Box 2 The evolution of international and domestic commodity derivative prices

The mining and agriculture industries are pivotal in the South African economy, with the former contributing meaningfully to the fiscus through taxes and the latter being important for food security. Both industries are vulnerable to instability created by fluctuations in mineral and agricultural commodity prices. In addition, changes in agricultural commodity prices are an important determinant of domestic food price inflation, which peaked at 14.4% in March 2023. This box explains the commodity derivatives market, the relationship between spot[1] and futures[2] prices as well as the evolution of selected commodity derivative prices.

The commodity derivatives market is essential for investors, traders and businesses looking to diversify their portfolios or hedge against price fluctuations. Commodity derivatives trading on the commodity derivates market of the JSE Limited (JSE) is based on contracts with various underlying agricultural and mining commodities, each with spot and futures prices. Spot prices are referenced to the near[3] delivery month where commodity instruments are exchanged or cash is settled on the conclusion of a near-term futures contract. Spot prices therefore reflect current or near-term supply and demand conditions. For commodity derivatives futures contracts, mark-to-market futures prices are established daily for settlement at future dates. Therefore, futures prices are determined and referenced against longer-term commodity contracts and reflect expected future demand and supply conditions.

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1 The South African Reserve Bank uses the mark-to-market spot price of commodity derivatives for analysis – a method used to measure the fair value of derivatives contracts based on their current (spot) market prices. For commodities, the JSE makes use of the time-weighted average price (TWAP) and snapshots are taken at certain times to determine mark-to-market prices.

2 Futures contracts are agreements to buy and sell commodities at a predetermined price at a longer-term future date. Futures contracts for the various commodities are available for different months, with the furthest contract currently extending to December 2025.

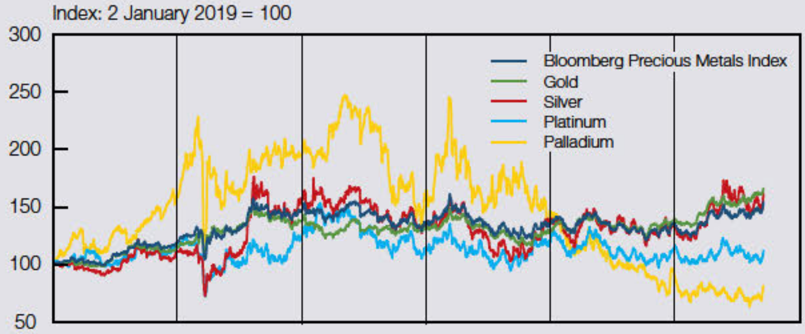
3 The near delivery month is the first contract expiration month for each product.

Macroeconomic shocks regularly impact commodity markets and thus movements in global and domestic commodity derivative prices.[4] International commodity prices and JSE commodity derivative prices will never be the same. This is because the market makers who hedge directly in the international markets take risks and provide liquidity but endeavour to ensure that the quotes are close to the market.

The Bloomberg Precious Metals Index[5] increased steadily throughout 2019 before decreasing sharply to 104 index points on 18 March 2020 following the lockdown restrictions related to the global coronavirus disease 2019 (COVID-19) pandemic. This decrease was broad-based among all global and domestic precious metals derivative spot prices, except for domestic gold derivatives as investors preferred this safe-haven asset during the period of heightened uncertainty. Subsequently, the Bloomberg Precious Metals Index rebounded to 157 index points on 6 August 2020, mostly reflecting global supply chain constraints and increased demand from China as industrial activity rebounded. Precious metal commodity derivative prices then corrected to November 2022.

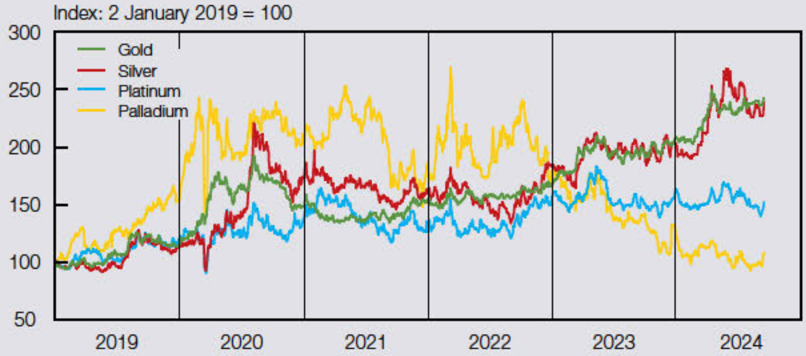
Global precious metals derivative spot prices

