



AFREXIMBANK RESEARCH
FLASHNOTE

Implications of current Cocoa Price Hikes on African Trade and Macroeconomic Performance

Afreximbank Research

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01

Global Cocoa Market: An Overview



Global Cocoa Market: An overview

Cocoa, the basic ingredient for chocolate and chocolate confections, is an important export commodity and foreign exchange earner for West Africa. The cash crop also promotes the livelihood of farmers in various farming communities, supports food security and assists economic growth in various parts of the region.

Although lower compared to the 77% share recorded in 2021, data from the International Cocoa Organization shows that Africa produced 73.4% of global cocoa output in the 2022/2023 season with Côte d'Ivoire (the world's largest cocoa producer) and Ghana individually accounting for about 44% and 14% of global cocoa production, respectively.

Closely following the lead of Africa in global cocoa production is the Americas with a combined output of 21.2% dominated by production in Ecuador and Brazil. Asia-Pacific produces the remaining 5.4% of world cocoa output, with the largest producers in the region being Indonesia and Papua New Guinea.

The major destination for cocoa exports has traditionally been Europe and the United States but a few countries in Asia have recently been experienced a rising demand for the commodity. In 2022, the top five largest importers include The Netherlands (US\$1.54 billion), Malaysia (US\$1.07 billion), United States (US\$943 million), Germany (US\$749 million) and Indonesia (US\$547 million).

Estimates further show that Europe accounts for 56% of global imports of cocoa beans with about 79% of this import sourced from cocoa-producing countries, especially Ghana and Cote d'Ivoire. Europe's import of cocoa beans is fueled by growing local demand and exports of chocolates and other products derived from cocoa.

The document effectively underscores the crucial role of cocoa in West Africa's economic landscape, providing precise figures to highlight its impact on farmers and regional economic growth.



Cocoa fact sheet

Current Price (per metric ton)	\$5,909
Average annual production (tonnes)	5 million
Size of processing market (2023)	\$15.4 bn
Top producers (regions)	West Africa, Americas, and Asia-Pacific
Top importers	Europe and US

Global cocoa production, by region (%)

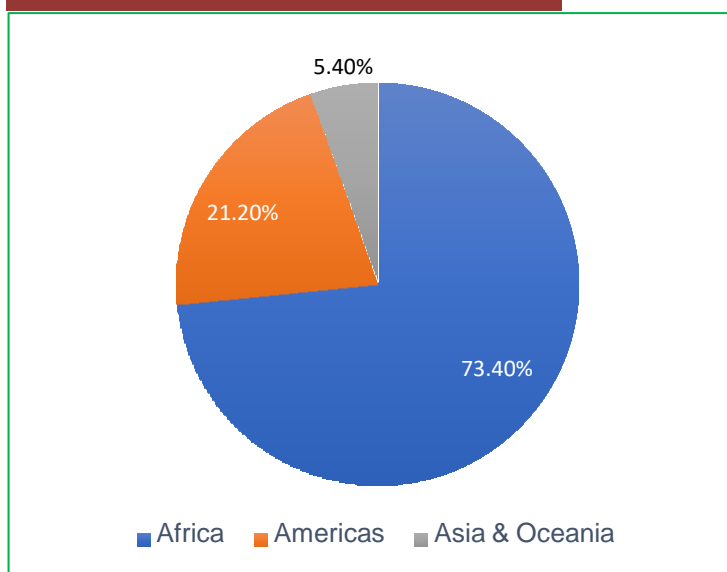


Figure 1: Global cocoa production, by region
Source: International Cocoa Organization

Global cocoa production, by country (%)

