

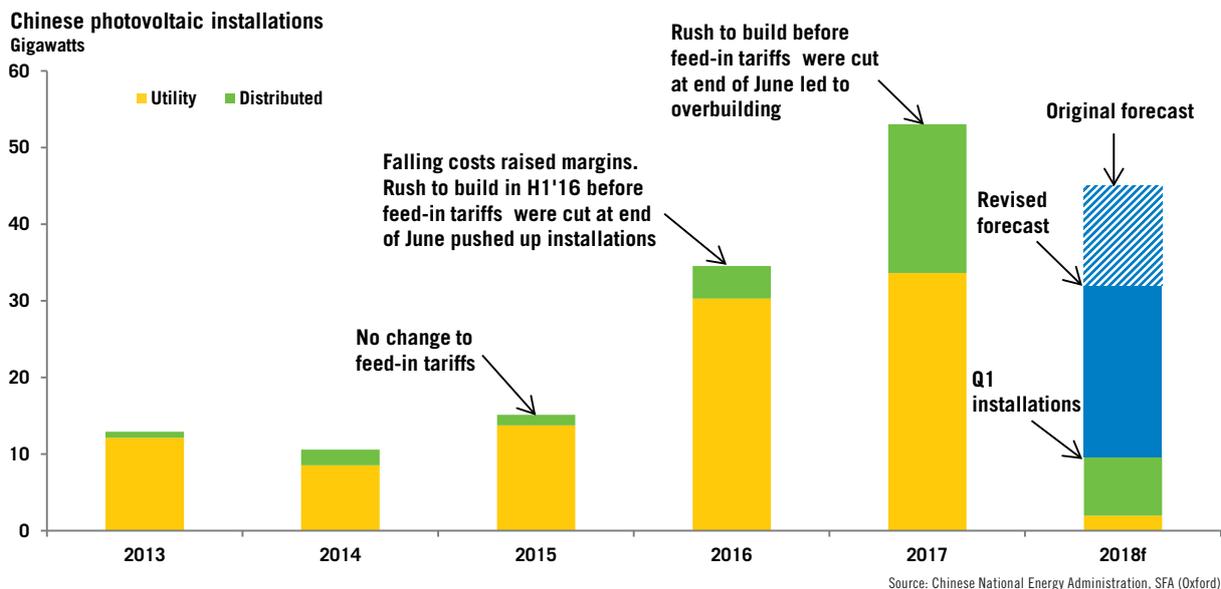


MARKET SPOTLIGHT

China cuts solar cell tariffs; hits silver demand by 10 moz

Chinese photovoltaic (solar panel) installations could drop by a third this year. The Chinese authorities have announced a lower feed-in tariff, removed government subsidies for utility-scale projects and put a cap on the amount of newly installed distributed (small-scale) solar capacity at 10 gigawatts (GW) (compared to 19.4 GW in 2017). This level has almost certainly been reached after 7.68 GW worth of distributed solar capacity was installed in Q1'18, according to the Chinese National Energy Administration (NEA). This combination of measures means that **there could be a sharp slowdown in photovoltaic installations in China in the second half of the year, negatively impacting silver demand.**

In 2017 around 9% of silver demand, 94.1 moz, was used globally to make photovoltaics, according to The Silver Institute's World Silver Survey 2018. Silver is used in solar panels to form the electrical connections on the cells. China is the largest manufacturer and user of solar cells with more than 53 GW of new photovoltaic capacity installed in 2017 (source: NEA), representing over 50% of global installations.



It was anticipated that Chinese solar installations would be lower than last year, owing to reduced feed-in tariffs for both distributed and utility-scale projects from the start of 2018, but that global installations would rise modestly. However, with the new rules cutting installations in China, and disruption to installations in the US caused by the 30% import tariff imposed by Donald Trump in January, **global solar installations are likely to decline in 2018.**

If global solar installations drop by 10 GW this implies a reduction of a little under 10 moz in industrial silver demand, equivalent to around 1% of total global silver demand. **With a decline in industrial demand now likely, the silver price could lack support in the second half of 2018.**



PRECIOUS METALS REVIEW

79 Au Gold

	Close	Weekly change	High	Date	Low	Date
\$/oz	1,278	-1.62%	1,309	14/06/2018	1,277	15/06/2018
€/oz	1,100	-0.26%	1,127	15/06/2018	1,097	11/06/2018

Gold collapsed to a new low for 2018 last Friday after the announcements from the major central banks. The Fed lifted interest rates, as expected, and the Chairman, Jerome Powell, struck a hawkish tone in the press conference, praising the strength of the US economy and inflation environment. It was indicated that there would be two additional rate rises this year and three next year. The Fed now faces the tricky task of finding the interest rate level at which the economy is not overly hindered or allowed to overheat. There is the potential for a misjudgement in monetary policy here which could create volatility for gold. The ECB announced on Thursday that it will extend its bond-buying programme into the last three months of 2018 at €15 billion per month, half the previous rate, but will then end it. A specific end-date was a mild surprise but there was little immediate reaction. After being little changed on Wednesday gold gained a little on Thursday (+\$6/oz), but gave back those gains and more on Friday (-\$26/oz) as news of further

escalation of trade tensions also failed to increase safe-haven investing.

