

## How is platinum as a portfolio diversifier?

**Volatile markets remind us of the importance of diversification.** Recent market volatility (e.g., VIX spiking to >35 in December) and limited macroeconomic visibility highlight the value of risk management and portfolio diversification. Adding additional assets to a portfolio, including risky assets, reduces aggregate portfolio volatility when those assets have correlations below 1.0.

**Adding platinum to a portfolio has a diversification benefit, reducing volatility,** particularly for portfolios with significant equity and real estate exposure. Platinum's correlation of <1.0 with other asset classes ensures diversification. While gold, also viewed as a helpful diversifier, generally has lower correlation with some assets, including US equities, platinum's correlation is sufficiently low (table below left) such that a 5-10% position provides measurable volatility reduction. A smaller position may not provide as substantial a benefit but remains directionally helpful. The table below right illustrates platinum's impact on two example portfolios' risk as measured by standard deviation. One portfolio without and one with gold. The standard deviation figures are calculated using monthly asset price changes over the past 10 years. The risk reduction benefit from an additional asset is in inverse proportion to its correlation with other assets in the portfolio and its level of volatility. Platinum's correlation of significantly less than 1.0 with other assets helps in diversification. However, its 10-year returns volatility measurement of 5.8% (Figure 1 next page) is somewhat higher than other assets, moderating its positive effect.

*Platinum's correlation with other assets is significantly <1.0, our exercise uses correlations based on last 10 years*

### Correlations Between Platinum and Other Assets

Years	Platinum	US Global Global Global US						
		Gold	Equities	Equities	IG Bonds	High Yld	REITS	REITS
20 yrs	1.00	0.58	0.21	0.32	0.32	0.38	0.27	0.16
10 yrs	1.00	0.69	0.31	0.40	0.42	0.47	0.30	0.17
5 yrs	1.00	0.71	0.16	0.28	0.52	0.48	0.31	0.15
3 yrs	1.00	0.69	0.16	0.27	0.51	0.50	0.33	0.14
1 yrs	1.00	0.52	0.05	0.12	0.00	0.35	-0.33	-0.54

Note: correlations are based on monthly change in asset prices over the specified number of years;  
Source: Bloomberg, WPIC research

*Diversification benefit is shown via the reductions of portfolios' standard deviations, with and without gold*

### Portfolio Impact Examples

Portfolio Compositions		Global	Global	Global	Global	Global	Portfolio
Totals = 100%	Platinum	Gold	Equities	IG Bonds	High Yld	REITS	Std Dev
Example Portfolio I	0%	0%	50%	20%	15%	15%	3.29%
Portfolio I + 5% Pt	5%	0%	48%	19%	14%	14%	3.25%
Example Portfolio II	0%	5%	50%	20%	10%	15%	3.23%
Portfolio II + 5% Pt	5%	5%	48%	19%	10%	14%	3.20%

Historical standard deviations are monthly returns over the past 10 years for portfolios with the given compositions; Source: Bloomberg, WPIC Research

**The main element in the investment thesis for platinum remains the market dislocation we see in PGMs overall.** In combination with the main investment thesis elements, the benefit of diversification is helpful, in our view. More significant for the outlook for platinum is that the shortage in palladium has not fed through to platinum. Palladium's price premium over platinum is now the highest ever at over \$500/oz. How long this dislocation lasts is a market debate. Substitution of palladium with platinum, which has happened in the past, would alleviate the imbalance, in our view. See our related [Platinum Perspectives](#).

### What would further boost platinum's diversification performance?

One might expect greater volatility reduction than our examples show given experience with other asset classes. Platinum's correlations with other assets helps reduce volatility. However, platinum's returns volatility has been above most other assets, as shown in Figure 1 on the next page. Both volatility and correlation play important roles in overall portfolio volatility, with lower values for both metrics translating into a greater diversification benefit in volatility terms. Lower volatility, e.g., near the level we have seen most recently (4.1% in the last year) would significantly improve platinum's impact on overall portfolio risk reduction.

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February 2019

# Platinum in six charts – February 2019

Platinum's attraction as an investment asset arises from:

- Supply is relatively constrained with limited investment in new PGM mines
- Platinum is at all-time lows relative to gold and palladium
- Total platinum group metal (PGM) demand continues to grow
- Growing automotive PGM demand argues for substitution of palladium by platinum
- Managed money positioning has significant room to improve

Figure 1: Platinum's volatility is a key component for volatility diversification

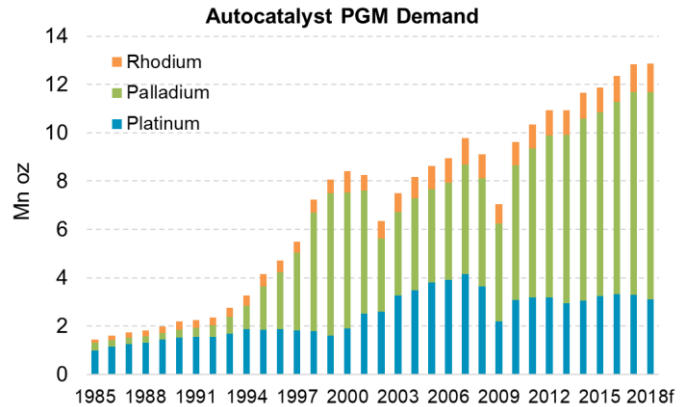
## Asset Class Volatility – Standard Deviations of Monthly Returns

