advised to discuss such an investment with your relationship manager or personal advisor and check whether the relevant product –considering the risks involved- is appropriate within your investment activities. The value of your investments may fluctuate. Past performance is no guarantee for future returns. ABN AMRO reserves the right to make amendments to this material.

© Copyright 2015 ABN AMRO Bank N.V. and affiliated companies ("ABN AMRO").