

COMMODITIES IN PERSPECTIVE

Third quarter 2021

Given or Grande, 2021 remains an Ever evolving story

Commodity markets experienced a reversal of fortunes over the third quarter. Only a few months ago, the bulls were preaching of a sector-wide supercycle akin to that of decade ago. Hard commodity prices have fallen across the board, while the energy sector has done the opposite.

As always, Chinese developments take centre-stage in commodity markets. Early indicators suggest that economic activity is slowing, with the Covid-19 Delta variant and ongoing supply chain disruptions having an impact. More recently, the Evergrande debt problem and the curtailment of energy-intensive sectors has weakened prospects.

We explore the ongoing semiconductor chip shortage in detail overleaf, as this is key to the medium-term outlook for PGM demand.

Winter shivers await

Natural gas and coal prices have been shooting for the moon in recent weeks, as reports of energy shortages increase across the Northern Hemisphere. With the winter season approaching, countries are in a rush to build inventories before the colder weather makes landfall. Knock-on effects on gas-dependent industries are already evident, with several European fertiliser and chemical producers announcing temporary shutdowns.

Several factors contributed to the problem today, a perfect storm of sorts. Weak rainfall in regions dependent on hydroelectric reservoirs such as Brazil and China, pandemic-induced production curtailments at several major gas fields, safety crackdowns at Chinese coal mines, weak supply responses from other coal-rich regions, and strong global demand during the year have all led to a tightening energy market.

Oil typically trades well above levels where its use for power generation makes economic sense relative to gas and coal, limiting its use for demand peaking and emergency backup purposes. With gas prices having risen exponentially, cost parity has already been exceeded and several power utilities are now switching to diesel to reduce costs. We estimate that power generation only accounts for 7% of total oil demand, so while oil prices are likely to be supported by this trend, it is unlikely to see a rapid increase.

With elevated heating and electricity demand over the winter months, the energy complex is likely to remain elevated over the short term. Demand should ease once winter passes and supply factors should gradually normalise over time. However, the risk of further sharp gas price surges remains significant should the winter season be colder than usual – as experienced in Asia recently during December 2020.

Chinese dual control

Related to the energy topic is China's newly-implemented dual control policy on energy. The policy aims to limit overall energy consumption and energy intensity from key industries. The policy is supported by China's carbon reduction pledges, where emissions are expected to peak by 2030 and be carbon-neutral by 2060. The ongoing global energy shortage has added further impetus to this initiative.

To date, impacts on the commodity complex have been felt most in the steel and aluminium sectors, both of which are heavy consumers of energy. From July, numerous steel mills were directed to cut production, particularly those who use blast furnaces. The result was a precipitous decline in iron ore prices from its record highs earlier in the year. Aluminium smelters were next to feel the pinch when authorities came knocking, which stifled supply of the metal and sent prices soaring.

Looking ahead, Chinese steel demand is likely to come under pressure from the property sector. Property construction has long been used as a counter-cyclical economic stimulus lever, a policy from which authorities appear to have reversed course. Elevated debt levels and high property prices, along with China's common prosperity objective, paint a dim outlook for the sector. Combined with the target of increasing the proportion of scrap used to make steel, along with rising iron ore supply in the coming years, the iron ore market remains unattractive over the medium term in our view.

The semiconductor chip shortage

PGM prices have come under heavy pressure in recent weeks. The semiconductor chip shortage, initially expected to peak around the middle of the year, has dug a deeper hole in recent months and dragged global vehicle production figures down with it. With revenues stifled, automakers' demand for vehicle raw materials have fallen, with PGMs being squarely in the firing line. Rhodium and palladium, the shining stars of the current PGM boom, are being particularly hard hit as they lack the demand diversification of that of platinum.

How did we get here?

The world continues to become increasingly electronic and much of our daily lives is reliant on new technologies. Supposedly simple appliances, such as microwave ovens and washing machines, have chips to thank for their modern levels of convenience. Cars are no different and many of their recent enhancements rely on chips to function – even simple features such as electric windows, climate control systems and door locking mechanisms.

