

HERAEUS PRECIOUS APPRAISAL

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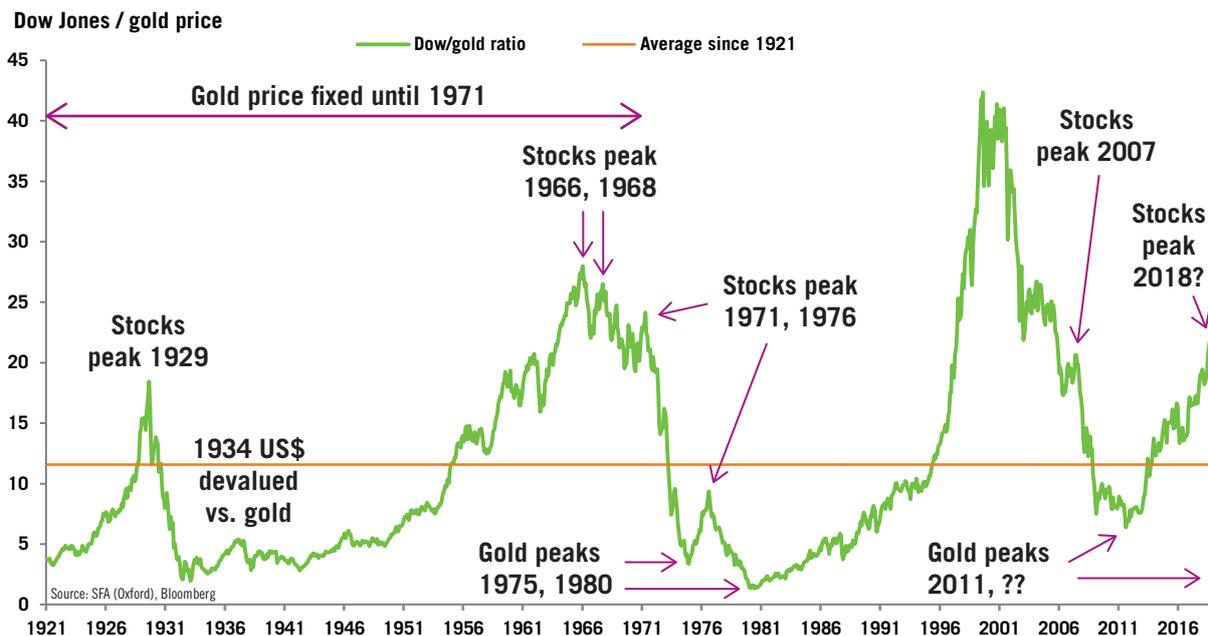
Ed. 41
3rd December 2018



MARKET SPOTLIGHT

Wall Street worries to benefit gold?

US stocks had their strongest up-day since 2014 last week, as the Fed Chairman suggested interest rate rises might nearly be over. Stocks have been outperforming gold since the gold price peaked in 2011. The ratio of the Dow to gold exceeded 22 in September, well above its long-term average. At 22 it was higher than at the stock market peaks in 1929 and 2007, but lower than the stock market peaks in 2000 and the 1960s and early 1970s. **The Dow-to-gold ratio is well above its long-term average, making it look excessive right now.**



Which way could the ratio go next? For it to go higher stocks need to outperform gold. This could happen if the US and China agree a trade deal which gives clarity on tariffs, so global trade and economic growth both pick up. Stock prices would then rise on the improved economic outlook. Interest rates edge higher as do bond yields, but inflation remains contained and the real interest rate is positive so gold underperforms.

