

The recurrence of adverse shocks in commodity terms of trade has severely constricted growth in African economies and made it crucial for businesses and policy makers alike to consistently monitor trends in the region’s key commodity markets. The Afreximbank African Commodity Index (AACI) accurately reflects the composition of African commodities and tracks the movements of commodity prices on a biannual basis. In so doing, the AACI highlights areas that require preemptive measures by the Bank, its key stakeholders, policy makers, and global institutions interested in the African market, to effectively mitigate risks associated with volatility of commodity prices.

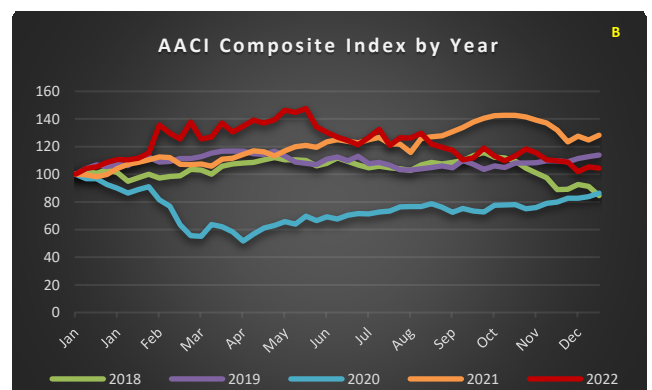
The AACI reflects the dynamics of 14 key commodities of export interest to Africa. The commodity list is divided into three main categories: agricultural (cocoa, coffee, cotton, corn, sugar, wheat, and palm oil), metal (aluminum, cobalt, copper, gold, and zinc) and energy (crude oil and natural gas). This report focuses on price movements, including growth rates and volatility in 2022, with particular focus on the second half of the year.

The AACI composite index in Figure 1(A) shows aggregated price movements on commodity markets since 2016. The index has increased steadily, with impressive growth since the collapse in commodity markets triggered by the COVID-19 pandemic. The index recovered from a sharp drop during the pandemic downturn in April 2020 and rose since the start of the Ukraine crisis, climbing steeply to a peak in March 2022 and remained elevated throughout the first half of the year.

Figure 1(B) shows aggregated price movements over the past five years. While prices plummeted drastically during the first half of 2020 and recovered somewhat in the second half, the opposite occurred in 2022, owing to lingering disruptions to global supply chains triggered by the COVID-19 pandemic, inflationary pressures accelerated by the outbreak of the Ukraine crisis, and strict COVID-19 containment measures in China.

The combination of supply chain disruptions, trade restrictions following the implementation of sanctions against Russia, heightening global tensions, and tightening monetary policy in response to record-high inflation contributed to major shifts in investor sentiments and led to steep increases in commodity prices during the first half of the year. However, commodity prices declined sharply in the second half, owing to softening demand in a context of sharp global growth deceleration especially in China and Europe, the leading drivers of global trade. Commodities such as gold and cobalt gained momentum in the last quarter of the year as energy prices stabilized and China relaxed its COVID-19 containment measures.

Figure 1: AACI Composite Index (2016=100)



Sources: Afreximbank Research, Bloomberg.

During the second half of 2022, metals and agricultural subindices drove the AACI decline (Figure 2(A)). These subindices decreased by 21 percent and 16 percent respectively, compared with the first half of 2022. Figure 2(B) shows that, except for a few commodities of interest (corn and cocoa), volatility was more pronounced in 2022, reflecting the challenging global operating environment of increasing uncertainty. Particularly volatile commodities in this period included natural gas, brent crude oil, coffee, sugar, and cobalt.