Index: 2 January 2019 = 100



Domestic precious metals derivative spot prices

Index: 2 January 2019 = 100



Sources: Bloomberg and JSE

Most of the global and domestic precious metals derivative prices trended higher from the end of 2022 amid rising geopolitical tensions arising from the war between Russia and Ukraine and later the conflict between Israel and Hamas in the Middle East. Similar to global gold and silver derivative prices, domestic gold and silver derivative prices increased largely in tandem, with all-time highs in April and May 2024 respectively, as both commodities offered similar hedging properties against macroeconomic and currency shocks. The increase in these derivative prices reflected, among other factors, expectations of interest rate cuts by the United States (US) Federal Reserve and increased demand from China. Furthermore, global and domestic silver derivative prices rose on increased industrial demand, primarily in the electrical and electronics sector, as silver is a vital commodity for conductors of electricity, including solar panels.

Following the commencement of the Russia–Ukraine conflict, global and domestic palladium derivative prices initially rose sharply for a brief period due to supply constraints. Thereafter, palladium derivative prices declined significantly as diversification strategies that substituted the use of palladium took effect. Domestic palladium derivative prices peaked at 270 index points on 8 March 2022 before falling by 65.4% to 6 August 2024 – a five-and-a-half-year low. Furthermore, the rise in global demand for electric vehicles, which do not have catalytic converters requiring the use of palladium, also contributed to the lower palladium derivative prices. After increasing to early 2021, domestic and global platinum derivative prices traded broadly sideways

4 Global commodity derivate contracts are quoted in US dollar per measure of the contract, while the domestic contracts are quoted in rand.

5 The Bloomberg Precious Metals Index tracks the performance of holding a long position in precious metal commodities futures contracts. The index comprises gold, silver, platinum and palladium commodity futures contracts.

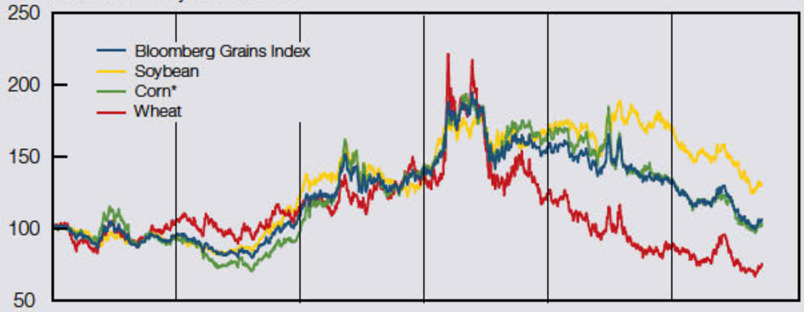
into 2024 due to relatively stable supply. As the largest producer of platinum, South Africa is expected to contribute around 70% of global platinum supply in 2024. In general, global and domestic metal derivative prices are similarly impacted by macroeconomic developments and therefore display broadly similar trends.

While global and domestic precious metals derivative prices largely trend in tandem, global and domestic grain derivative prices do not always follow similar trends as weather conditions have a big influence on the crop production per country. The disruption in global economic activity caused by the COVID-19 pandemic also led to a considerable decrease in the Bloomberg Grains Index[6] to a low of 80 index points on 26 June 2020. However, the index recovered significantly to well beyond its pre-pandemic levels, peaking at 195 index points on 17 May 2022, initially because of the pandemic-induced supply chain constraints and later because of the Russia–Ukraine war as both countries are significant global grain producers. The index subsequently declined to a recent low of 99.4 index points on 26 August 2024.

Domestic wheat derivative prices generally displayed an upward trend from December 2019 to mid-2022, while domestic maize derivative prices declined somewhat in early 2020 before also increasing up to the end of 2022. Soybean derivative prices increased significantly from early 2019 up to 2022, with intermittent declines at the start of 2021 and mid-2022. The Russia–Ukraine war, which started in February 2022, destroyed grain crops, interrupted imports and exports, and led to international sanctions, thus impacting both global supply and demand for grain products and contributing to the higher global and domestic agricultural derivative prices. In addition, grain prices were impacted by a demand shock driven by panic buying, labour shortages and logistical challenges as well as strong demand from China.

