

PRECIOUS APPRAISAL



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PRECIOUS METALS REVIEW

Gold



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,975	-1.73%	2,022	15/05/2023	1,952	18/05/2023
€/oz	1,825	-1.39%	1,859	15/05/2023	1,813	19/05/2023

Rebound in Chinese jewellery demand offset by price sensitivity in India in Q1. As the Chinese economy reopened in Q1, Chinese consumers bought 198 tonnes of gold jewellery – an eight-year high (source: World Gold Council). The first quarter is seasonally strong for gold jewellery demand in China, and this was boosted by pent-up demand following the relaxation of Covid restrictions in late 2022. In contrast, India, the world’s second-largest consumer gold market, saw a 17% year-on-year decline in jewellery demand to 78 tonnes in Q1. Consumers in India tend to be more price sensitive, postponing purchases when prices are rising. The gold price in rupee terms has been climbing sharply this year and achieved multiple new all-time highs. Net global gold jewellery demand was flat year-on-year in Q1 at 478 tonnes, and the outlook for Q2 is mixed. If very high prices are maintained, demand could continue to lose momentum in India and Q2 typically sees a dip in Chinese demand.

The new Newmont now carries 6% of global gold production. Newmont has sealed a \$19 billion deal to acquire Newcrest, making it the largest gold miner in the world. It will account for ~8 moz of production this year. The deal is the fourth-largest mining takeover ever and represents nearly twice the value of the consolidation of the Kirkland Lake mining camp by Agnico Eagle last year.

Gold price is faltering as traders shift away from hopes of a Fed interest rate cut. The drop back below \$2,000/oz has been driven by higher US Treasury yields and a stronger dollar. The last two weeks have seen traders less enthusiastic about a rate cut by the Fed in June, and bets boosted on a pause or another hike. Longer term, the price risk is to the upside as the probability of US interest rate cuts remains high owing to the probability of a US recession, and as indicated by the 2-year US Treasury yield which is currently ~100 bp lower than the Federal Funds target rate. Interest rate cuts have historically preceded gains in the gold price.

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Silver



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	23.85	-0.16%	24.21	15/05/2023	23.33	18/05/2023
€/oz	22.05	0.17%	22.25	15/05/2023	21.65	18/05/2023

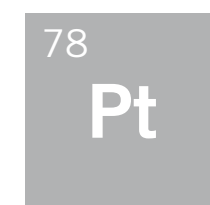
Updated IRA guidance not likely to lead to US solar manufacturing dominance. The US Treasury Department issued new guidance on 12 May that would allow only US-based solar developers to secure tax credits offered in the Inflation Reduction Act (IRA) if the cells used in products are manufactured domestically. The US already has trade tariffs in place to curb photovoltaic (PV) cell imports from China. The last decade has seen cell production capacity grow in ASEAN nations by Chinese companies to circumvent these tariffs. At present, the US has no cell manufacturing bases. If tax incentives are sufficient to boost production, silver powder demand in the US could grow. Globally, PV silver demand is forecast to have another year of strong growth, having reached record levels last year. Demand is forecast to reach 161 moz (14% of total global demand) this year as solar installations gain momentum (source: The Silver Institute).

The silver price has declined more than 5% since the last Precious Appraisal, after failing to hold above \$26/oz. Silver is nearing oversold territory, so some bargain hunting may lead to a short-term bounce in the price.

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Platinum



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,070	0.28%	1,081	17/05/2023	1,051	18/05/2023
€/oz	988	0.54%	998	17/05/2023	973	15/05/2023

Platinum use in the hydrogen economy under the spotlight during London Platinum Week. Platinum has been the outperformer of the major PGMs this year and the price is currently flat year-to-date. Prices of its sister metals, palladium and rhodium, have fallen by 22% and 43%, respectively, in that time. The highlight of the PGM industry calendar, London Platinum Week saw market participants come together to discuss developments in the platinum industry. There has been significant talk about the future of platinum demand and how to fill the gap that automotive demand is forecast to leave as combustion engines are gradually phased out. Hydrogen and the various PGM-based technologies used to produce, use and transport molecules are at the forefront.