Figure 2: AACI Price Growth and Volatility (2016=100)

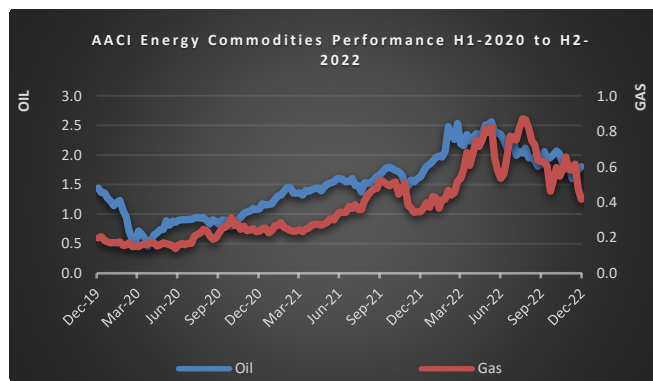
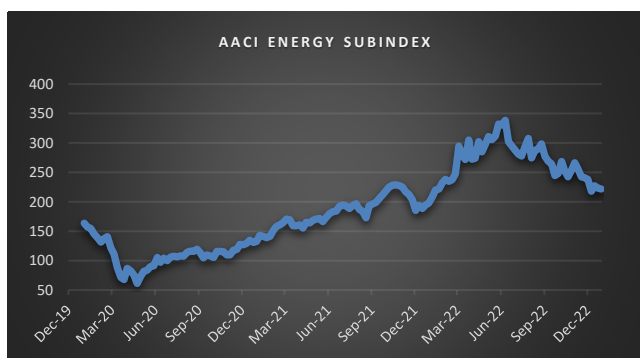


Sources: Afreximbank research, Bloomberg.

a. Energy

The AACI energy subindex has increased sixfold over the past three years. The impressive growth is attributable to the exceptionally fast-paced global economic recovery in 2021, coupled with demand and supply imbalances aggravated by the Ukraine crisis especially in the first half of 2022. After reaching a new record half of the year in June 2022, the subindex eased slightly in the second half of the year.

Figure 3: AACI Energy Subindex (2016=100)



Sources: Afreximbank research, Bloomberg.

The dynamics of both oil and gas prices were consistent during the review period. After reaching a decade-high record of US\$110 per barrel in May 2022, brent crude oil prices declined sharply in the second half of the year, landing at \$76.6 per barrel in the second week of December. This trend was supported by easing supply chain bottlenecks and the securing by European countries of alternative sources of energy, especially from the United States.

International Energy Agency data shows marked reductions in United States crude oil stocks during the year, reflecting declines in the Strategic Petroleum Reserve and other global inventories. Total stocks declined to 2,681 million barrels, 292.1 barrels below the five-year average. These demand and supply fundamentals, among other extenuating factors, intensified swings in oil prices throughout the year.

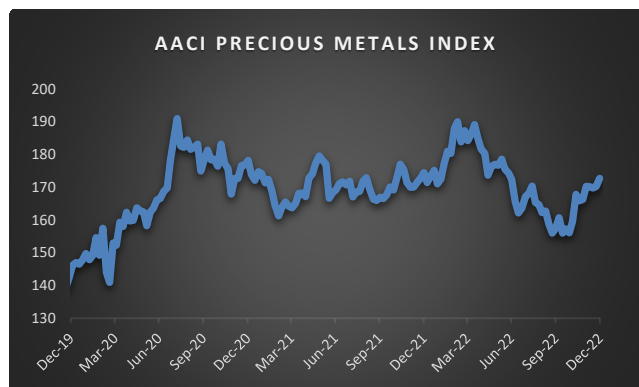
Western-led sanctions against Russia have also intensified competition among foreign investors for energy in Africa. Of the total capital expenditures on oil and gas activities on the African continent in 2022, more than two thirds was by foreign companies with long term operations spanning 20 to 30 years in 48 African countries. Top foreign upstream developers exploiting and extracting oil and gas on the African continent include TotalEnergies (France), Eni (Italy), Mitsui & Co. (Japan), BP (United Kingdom and China National Offshore Oil Corporation (CNOOC).

Similarly, the price of natural gas reached a record high of US\$9.3 per million British thermal units (MMBtu) in June 2022, a 166 percent increase over the price a year earlier. The spot price reached a peak of US\$9.7 per MMBtu in August before declining to US\$3.9 per MMBtu by the end of December 2022. The decrease is due to a combination of several factors, including the emergence of alternative sources of energy that are increasing production and easing supply chain bottlenecks.

b.1 Precious Metals

The precious metal index weakened by 8.4 percent in the second half of 2022 compared to the first half of the year, with the price of gold declining by 7.7 percent and the price of cobalt by 31.7 percent.