How might stocks underperform? **The bull market in the US has now lasted for the second-longest period ever and is looking increasingly vulnerable.** The Dow is essentially flat for the year, having had two 11%+ corrections. Valuations for US stocks, as measured by the cyclically adjusted price-earnings ratio, are very high. This measure currently rates the market as the third most expensive ever behind 1929 and the dot.com bubble in 2000. If the Fed stops raising rates because the economy is weakening then the yield curve will steepen. The dollar would weaken which should benefit gold. Considering stocks' historically high valuation, **the odds seem to favour stocks underperforming gold from here and the gold price rising.**



PRECIOUS METALS REVIEW

79 Au Gold

	Close	Weekly change	High	Date	Low	Date
\$/oz	1,222	-0.06%	1,229	29/11/2018	1,211	28/11/2018
€/oz	1,079	0.03%	1,083	27/11/2018	1,073	30/11/2018

Have treasury yields peaked, does this suggest higher gold prices in 2019? The 10-year Treasury yield dropped 3 basis points last week on lower interest rate rise expectations. Treasury yields are likely to underperform 2019 forecasts made before the Fed's dovish shift in tone, particularly if the stock market shows sustained recovery. The dollar index reached 97.4 last Tuesday, just 0.1 off its 2018 high. It has been a key factor in the weakness of the gold price but for how long can it continue? Rising interest rates have been a big draw for the dollar, particularly as they have triggered a flight to currency safety from emerging markets, and another rate rise is

highly likely in December. The 10-year US Treasury yield remains around 3%, having started the year at 2.4%, which has attracted bond investors. The US economy is still performing well with annualised GDP growth in Q3 at 3.5%. However, risks to the downside are rising. Last week Jerome Powell said interest rates were "just below" the neutral rate having said in October that they were "a long way off". GDP growth could also slow as the decline in global trade hits the economy and the effects of fiscal stimulus wear off. Consequently, the dollar has a good chance of weakening in the next few months and, if it does, gold should climb.

47 Ag Silver

	Close	Weekly change	High	Date	Low	Date
\$/oz	14.17	-0.85%	14.44	26/11/2018	14.05	30/11/2018
€/oz	12.52	-0.72%	12.87	27/11/2018	12.17	27/11/2018

High semi-conductor sales indicate strong electronic silver demand in 2018. Electrical and electronic applications are a major source of silver demand, constituting approximately a quarter of the global 1,000 moz market. A good indicator of electronics demand is the market for semiconductors which are found in a wide array of electronics. Semiconductor sales in Q3 2018 are up 13.8% year-on-year in dollar terms and were the highest on record, according to the Semiconductor Industry Association. This follows gains of 20% in each of Q1 and Q2 2018. Silicon wafer shipments (the foundation of semiconductors) increased 8.6% year-on-year in Q3 2018 and

also set an all-time record (source: SEMI). Year-to-date silicon wafer shipments are up 7.6%. The rapid rise in demand for these products in 2018 indicates that the electronics industry is performing well, so silver demand should see strong growth from this sector. However, the World Semiconductor Trade Statistics (WSTS) expects the semiconductor market to grow again in 2019 but at a slower rate of 2.6%. This suggests that 2019 may be more a year of stabilisation than growth for electronic silver demand. Rising electronics demand should be having a positive impact on the silver price but a slowdown in demand will reduce price support.

78 Pt Platinum

	Close	Weekly change	High	Date	Low	Date
\$/oz	803	-4.79%	849	26/11/2018	800	30/11/2018
€/oz	709	-4.71%	748	26/11/2018	705	30/11/2018

The Chinese platinum jewellery market could continue to contract without more marketing. Chinese jewellery accounted for approximately 1.3 moz of platinum demand last year, a sixth of global consumption. It has fallen from 2 moz of demand in 2014, 25% of total demand. Platinum Guild International (PGI) noted that "The Chinese market does not appear to be bottoming out yet" and "will continue contracting without a step change in marketing". The Chinese jewellery market is currently undergoing a transitional period as millennials become a major market segment and more focus is being placed on fashionable jewellery designs. Consequently,

marketing efforts are arguably more important than ever as platinum needs to establish itself in this new market dynamic or it could lose substantially more demand to white gold, a cheaper alternative due to its lower purity and cheaper manufacturing costs. With cost-cutting initiatives taking place among multiple South African miners, who fund the PGI, it could be difficult to maintain the required levels of funding. Without a boost in funding, changing consumer tastes could easily lead to platinum demand falling by hundreds of koz over the next few years. This would widen the existing surplus and contribute to platinum's price falling further.