Platinum is secondary to iridium (and ruthenium) in the hydrogen economy, owing to iridium’s greater catalytic efficiency, but platinum will play an important role. Emerging uses for platinum were discussed during the week, and where the metal’s properties can be advantageous. Current demand for platinum from hydrogen applications is estimated to be approximately 100 koz. This is forecast to grow as green hydrogen use expands – particularly in heavy-duty fuel cell vehicles.

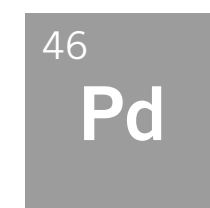
Eskom says that load-shedding could reach unprecedented levels by July. Statements last week from South Africa’s electricity provider indicate that the country could reach Stage 8 load-shedding in the next few months, potentially impacting refined PGM output. At Stage 6 load-shedding, which thus far in 2023 has been implemented for ~30 days, PGM miners are typically required to reduce power consumption from the grid by 20%. This appears to have been manageable, and to date no underground production has been lost. However, downstream processes have been impacted, with miners reporting a build-up of unrefined stocks in Q1. At Stage 8, the potential effect on miners is unknown, but the impact on the ability to process new stock build-up and carryover of unprocessed PGMs from smelter maintenance last year is likely to grow. With power supply issues creating a potential bottleneck to output, platinum supply could be restrained later in the year, potentially increasing the market deficit.

The uncertainty around power supply has accelerated weakness in the South African rand, which fell to new lows against the dollar as London Platinum Week began. This puts short-term downside pressure on the platinum price and raises the cost of products such as diesel for generators which is increasingly being used by miners to supplement their electricity supply.

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Palladium



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,522	-0.32%	1,552	15/05/2023	1,455	18/05/2023
€/oz	1,405	-0.06%	1,427	15/05/2023	1,350	18/05/2023

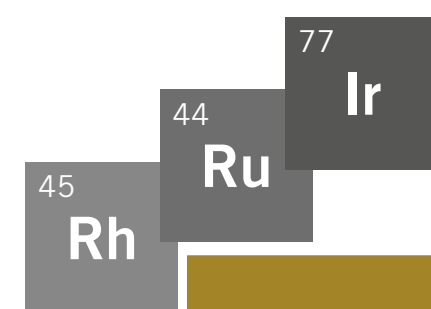
EU combustion engine car registrations showed strong growth in April and EV share also jumped. European car sales are defying macroeconomic headwinds so far this year, now having grown year-on-year every month in 2023. April’s registration of non-hybrid gasoline cars saw growth of 17.3% year-on-year to 307,000 units which is supportive of palladium demand in the short term. Along with this growth in combustion vehicle sales, there is also a jump in the market share of BEVs to 11.8% from 9.1% a year ago, which is likely to be the trend for the foreseeable future. Electric vehicles are forecast to continue to capture new vehicle market share both within and outside of Europe to the detriment of palladium demand. Despite higher vehicle production forecasts, this growth in EVs combined with substitution for platinum in some regions means that global autocatalyst demand for palladium is expected to remain flat year-on-year in 2023, which may weigh on the palladium price as the year progresses.

Drawn-out emissions legislation may defer some Chinese palladium demand. The transition from China 6a to 6b emissions standards was due to be implemented on 1 July 2023, and means that dealers could not sell China 6a-compliant vehicles after this date. The date has now effectively been extended by six months to the beginning of 2024, meaning that any incremental gains in loadings from the uplift in standards will be postponed until then. Any increase in loadings between the 6a and 6b standards is expected to be minor. However, despite higher vehicle production forecasts following the reopening of the economy, autocatalyst demand in China was already expected to soften slightly to 2.6 moz this year, owing to growing EV adoption and platinum for palladium substitution. This extension of the standards may add further downside risk to demand in the largest automotive market.

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Rhodium, Ruthenium, Iridium



	RHODIUM	RUTHENIUM	IRIDIUM
Reporting Week	\$7,850/oz	\$525/oz	\$5,150/oz
Previous Week	\$8,550/oz	\$525/oz	\$5,150/oz

How to avoid PGMs becoming hydrogen’s Achilles heel. The talking point for many at this year’s Platinum Week was ‘hydrogen’ and the role of PGMs – and iridium in particular – in enabling its further widespread use to decarbonise industry and transport. Heraeus, among other companies, is developing catalysts with lower loadings of iridium to better balance future supply and demand.