Figure 4: AACI—Precious Metal Subindex (2016=100)



Source: Afreximbank research, Bloomberg.

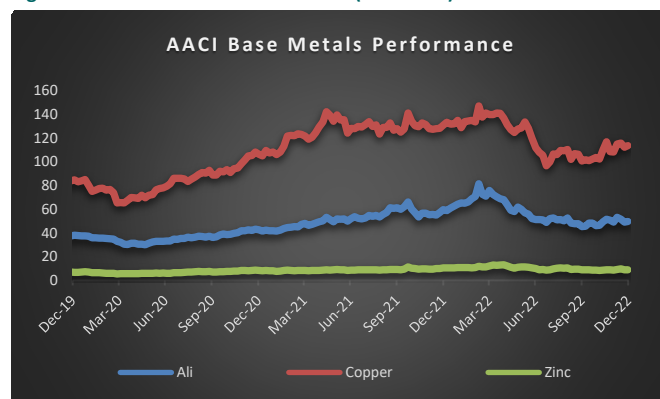
After a sterling performance in the first quarter dominated by heightened global volatility and sharp appreciation of the US dollar, gold prices decreased sharply in six months to September, trading below US\$1,650, a 24 percent decline from their 19-month high of US\$2,050 per ounce in March 2022. However, the recovery witnessed in the last quarter of the year following the shift which set the US dollar on a weakening track, could see gold regain its position as safe haven asset in the coming year.

b.2 Base Metals

The base metals index declined 21 percent from the first half of 2022 to the second half, driven by decreases in the prices of aluminum (24 percent), copper (19 percent), and zinc (19 percent, along with the synchronized deceleration of global output, especially in China and Europe, where manufacturing output fell sharply.

Most base metals play a critical role in the construction industry, and they also form pivotal elements of the transition to green energy. But in addition to falling global demand in the context of sharp growth deceleration, global supplies were severely squeezed by soaring energy prices. Because energy accounts for about 40 to 50 percent of aluminum smelting costs, the surge in energy prices raised overall costs for producers, causing most smelters to scale back on output, particularly in Europe.

Figure 5: AACI—Base Metals Subindex (2016=100)



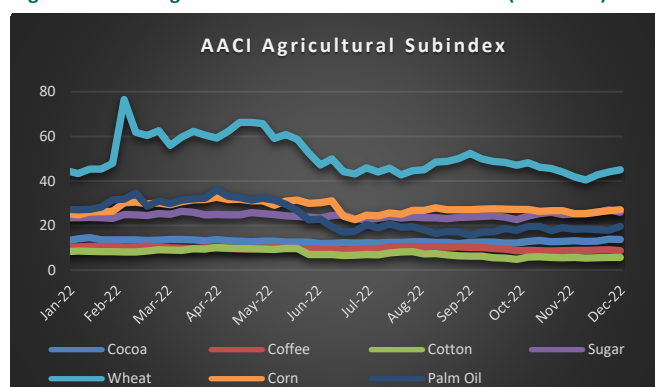
Sources: Afreximbank research, Bloomberg.

Severe declines in the prices of base metals were attributable to stringent COVID-19 containment measures in China, the world's biggest importer of base metals. However, as China eased those measures in the last quarter of the year, prices gained momentum, as reflected in Figure 5.

C. Agriculture

Agricultural commodities posted contrasting performance between the first and second half of 2022, as reflected in Figure 6. Following strong commodity price tailwinds from the Ukraine crisis in the first quarter of the year, the agricultural subindex weakened by 16.4 percent from the first to the second half of the year. This was particularly driven by marked price declines in palm oil (37.9 percent), cotton (28 percent), wheat (18 percent), corn (8.4 percent), coffee (6.8 percent), and cocoa (6 percent).

Figure 6: AACI—Agricultural Commodities Performance (2016=100)



Source: Afreximbank research, Bloomberg.