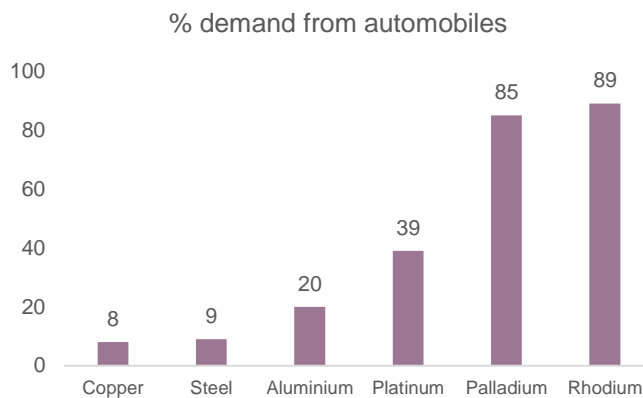
With the onset of the Covid-19 pandemic, automakers faced an uncertain recovery timeline and raw material order books were cut sharply. Simultaneously, social distancing and work-from-home behaviours shifted consumer spend towards electronics and home improvement sectors. While innocuous at first glance, consumer durable goods tend to share several chip types with vehicles. During the latter half of 2020, developed economies and China were firmly in recovery, leading to a surge in demand from across the board. Initial rumours of a tight semiconductor market were first heard around November/December 2020.

On the supply front, several once-off disruptions occurred in early 2021 such as a fire at major Japanese supplier Renesas, and the Winter Storm Uri in Texas affecting several chip makers in the region. At this stage, the worst period for chip supply was expected to be during the second quarter of 2021. The Covid-19 Delta variant, which spread globally around the end of the second quarter, stretched matters further, as strict lockdowns in key Asian regions kept workforces and production limited.

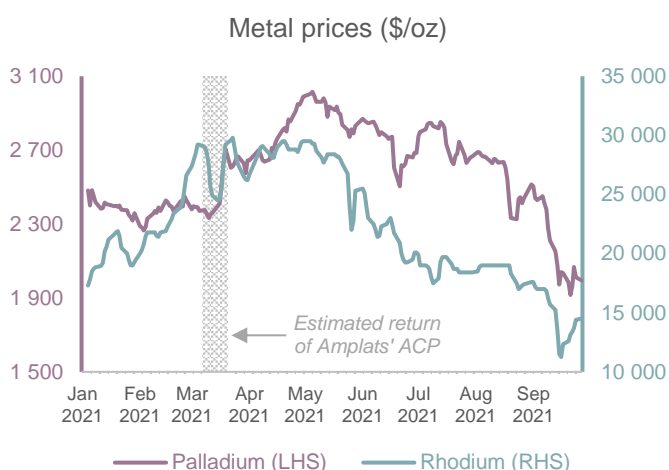
What has the impact been to date?

Following the strong recovery in the second half of 2020, global vehicle production figures fell as the chip shortage worsened through the course of early 2021. With much of the semiconductor chip supply chain being opaque, along with limited visibility on inventories and Covid-19 workplace restrictions, forecasting the impact on vehicle production has been difficult. Hence, the outlook for the remainder of 2021 has progressively deteriorated each month.

For PGMs, a decrease of 5 million vehicles in IHS' forecast for 2021 represents an approximate 5% reduction in demand for palladium and rhodium. Initially, both metals were widely expected to be in deficit for 2021. Rhodium is now expected to be closer to in balance for 2021, if not in a mild surplus, while palladium is expected to be in a mild deficit for 2021. The negative impact on spot prices has been severe over the past month as the news flow surrounding the chip shortage worsened.