PRECIOUS METALS REVIEW

⁴⁶Pd Palladium

	Close	Weekly change	High	Date	Low	Date
\$/oz	1,188	4.61%	1,205	30/11/2018	1,136	26/11/2018
€/oz	1,049	4.65%	1,061	30/11/2018	1,000	26/11/2018

US auto palladium demand looks robust in the short term despite restructuring. GM has announced that it is to close five vehicle production plants in the US and cut six vehicle models, mostly sedans. This is to enable it to focus on popular larger vehicles, such as pick-ups and SUVs, but also to cut costs while it increases investment in electric cars. The slimming of model offerings is similar to Ford which announced earlier this year that it would also cut five of its smaller models to focus on SUVs and pick-ups. SUVs and pick-up sales (68% of the market) grew 8.3% in the first 10 months of 2018 while cars sales fell 13.3%, according to MarkLines. The result is that total sales have seen only 0.2% growth in 2018 to 14.26 million vehicles. However, the shift in product mix means US auto palladium demand is expected to grow faster at +2% this year to 1.75 moz, as larger cars

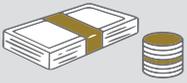
require more metal in their exhaust treatment systems. The cutting of car models means automakers expect this trend to continue, at least in the short to medium term. This shift also helps to offset the impact on palladium of the increasing popularity of electric vehicles. Sales data in California show that plug-in electric and battery electric vehicles (BEVs) are increasing their market share, reaching 3% and 4% respectively in 2018 to date. However, standard hybrids have been declining, falling from 7% in 2013 to 4% for the year so far. California is leading the way with electric vehicles as national BEV market share was just 1.2% in Q3, but it is indicative of where the market is heading. While plug-ins have similar catalysts to standard cars, BEVs will continue to expand their market share and impact palladium demand, particularly as OEMs have staked so much on them.

⁴⁵Rh ⁴⁴Ru ⁷⁷Ir Rhodium, Ruthenium, Iridium

	Rhodium	Ruthenium	Iridium
Reporting week	\$2,585/oz	\$285/oz	\$1,480/oz
Previous week	\$2,575/oz	\$285/oz	\$1,480/oz

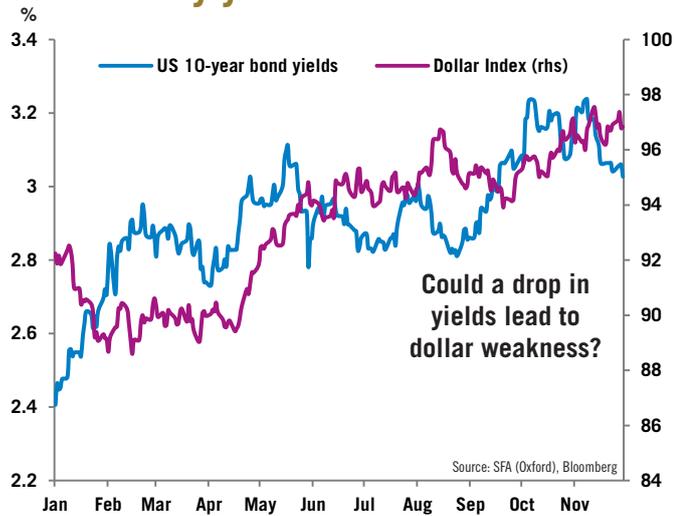
Larger vehicles in the US also boost rhodium demand. Over 80% of rhodium demand comes from the auto industry and of that, 28% is in the US, primarily for use in light gasoline vehicles. Therefore, rhodium demand will benefit from the shift to larger vehicles in the US. Rhodium performs an important role in exhaust treatment as it is particularly effective at removing NOx compared to platinum and palladium.