Coffee prices plunged to 16-month lows of US\$1.5 per pound in the second half of 2022 amid abundant global supplies. The sharp increase in global exports reached 10.88 million bags in December 2022, up from 9.9 million bags in August. The weakening Brazilian Real encouraged exports from Brazil, the top producer of Arabica coffee, which accounts for 40 percent of global coffee supply. Vietnam, the largest producer of Robusta coffee, reported a 56 percent surge in exports between October and November 2022 and an of 15.74 percent from October 2021 to October 2022.

From an all-time peak of US\$1,088 per bushel in May 2022, Chicago wheat futures plummeted by 35 percent in the second half of the year. The decline reflected the easing of the supply chain disruptions associated with the outbreak of the Ukraine crisis. The UN-brokered Black Sea Grain Initiative (the Black Sea deal) facilitated large exports of grain. For instance, 11 million tonnes of Ukrainian wheat were shipped between August and December 2022.

During the review period, a record-high harvest in Russia, coupled with the Black Sea deal which was extended for another four months, spurred strong supplies from top global exporters. As a result of favorable growing conditions in Russia, production was estimated to be in excess of 90 metric tonnes at the end of current season. Prior to the Ukraine crisis, Russia and Ukraine together accounted for roughly 30 percent of global wheat exports, followed by the United States, Canada, and France.

Cocoa prices were affected by supply and demand imbalances triggered by a combination of several factors. Flash floods in West and Central Africa and a dock workers' strike in Côte d'Ivoire negatively affected cocoa bean transportation from farms to ports. The International Cocoa Organization (ICCO) reported a decline of 23 percent year-on-year in port arrivals from 452,000 tonnes in November 2021 to 348,000 tonnes in November 2022. Elevated input costs and an outbreak of Black Pod diseases in some cocoa growing regions also squeezed production. As a result, prices spiked to about US\$2,600 per tonne during the last quarter of 2022, up 18 percent from US\$2,200 in July.

In addition to supply-demand imbalances, cocoa price increases were also driven by policies designed to boost farmers' income in cocoa growing countries. These include measures to increase producer prices to bolster a sustainable, resilient, and lucrative cocoa industry in Ghana and Côte d'Ivoire, which account for more than 60 percent of global cocoa output. Governments of both countries are committed to assisting farmers by providing fertilizer and crop chemicals and by instituting pest and disease control programs designed to improve the quality and quantity of cocoa beans.

d. Outlook for Commodity Prices

The outlook for commodity markets is largely dependent on the duration of the Ukraine crisis and the extent of global coordination to mitigate the risk of recession. Both the forecast recovery in China – the world's leading importer of commodities – and growth resilience in the United States, the world's largest economy, augurs well for the commodity outlook in 2023. The outlook is further enhanced by the forecast depreciation of the US dollar. Table 1 provides forecasts for the prices of key commodities of interest in the near term and Table 2 shows price growth over time relative to the current spot price.

Oil: Price forecasts remain uncertain due to several factors with potential to materially sustain demand and supply imbalances. The persistence of economic contraction concerns persist in the United States and European Union could adversely impact oil demand. However the International Energy Agency anticipates further declines in global inventories and OPEC envisages a bullish market in the near future, buoyed by the positive outlook for China, the world's leading importer. In addition, less aggressive monetary policy is anticipated in 2023 by the Federal Reserve and other central banks.