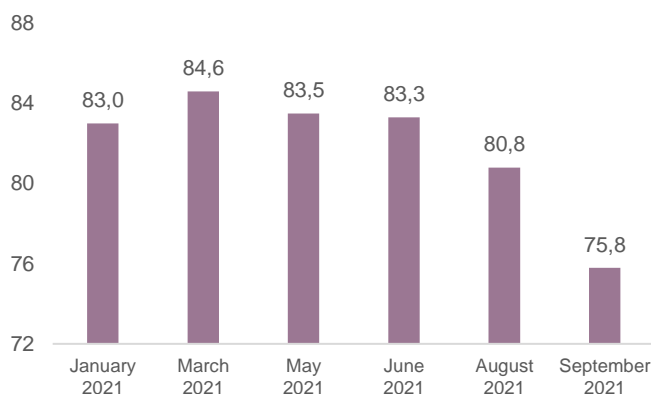


Source: UBS research, Citi research



Source: Refinitiv, Johnson Matthey, NPW estimates

IHS 2021 global light vehicle production forecast at the date of forecast



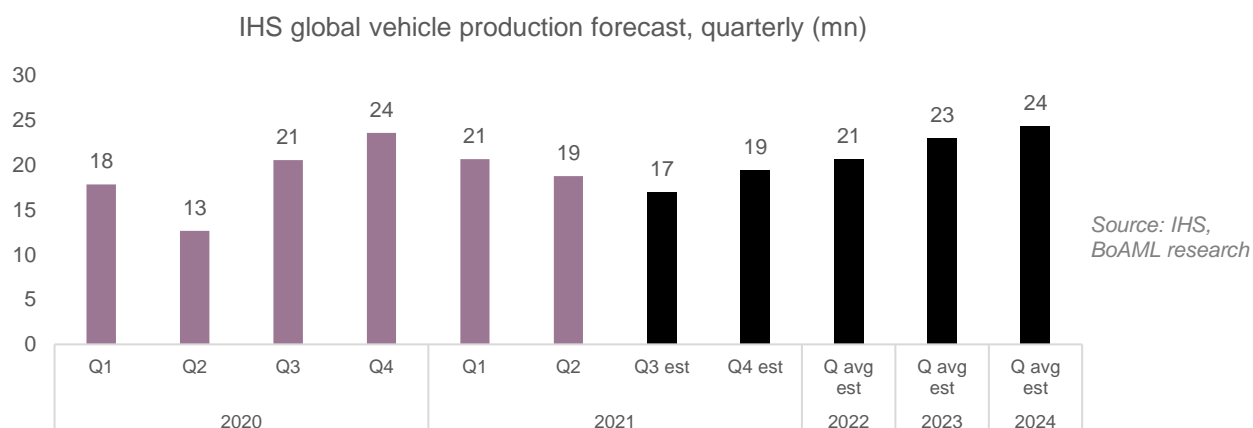
Source: IHS, BoAML research, HSBC research

So where to from here?

At some point over the short term, the chip shortage is expected to be at its worst – if not already, judging by IHS' latest vehicle production forecast. Given the lack of visibility of the state of the supply chain, there is a high degree of uncertainty as to when this will be. We note that several contributing factors have been improving of late, suggesting that the recovery could begin soon. These improvements include:

- Covid-19 cases in key Southeast Asian regions are falling, suggesting that the Delta variant impact has likely passed its peak. For Malaysia specifically, chip factory utilisation has improved substantially over September, according to a recent Morgan Stanley survey.
- Fire damage at Renesas' Naka facility in Japan has been repaired, a major Japanese chip supplier to the automotive sector. Going forward, Renesas plans on increasing throughput beyond their previous levels.
- TSMC has increased commitments to automotive clients by 20-30% from 3Q 2021 onwards.
- US consumer spend at home improvement stores, per Bank of America card data, is slowing gradually. Further weakening should be expected with the recent end in unemployment pay benefits. This reduces competition for chips that could be used in vehicles.

Reliable leading indicators are elusive, apart from industry insider anecdotes. Even if conditions within the chip supply chain are improving, the lead time in chip production under normal conditions is approximately 12 weeks, so timing mismatches are possible. The best coincident indicators are new vehicle sales and production figures. With prospective new vehicle buyers forced to consider used vehicle options, the price level of used vehicle sales should provide some indication to underlying vehicle demand. Once new vehicle production momentum returns, the prices of palladium and rhodium should follow suit.



PGM investment implications – the comeback is greater than the setback

As things stand, PGM metal prices and equities have fallen rapidly. Assuming that the chip shortage abates and vehicle production recovers to normal levels, PGM metal prices should recover significantly, as the deficits in palladium and rhodium return.

This thesis is not without risks, however. Should the chip shortage continue for much longer than currently expected, weakening PGM prices further to a level where even a future recovery would not offset the initial loss. This is relevant since the PGM market has a limited window of opportunity before the EV revolution permanently displaces demand for autocatalysts. Recent EV penetration statistics paint a worrying trend, however, several automakers have prioritised EVs and other high-end vehicles to maximise profit per unit of chips available in the interim.

The bull case envisions a swift recovery, followed a period of pent-up demand for new vehicles. It can be reasoned that several new car buyers would simply defer purchases into later periods, adding to those who had already planned on buying in said later periods. We see merit in this bullish view although the extent of pent-up demand and the timing thereof are difficult to forecast.

Either way, we expect demand for PGMs to be greater in 2-3 years' time compared to now. PGM supply is not likely to grow significantly over the same period, as Amplats' excess work-in-progress metal inventory is expected to be fully worked down by end-2022. If one is willing to look through the short-term volatility, and apply a 'buy low, sell high' mindset, a buying opportunity is currently on offer.

Considering the uncertainty surrounding the extent of the Covid-19 impact and subsequent economic recoveries, the short-to medium-term outlook remains volatile. Over the long term, we use cost-curve dynamics and incentive pricing, which defines our longer-term price view in the commodity price assessments that follow.

Nedbank Private Wealth Investment Research and Fund Management

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