The price of rhodium has increased \$10/oz to \$2,585/oz and is equal to its previous 2018 high. There was no change in the ruthenium and iridium prices from the previous week.

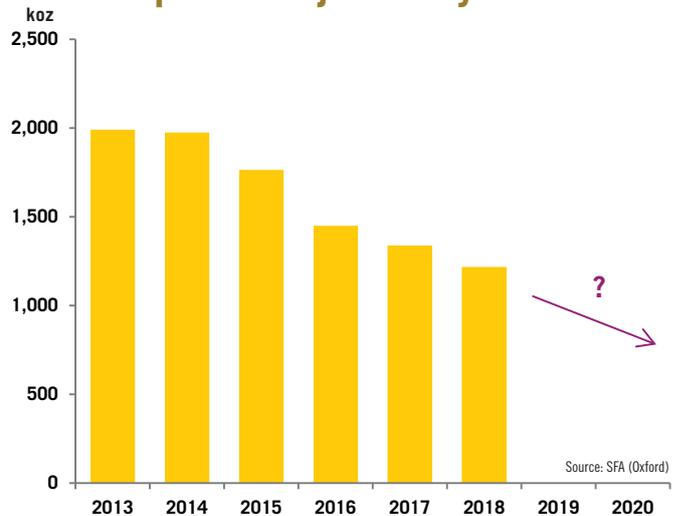


TRENDS AND INVESTMENTS

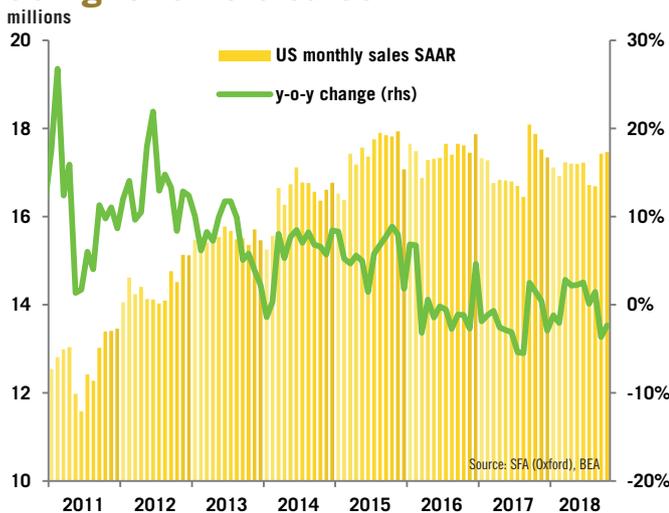
US Treasury yields and dollar



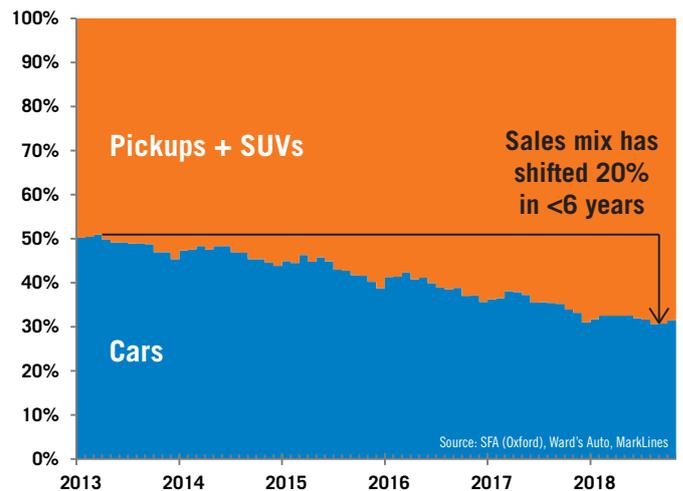
Chinese platinum jewellery demand



US light vehicle sales



US light vehicle sales product mix



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