Demand is forecast to grow rapidly later this decade as electrolyser installations ramp up. The International Energy Agency forecasts that installed electrolyser capacity must grow from ~5.5 GW by the end of 2023, to 700+ GW by 2030. Of this, 20-40% is expected to be proton exchange membrane (PEM) electrolysers that use Ir-Pt (± Ru) catalysts. Much discussion during the week centred on lowering the amount of iridium used while enabling efficiency. Next-generation catalysts were shown to reduce the intensity of use in PEM electrolysers from 400 kg/GW to 100 kg/GW, with the goal of reducing this further. Improving efficiency is key, as primary supply of iridium is highly concentrated in South Africa (83% of global mine supply), and is a by-product of primary platinum mining, meaning supply is inelastic to demand.

Rhodium ETFs have witnessed a moderate amount of buying activity since mid-March, following a quiet period since the beginning of 2021. The falling rhodium price and a growing risk to South African mine supply (83% of global primary production) may be tempting some investors to bet on a future price spike. The scale of net buying into rhodium ETFs is, however, still small compared to 2014 when holdings peaked at 130 koz.

The rhodium price has continued its decline over the last two weeks, while iridium and ruthenium have held steady since the beginning of March.

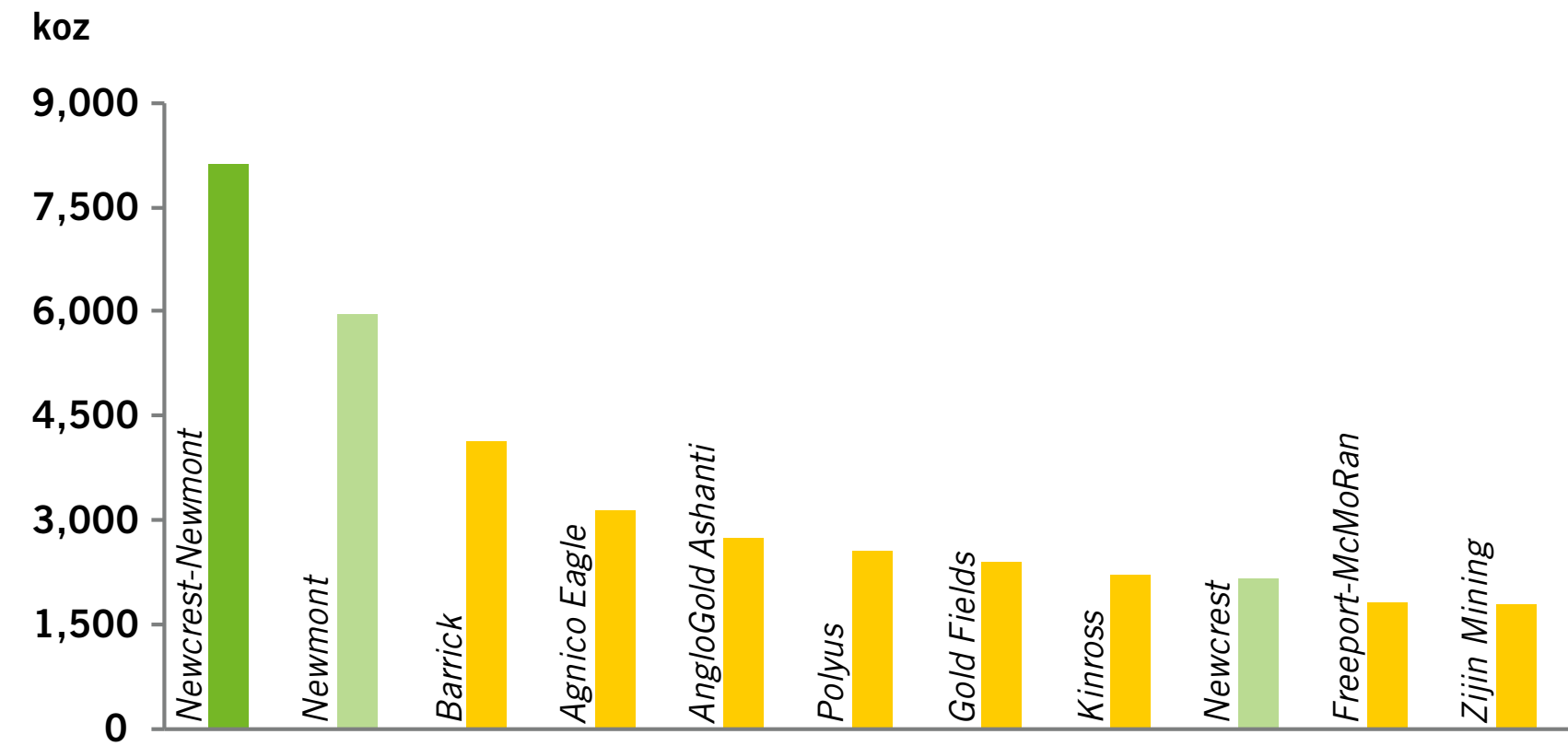
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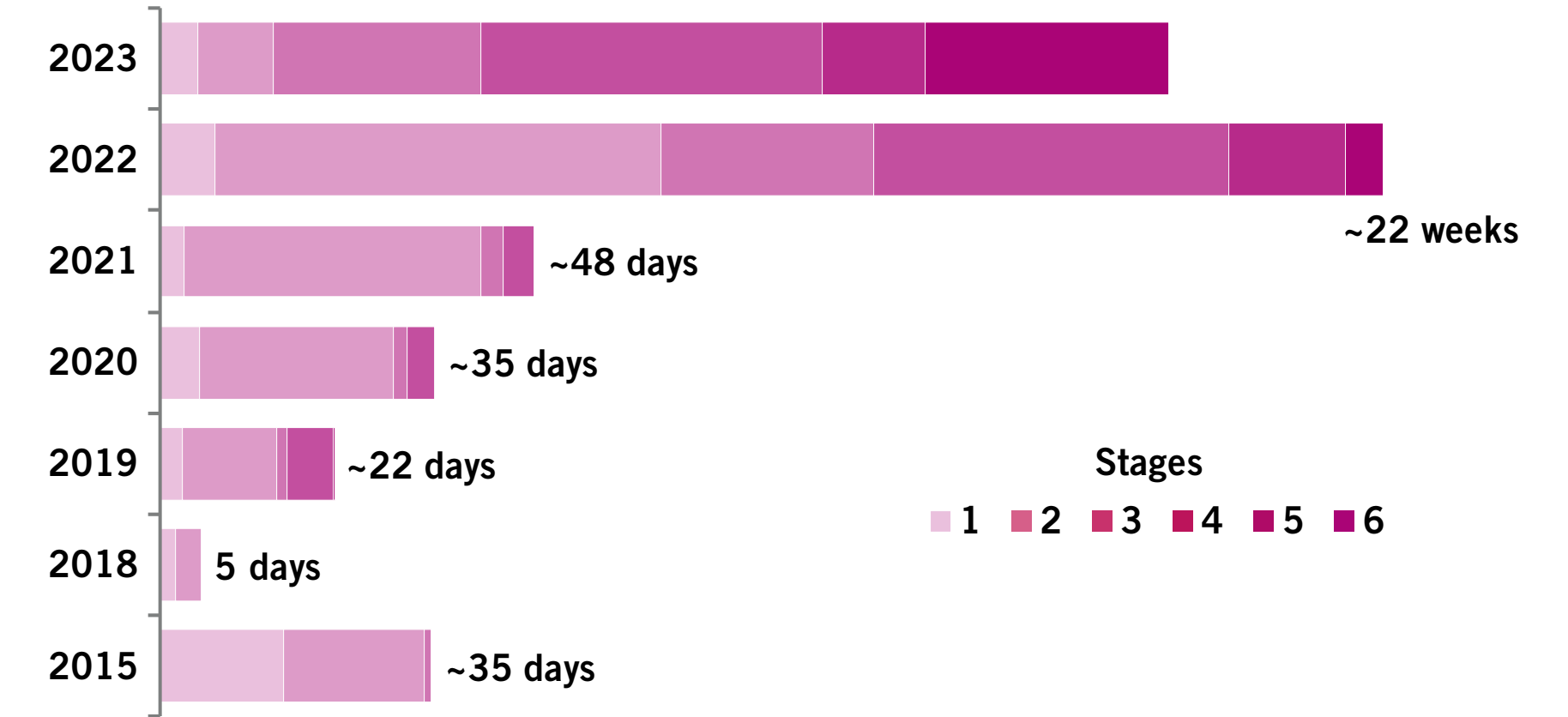
TRENDS AND INVESTMENTS