South African gold miners are facing demands for a ZAR12,500 per month minimum wage from the AMCU, a mineworkers' union, which could lead to strikes. Gold miners are likely to be highly resistant as the South African mines are some of the world's oldest and deepest. Consequently, the margins on the current gold price are small. Sibanye-Stillwater and AngloGold Ashanti's Q1'18 all-in sustaining costs (AISC) were \$1,336/oz and \$1,292/oz respectively, and Harmony Gold last published an AISC for H2'17 of \$1,161/oz. The salary increase could dramatically raise costs; the minimum wage at Harmony as of July last year is reported as ZAR7,662 per month. The current gold price provides little headroom to raise salaries and so a simple resolution seems unlikely, with strikes a possible consequence. Similar demands made to PGM producers are what ultimately led to the strikes in 2012 and 2014, the latter lasting five months.

47 Ag Silver

	Close	Weekly change	High	Date	Low	Date
\$/oz	16.57	-1.17%	17.32	14/06/2018	16.57	15/06/2018
€/oz	14.27	0.26%	14.89	15/06/2018	14.20	11/06/2018

Silver closed at a 35-day high last Thursday, but fell with gold on Friday erasing most of the gains of the last two weeks. ETF holdings declined 7.5 moz from Monday through Thursday as the price moved to be 4% above the 50-day average of \$16.61/oz, enough to grab the attention of traders in this low volatility environment. Gains early in the week were followed by a price increase in advance of the Federal Reserve announcement,

which continued into Thursday as silver outperformed the moves in gold. Traders may also have been seeking exposure in the silver futures market; total open interest increased by 2% week-on-week on 5 June. The Friday sell-off resulted in a daily move of -3.8% and resulted in another lower peak as the trading range continues to narrow.

78 Pt Platinum

	Close	Weekly change	High	Date	Low	Date
\$/oz	887	-1.97%	914	14/06/2018	887	15/06/2018
€/oz	765	-0.57%	784	15/06/2018	759	13/06/2018

The rand has weakened by 5.4% over the past two weeks to reach ZAR13.37:\$1. The move is weighing on the platinum price which was pushed under the \$900/oz level to a low of \$887/oz. This is the weakest the rand has been since December 2017, before Ramaphosa was elected, but just above the 2017 average of ZAR13.31:\$1. The decline in the platinum price has been less than the move in the rand which has resulted in the South African platinum price increasing from

ZAR11,319/oz to ZAR11,861/oz. This will give some relief to the mining companies which have seen their margins eroded by the strong dollar. The move in the exchange rate is a consequence of concerns that higher US interest rates could reduce the incentive to invest in emerging market economies. The rand strengthened slightly following the Fed's announcement as it did not contain any surprises.



PRECIOUS METALS REVIEW

⁴⁶ Pd **Palladium**

	Close	Weekly change	High	Date	Low	Date
\$/oz	991	-2.30%	1,026	11/06/2018	990	15/06/2018
€/oz	855	-0.80%	875	15/06/2018	852	13/06/2018

Palladium received support from vehicle sales in China which rose 9.6% year-on-year in May to 2.3 million, a 5.7% increase year-to-date. The rise was mostly driven by stronger demand for sedan-style cars, which gained 12% compared to May last year. Contrary to recent trends, the popularity of SUVs was lower in May, having gained only 6.5%. SUV sales have increased 12% year-to-date against 5% for sedans. Attention should be paid to this

split as it has implications for the average loadings of palladium and rhodium. Palladium demand from Chinese automobile manufacturing overtook the US in 2017 and accounts for 20% of total global palladium consumption, having grown rapidly from just 4% of demand in 2007. In growth terms, new energy vehicles (NEVs) dwarf the other sectors as they increased 122% year-on-year in May, but they still only account for 4.5% of the market.

⁴⁵ Rh ⁴⁴ Ru ⁷⁷ Ir **Rhodium, Ruthenium, Iridium**

	Rhodium	Ruthenium	Iridium
Reporting week	\$2,250/oz	\$275/oz	\$1,425/oz
Previous week	\$2,250/oz	\$275/oz	\$1,425/oz

Ruthenium has an important role to play at the FIFA World Cup as it is responsible for keeping the iconic trophy under lock and key. Louis Vuitton has designed the case in which the World Cup trophy will be presented and chose to make the lock and clasp from ruthenium. The usage of the metal is very appropriate as the name ruthenium is derived from Rus, the Latin word for the host nation Russia.