based on monthly returns

	US Platinum	Global Gold	Global Equities	Global Equities	Global IG Bonds	Global High Yld	Global REITS	US REITS
20 yrs	6.3%	4.8%	4.2%	4.4%	1.6%	2.7%	5.2%	5.7%
10 yrs	5.8%	4.8%	3.9%	4.2%	1.4%	2.4%	5.0%	5.7%
5 yrs	5.5%	3.9%	3.1%	3.1%	1.2%	1.6%	3.2%	3.7%
3 yrs	5.5%	3.8%	3.1%	3.0%	1.4%	1.4%	3.1%	3.6%
1 yrs	4.1%	2.4%	4.2%	3.7%	1.0%	1.1%	3.1%	4.0%

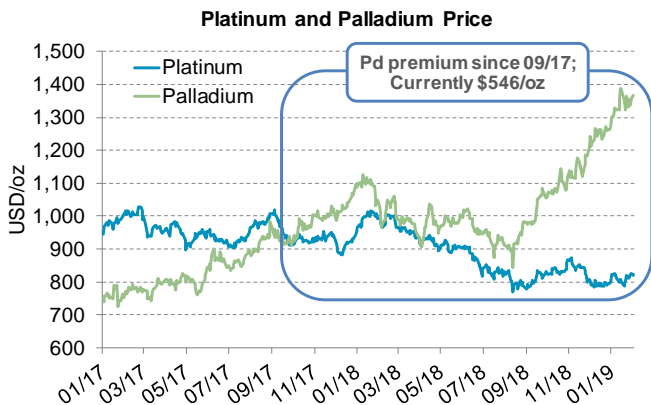
Source: Bloomberg, WPIC Research

Figure 2: Rising PGM autocat demand is carried mainly by palladium, presenting a potential availability challenge



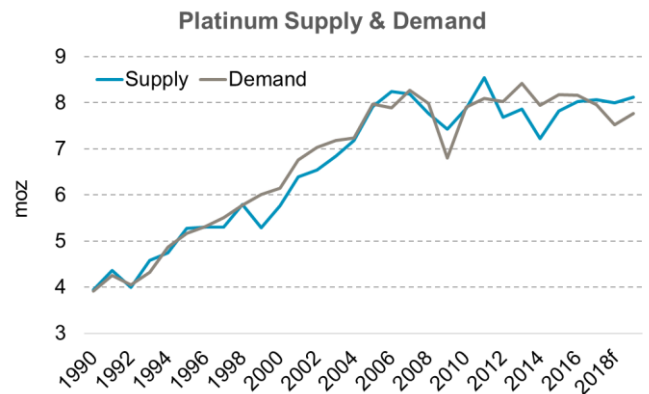
Source: Johnson Matthey, WPIC Research

Figure 3: Palladium's price premium to platinum reflects a tight market and highlights the potential for substitution



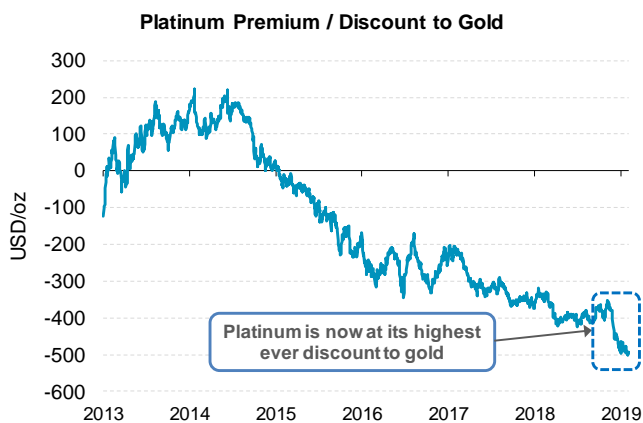
Source: Bloomberg, WPIC Research

Figure 4: Platinum is expected to see a supply surplus on the order of 500 koz this year and next



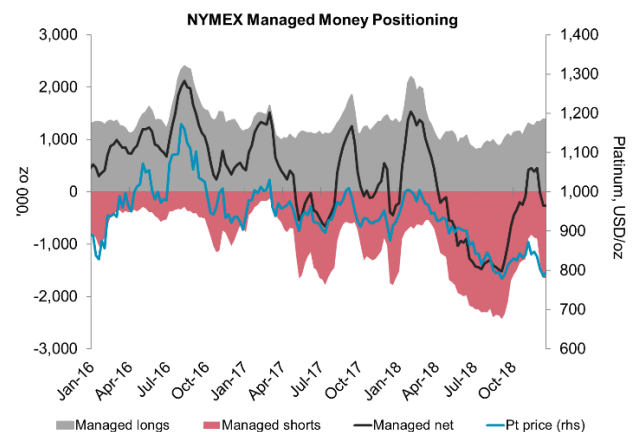
Source: Johnson Matthey, SFA, WPIC Research

Figure 5: Similar to platinum's discount to palladium, the discount to gold is at an all-time high of almost \$500/oz



Source: Bloomberg, WPIC Research

Figure 6: NYMEX net positioning is slightly short



Source: Bloomberg, WPIC Research

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