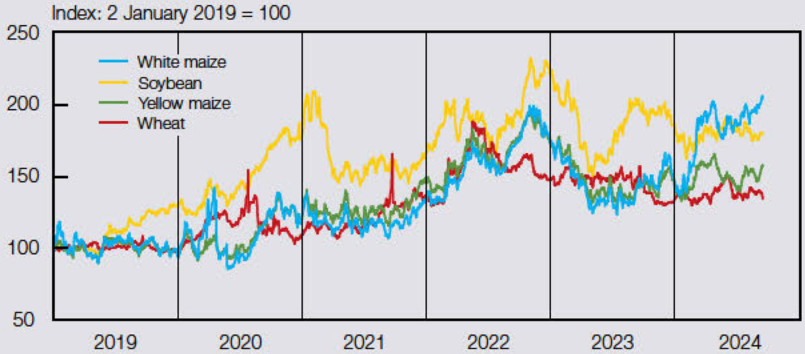
Global agriculture derivative spot prices

Index: 2 January 2019 = 100



Domestic agriculture derivative spot prices

Index: 2 January 2019 = 100



* Corn in the US is the same product as yellow maize in South Africa
Sources: Bloomberg and JSE

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6 The Bloomberg Grains Index aims to track the performance of holding a long position of agricultural grain commodity futures contracts. The index is derived from corn, Chicago wheat, Kansas City wheat, soybeans, soybean oil and soybean meal commodities.

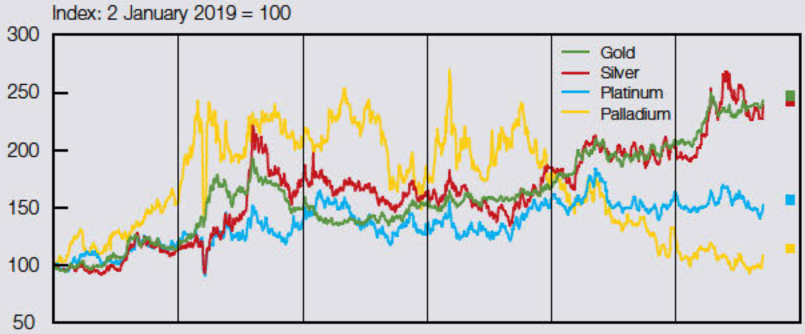
The factors that underpinned higher agricultural derivative prices subsided somewhat from the end of 2022. Following an agreement brokered by the United Nations and Türkiye, grain exports from Ukraine resumed in the second half of 2022 and, together with favourable weather conditions, resulted in ample global grain supplies as the 2022/23 global maize harvest increased by 6.0% year on year, according to the International Grains Council. Domestically, favourable weather conditions also contributed to good harvests and improved crop yields, according to the Crop Estimates Committee (CEC) of the Department of Agriculture, Land Reform and Rural Development, which contributed to lower domestic derivative grain prices. Subsequently, after Russia's withdrawal from the Black Sea Grain Initiative, most domestic agricultural derivative prices increased from the second half of 2023 alongside a weaker exchange value of the rand and adverse weather conditions brought about by the El Niño weather pattern, while international grain prices continued to trend lower.

Domestic precious metals derivative futures prices are trending somewhat higher for the remainder of 2024. Although domestic mining production is expected to continue to experience high input costs and logistical challenges, the stable electricity supply should aid metals production. The derivative futures prices of silver and gold are significantly influenced by the impact of geopolitical developments on supply, the outlook for US interest rates and higher global industrial demand. The derivative futures prices of palladium are expected to only increase marginally following the sharp decrease over the past two years.

The most recent crop estimates released by the CEC show a decline in most of the domestic grain harvests for the 2023/24 production season due to adverse weather conditions. Consequently, the derivative futures prices of domestic agricultural products generally reflect a mix of slight increases and declines for the remainder of 2024.

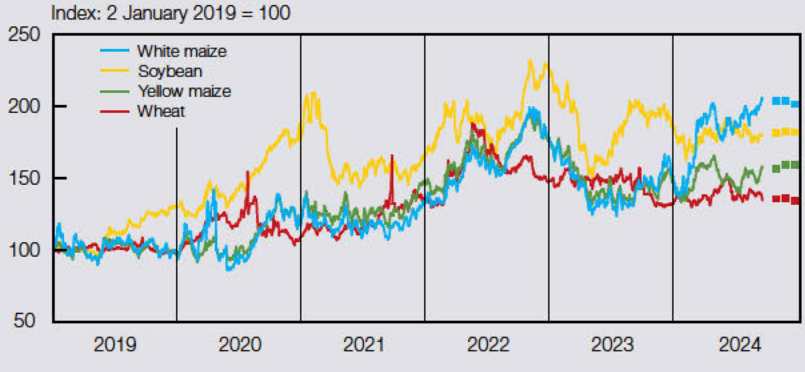
Domestic precious metals derivative spot and futures prices*

Index: 2 January 2019 = 100



Domestic agriculture derivative spot and futures prices*

Index: 2 January 2019 = 100



* Blocks: futures prices at 13 September 2024

Source: JSE