Table 1: Selected Commodity Forecasts

Commodity Price/Unit	Quarterly					Annual	
	Spot	Q1 23	Q2 23	Q3 23	Q4 23	2023	2024
Corn cents/bu.	680	682	674	613	591	640	576
Wheat cents/bu.	748	754	762	771	783	767	782
Coffee (DF) \$/MT	167	167	167	165	163	166	164
Sugar#11 c/lb	21	20	19	18	18	19	17
Cocoa \$/mt	2,623	2,634	2,661	2,658	2,637	2,648	2,579
Cotton cents/lb	87	88	88	86	86	87	84
Palm Oil RM/metric ton	3,874	3,795	3,785	3,751	3,730	3,765	3,719
ICE Brent \$/BBL	89	87	86	85	83	85	79
Natural Gas \$/MMBtu	137	140	142	148	173	151	156
Gold \$/t oz	1,930	1,934	1,960	1,986	2,009	1,972	2,065
Cobalt \$/lb	18	23	22	22	24	23	28
Aluminum \$/mt	2,639	2,618	2,654	2,684	2,706	2,666	2,758
Copper \$/mt	9,330	9,291	9,332	9,329	9,320	9,318	9,275
Zinc \$/mt	3,487	3,470	3,480	3,460	3,435	3,461	3,322

Sources: Afreximbank research, Bloomberg.

*MMBtu (Metric Million British Thermal Unit)

Copper: The outlook is positive for copper, given the global shift towards clean energy. According to the International Energy Agency, the stock of copper used to produce electric cars rose by 43 percent in 2020 and is expected to surge tenfold by 2030. Clean energy projects are projected to utilize more than double the amount of copper in 2040 as they do today. In Africa, the Democratic Republic of the Congo and Zambia stand to benefit from the ongoing energy transition.

Gold: Rising interest rates, while slowing, are increasing the risk of recession and combined with ongoing geopolitical tensions, are likely to enhance the safe haven nature of gold. Accordingly, investors are expected to remain bullish on the precious metal in the short to medium term.

Cocoa: The combination of unfavorable weather conditions and crop diseases in Côte D'Ivoire and Ghana, which account for more than 60 percent of global cocoa output, are likely to impact the quality and quantity of production, as well as the size of the cocoa bean, according to the International Cocoa Organization. Meanwhile, rising costs of living driven by inflationary pressures may erode purchasing power, decreasing demand for chocolate, a major product of cocoa.

Gas: More than half the countries on the African continent have natural gas reserves estimated at more than 800 trillion cubic feet. However, Africa remains a marginal global player in gas production. The outlook for the commodity will be driven by big players such as Russia. According to the International Energy Agency, global gas production will average 99.6 billion cubic feet per day in the first half of 2023, up from 95.1 billion cubic feet per day in the first half of 2022.

Table 2: Forecasts vs. Spot Prices (percentage change)

Forecasts versus Spot	Quarterly				Annual	
	Q1 23	Q2 23	Q3 23	Q4 23	2023	2024
Corn cents/bu.	0.3%	-0.9%	-9.9%	-13.1%	-5.9%	-15.2%
Wheat cents/bu.	0.8%	1.8%	3.0%	4.7%	2.6%	4.6%
Coffee (DF) \$/MT	0.2%	0.1%	-1.0%	-2.0%	-0.7%	-1.9%
Sugar#11 c/lb.	-2.5%	-9.3%	-11.5%	-10.8%	-8.6%	-16.7%
Cocoa \$/mt	0.4%	1.5%	1.3%	0.5%	0.9%	-1.7%
Cotton cents/lb.	1.0%	1.7%	-0.5%	-0.9%	0.3%	-2.6%
Palm Oil RM/metric tonne	-2.0%	-2.3%	-3.2%	-3.7%	-2.8%	-4.0%
ICE Brent \$/BBL	-1.6%	-2.8%	-4.6%	-6.5%	-3.9%	-10.5%
Natural Gas \$/MMBtu	1.9%	4.0%	8.0%	26.4%	10.1%	13.9%
Gold \$/t oz	0.2%	1.6%	3.0%	4.1%	2.2%	7.0%
Cobalt \$/lb.	23.9%	20.2%	22.7%	31.4%	24.7%	51.7%
Aluminum \$/mt	-0.8%	0.6%	1.7%	2.6%	1.0%	4.5%
Copper \$/mt	-0.4%	0.0%	0.0%	-0.1%	-0.1%	-0.6%
Zinc \$/mt	-0.5%	-0.2%	-0.8%	-1.5%	-0.7%	-4.7%

Sources: Afreximbank research, Bloomberg.

*MMBtu (Metric Million British Thermal Unit)