Newmont-Newcrest combined production in 2022



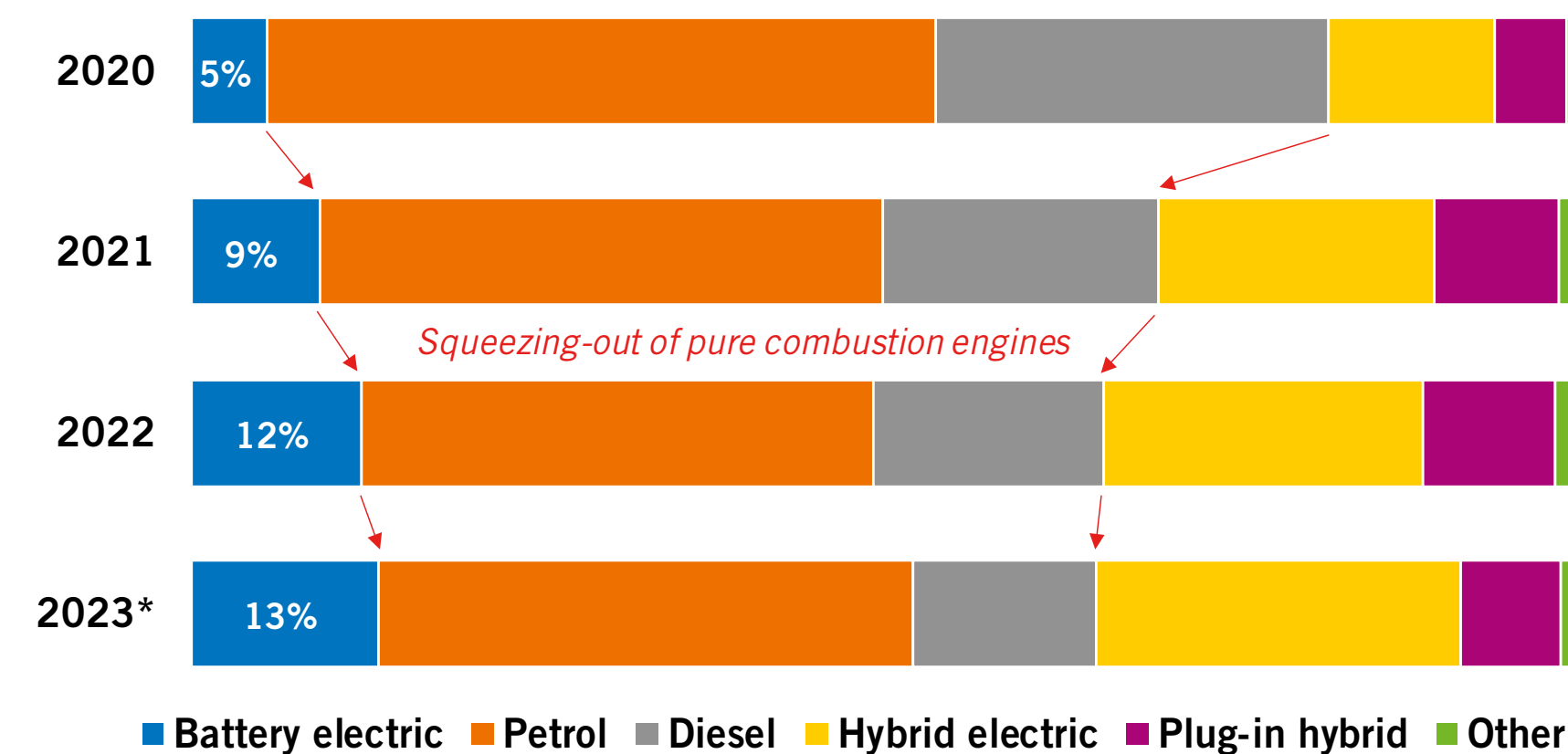
Source: SFA (Oxford), company reports

South Africa's loadshedding year-to-date



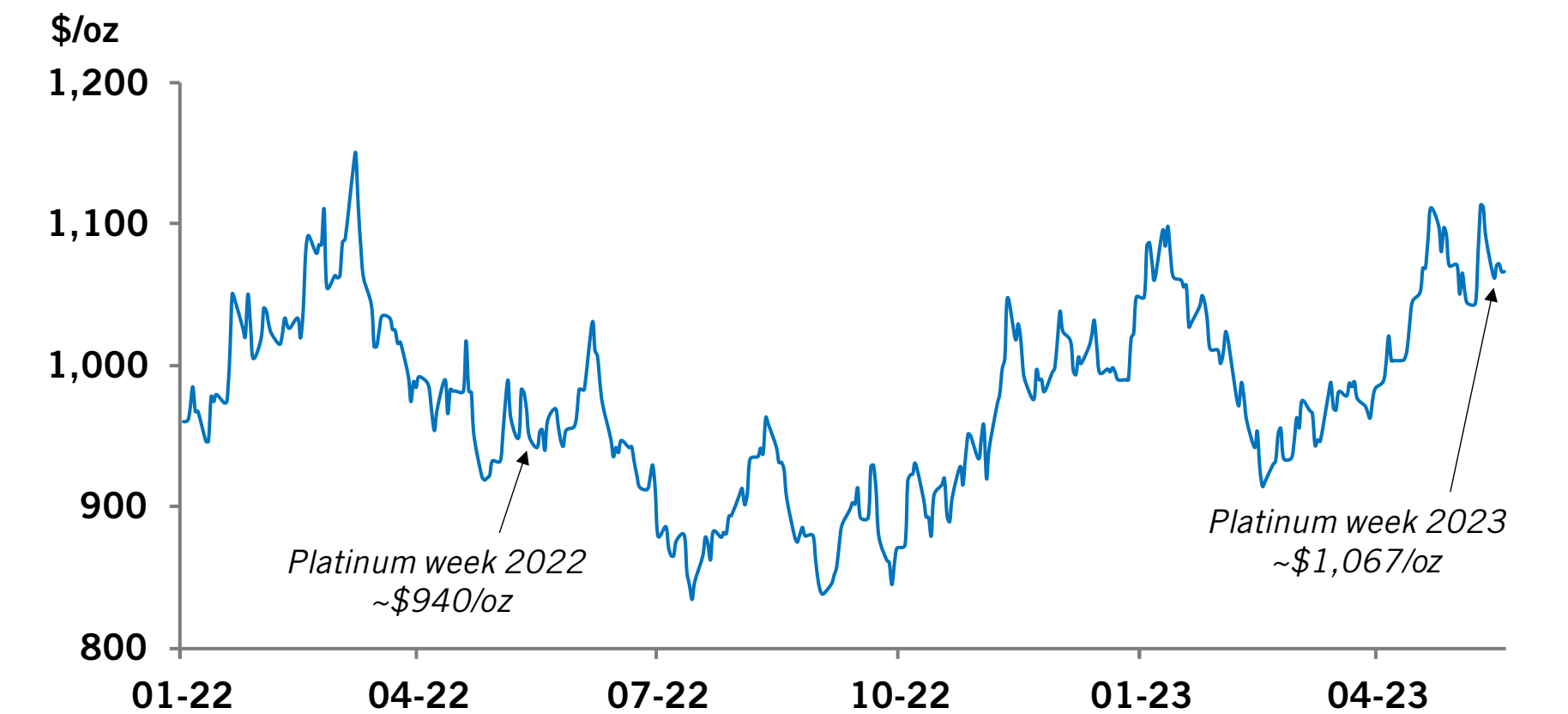
Source: SFA (Oxford), EskomSePush

EU new car powertrain market share



Source: SFA (Oxford), ACEA. *Jan-Apr only.

Platinum price



Source: SFA (Oxford), Bloomberg

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