HERAEUS Precious Appraisal

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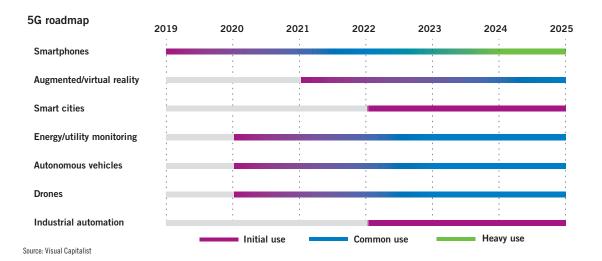


Delayed 5G network rollout weighs on silver demand

The rollout of a global 5G network was expected to boost electrical demand for silver this year. Silver stands to benefit from the growth of 5G infrastructure and devices owing to its use in electrical contacts, such as semiconductors and multilayer ceramic capacitors (MLCCs). Electrical and electronic (EE) applications are the largest end-use for silver, accounting for 24% of total physical demand (248.5 moz in 2018). However, EE demand has fallen by 50.2 moz (-17.5%) since its peak in 2011, and 5G was expected to partially offset this decline in 2020.

The year 2020 was heralded as the 'year of 5G', owing to coverage rollout and availability of devices. 5G is the fifth generation of mobile network technology, offering greater connectivity, reliability and capacity. Shipments of 5G smartphones were expected to surge 696% to 231 million units this year, from 29 million units in 2019 (source: Omdia). However, disruption to manufacturing and global supply chains owing to the impact of COVID-19, as well as the consumer's willingness (or lack thereof) to spend money in the current economic climate, casts doubt on this year's forecast. Lockdowns across the world have placed unprecedented strain on networks owing to the millions of people now working remotely. Operators have been forced to prioritise increasing capacity of existing networks, which has (ironically) temporarily deflected investment away from 5G this year. Penetration of 5G technology, and the increased silver demand, is likely to fall short of projections this year.

However, silver is a critical metal in the electrical components that will enable 5G technology, so demand will be sustained in the long term. In addition to the anticipated rise in 5G smartphones and infrastructure, the rollout of 5G is expected to massively expand the Internet of Things' (IoT) capability and industry digitalisation, such as virtual reality, autonomous driving and robotics. China's three major telecommunication carriers have pledged to accelerate their investment into 5G, in response to the government's call for new infrastructure projects that can boost economic activity in the aftermath of the COVID-19 pandemic.



PRECIOUS METALS REVIEW

Au

GO	

ł			Close	Weekly change	High	Date	Low	Date
	\$/	οz	1,678	-3.29%	1,745	02/06/2020	1,671	05/06/2020
	€/	ΟZ	1,486	-4.87%	1,568	01/06/2020	1,478	05/06/2020

Gold ETFs had record inflows in the year to date. Goldbacked ETFs added 4.1 moz in May, taking inflows for January to May to 18 moz. This exceeds the highest level of annual inflows seen in 2009 (16.3 moz). The ECB has just announced that it intends to almost double the size of the pandemic emergency purchase programme to \in 1,350 billion (assuming that the German Constitutional Court's recent ruling does not ultimately impede this). Governments and central banks are throwing considerable sums of money at the problem. This news has been seen as positive by stock markets despite a bleak economic outlook, with the S&P 500 surging almost 40% and the DAX up over 50% from their March lows. In the US a surprisingly large jump in employment in May added to the rally in stocks while safe haven gold fell below \$1,700/oz. There is still significant uncertainty about how the economic recovery will play out and any disappointments could support the gold price.

Ag	Si	lver					
	_	Close	Weekly change	High	Date	Low	Date
	\$/oz	17.32	-2.94%	18.37	02/06/2020	17.23	05/06/2020
	€/oz	15.34	-4.54%	16.47	02/06/2020	15.27	05/06/2020

Silver held its ground against gold last week despite the sell off. While prices were rising from the March low silver outperformed gold, but should prices continue to fall, gold will most likely resume its outperformance.

Pandora to phase out all mined silver from its supply by 2025. Pandora, the world's largest jeweller by volume, aims to use only recycled silver and gold in its products by 2025, from 71% today, in order to reduce its carbon emissions. Pandora's jewellery uses around 340 tonnes (~12 moz) of silver annually. Recycling accounted for 16% of global silver supply last year at 169.9 moz, compared to 836.5 moz from mining (source: The Silver Institute). Silver recycling volumes are forecast to remain flat this year, although the recent price rally after the low in March may spur some price-sensitive jewellery and silverware recycling in emerging markets.