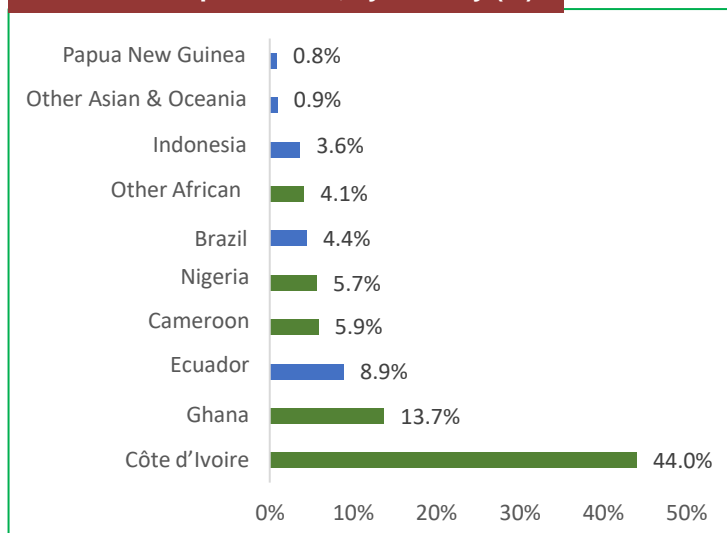


Figure 2: Global cocoa production, by country
Source: International Cocoa Organization

The chocolate industry: the biggest market for cocoa

The performance of the cocoa market is fundamentally linked to the fortunes of the global chocolate industry. With the global market for industrial chocolate estimated at US\$57.8 billion in 2022, and a projection to reach US\$81.8 billion by 2030, the demand for cocoa beans is expected to increase. While the global average consumption of chocolate is estimated at 0.9 kg per capita per annum, European countries show a much higher consumption rate - Switzerland (8.8 kg per person), Germany (8.4 kg), Ireland (8.3 kg) and the United Kingdom (8.2 kg), suggesting a huge domestic market for chocolates.

Export, on the other hand, continues to increase as global demand improves. The export of chocolate and other food preparations containing cocoa was valued at US\$36.7 billion in 2022, with an average growth of 4% in the last five years. Germany, Belgium, Italy, Poland and Netherlands collectively accounted for 53% of total exports of chocolate and other food preparations containing cocoa in 2022.

In the last five years, there has been significant export growth in countries such as Turkey, Bulgaria, Croatia, Serbia and New Zealand, following an increase in investment in the cocoa-processing industry to meet the growing demand for chocolate and other related products. This presents tremendous opportunities for cocoa-producing and exporting countries in the medium term, especially those in Africa.

To reduce production costs and tap into regional markets, some multinationals have made significant investments in cocoa grinding across several cocoa-producing countries. For instance, in 2021, Cargill, one of the largest global chocolate makers, completed a US\$100 million expansion of its cocoa processing facilities in Yopougon, Côte d'Ivoire. This makes the facility the single largest cocoa-grinding plant in Africa. Similarly, in 2019, Barry Callebaut, the world's leading manufacturer of cocoa and chocolate products, inaugurated a processing plant in Abidjan, Côte d'Ivoire. As a result of these investments, Côte d'Ivoire became the world's largest cocoa grinder in 2020/2021, with 620,000 tonnes. The Netherlands followed with a grinding volume of 610,000 tonnes. This approach of investing in grinding capacity has been adopted by several multinationals as a measure to secure the supply of quality cocoa products and to lower production costs.

By presenting key figures on chocolate consumption and export values, the document provides a nuanced perspective on the market forces driving cocoa demand.

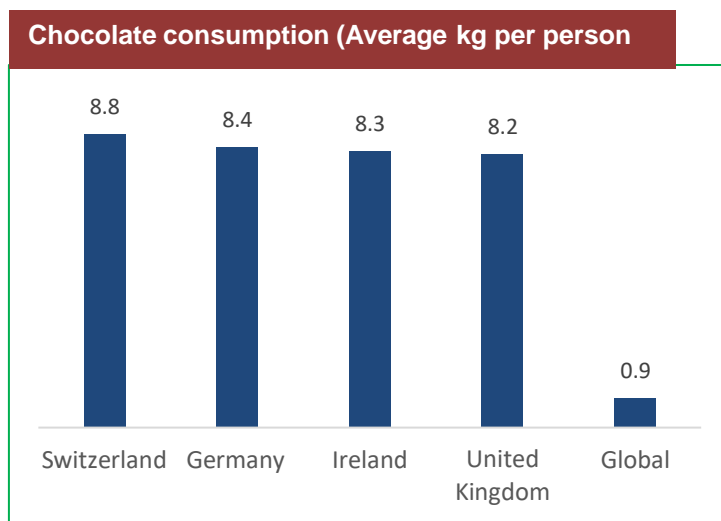


Figure 3: Chocolate consumption



Production of Cocoa Beans (Thousand Tonnes)