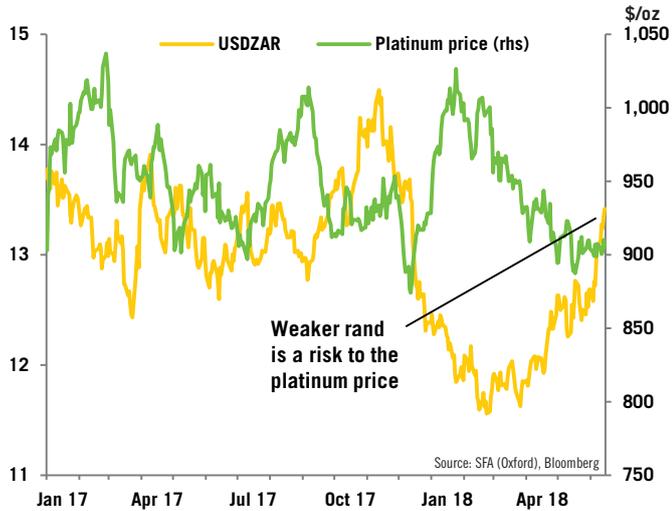
Iridium nanocrystals have been demonstrated to aid significantly in the production of hydrogen through electrolysis. A paper from Shaanxi Normal University and City University of Hong Kong has demonstrated a

method for utilising iridium nanocrystals by combining them with carbon nanobowls. This material increases the performance at the anode and outperforms the existing anode material in both the rate of production and durability. The paper also presents a relatively simple method for the production of this material. While this particular development may be many years from commercialisation, an increase in the performance of electrolyzers would make hydrogen use for energy storage and grid balancing (levelling the peaks and troughs of power from renewable energy sources) more viable, which could boost iridium demand. As platinum also forms part of the catalyst for electrolysis, it, too, would stand to benefit.

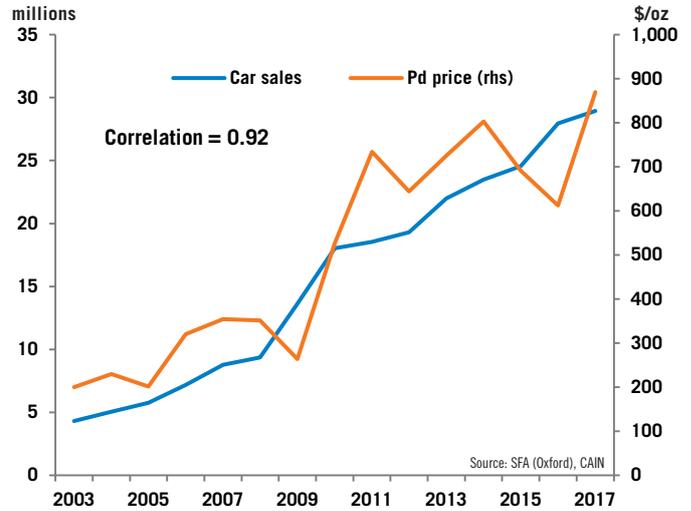


TRENDS AND INVESTMENTS

USDZAR



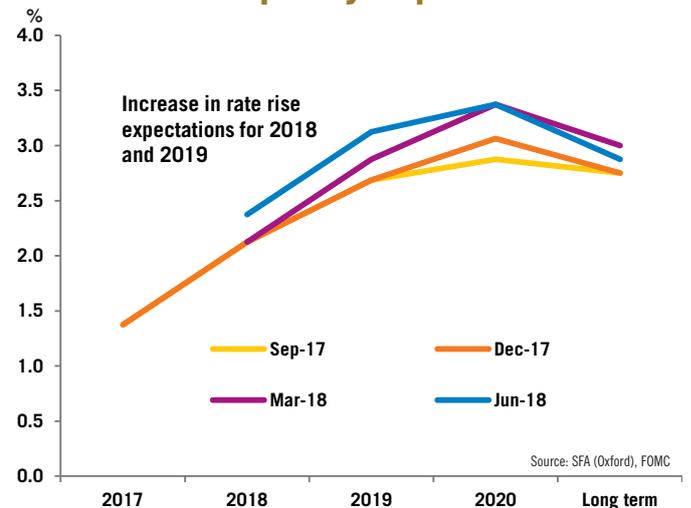
China car sales



Silver price



FOMC median policy expectations



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