Pt Platinum

	Close	Weekly change	High	Date	Low	Date
\$/oz	814	-2.61%	860	01/06/2020	808	05/06/2020
€/oz	721	-4.24%	773	01/06/2020	714	05/06/2020

De-dieselisation has led to increased emissions in Europe, but policy-makers are pushing EVs to meet CO₂ **targets.** Average CO2 emissions from new cars and vans registered in the EU, UK and Iceland rose for a second consecutive year in 2018 (source: European Environment Agency). Emissions rose to 120.8 g CO₂/km, up 2 g from the previous year. The increase in average emissions was caused mainly by the continuing shift away from fuelefficient diesels to petrol vehicles, particularly heavier SUVs. The market share of diesel cars in Western Europe has shrunk from 46% in Q1'17 to just 29.9% in Q1'20 (source: ACEA). This has led to a loss of nearly 450 koz of platinum demand over the last three years, almost a third of the market's size. CO₂ emission targets in the EU this year are capped at 95 g/km. Automakers will need to cut emissions by 27% from 2018 levels to avoid large fines. In the wake of COVID-19, planned auto stimulus programmes in the EU are now heavily geared towards low-emission cars. The German government has increased subsidies for batteryelectric and hybrid vehicles but excluded traditional internal combustion engine vehicles from any incentives. Despite diesel's low-emissions, subsidies are likely to push consumers to favour electrified vehicles this year. The shrinking market share of diesel cars in Western Europe has been, and continues to be, the main driver of declining automotive platinum demand. Platinum's poor fundamental outlook is expected to weigh on the price.

PRECIOUS METALS REVIEW



Palladium

		Close	Weekly change	High	Date	Low	Date
\$/	ΟZ	1,978	3.12%	1,997	03/06/2020	1,831	04/06/2020
€/	οz	1,749	1.23%	1,785	02/06/2020	1,625	04/06/2020

Full throttle for China's auto industry. Vehicle sales in China are estimated to have risen by a further 11.7% in May, according to provisional data from the China Association of Automobile Manufacturers, with sales rising to 2.14 million units. This marks the second consecutive month of sales growth after 21 months of decline. The rebound in China's auto market after the country's lockdown was lifted has been stronger than anticipated, but demand is expected to wane in the second half of the year as the world's largest auto industry faces significant headwinds from a global recession. China is the single largest autocatalyst market for palladium, accounting for around 21% of demand last year (~2.3 moz). Despite China's strong recovery, the palladium price is yet to recover to pre-pandemic levels and is down 4.6% in the year to date. There is a risk of further downside this year if other key auto markets such as the US and (to a lesser extent) Europe fail to recover as well as expected this year.

hodium, Ruthenium, Iridium

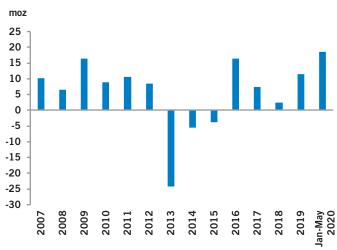
Rh ⁻		Rhodium	, Ruthenium Iridium	
	Reporting week	\$9,350/oz	\$295/oz	\$1,650/oz
	Previous week	\$10,150/oz	\$305/oz	\$1,650/oz

Rhodium's 2020 deficit set to grow further due to **converter shutdown.** Anglo American Platinum's (AAP) Anglo Converter Plant (ACP) has been temporarily shut down for the second time this year, following the detection of a water leak in the phase B unit. The announcement follows the successful repair of the same phase B unit, which re-opened in May after a water leak was detected in March. In the meantime, repair work to the phase A unit, which suffered an explosion in February, continues and is expected to be completed by Q2'21. The first shutdown of the ACP led to a build-up of approximately 400 koz of 6E matte. As this occurred early in the year and mine production was lower during

the repair period due to COVID-19 stoppages, it was estimated that AAP would be able to refine the built-up stock in 2020. AAP has not announced how long the repair will take this time, but assuming it is similar to the first leak (10 weeks), the second shutdown could see the processing of work-in-progress stock now running over into 2021. That could potentially cut supply this year by up to a few tens of thousands of ounces, moving the rhodium market further into deficit.

The rhodium price fell by \$800/oz last week (-8.9%), despite the news from AAP. Ruthenium lost another \$10/ oz (-3.2%) and iridium was unchanged.

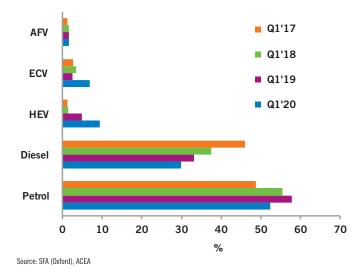
TRENDS AND INVESTMENTS



Source: SFA (Oxford), Bloomberg

Gold ETF inflows

EU car market share by fuel type



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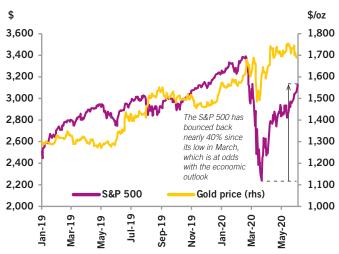
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S&P 500 and gold price



Source: SFA (Oxford), Bloomberg

PGM prices

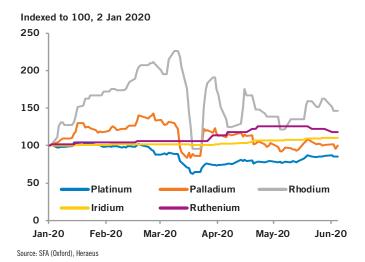
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