	2020/2021		2021/2022**		2022/2023**	
Africa	4,056	77%	3,589	74%	3,634	73.4%
Cameroon	292		295		290	
Côte d'Ivoire	2,248		2,121		2,180	
Ghana	1,047		683		680	
Nigeria	290		280		280	
Others	178		210		204	
Americas	935	18%	973	20%	1,052	21.2%
Brazil	200		220		220	
Ecuador	365		365		440	
Others	369		388		392	
Asia & Oceania	254	5%	265	5%	268	5.4%
Indonesia	170		180		180	
Papua New Guinea	42		42		42	
Others	42		43		46	
World Total	5,245	100%	4,826	100%	4,953	100%

Source: International Cocoa Organization

** denote estimates

World Cocoa Production (Thousand Tonnes)

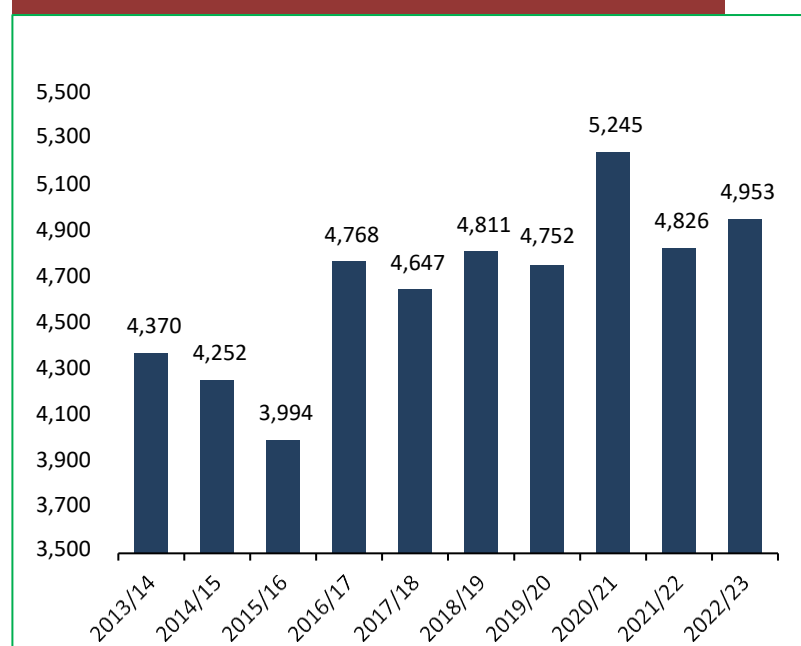


Figure 4: World cocoa production, annual

Source: International Cocoa Organization

In terms of cocoa production and demand, there has been a significant uptick in global demand for the commodity and its by-products, particularly chocolates. The decline in the sales of chocolate at shopping malls, hotels, and airports induced by the pandemic is gradually being reversed, following the recovery of global demand since the emergence from COVID-19.

In 2021, for instance, cocoa production rose to 5.25 million tonnes. Furthermore, production volumes in 2022 and 2023 also exceeded pre-pandemic levels, although demand appears to have grown faster than output, particularly in both years.

Following the COVID-19 Pandemic and later Russian/Ukraine war in February 2022, the price of oil, gas and coal spiked as traders believed energy supply in Europe will crumble due to dwindling Russia supplies. Accordingly, European chocolate manufacturers placed few orders for cocoa (which in turn depressed cocoa beans production and price) in anticipation of disruptions in their production processes.

However, Europe managed the disruption much better than earlier anticipated as they also increased investment in alternative energy sources. By the time fuel price started dropping in Q3 2023 and chocolate manufacturers realized they had overestimated expected disruptions in their production process, the production of cocoa had already dropped in response to lower demand from European countries, and this meant they now had to compete for lower cocoa supply. With demand suddenly outstripping supply, prices started to rise.

It is important to also note that cocoa is also a fertilizer-intensive crop so high fertilizer prices will also affect its production as was the case after the Russia/Ukraine war which was the genesis of the price hikes. However, this effect has been exacerbated by recent weather patterns in West Africa. With over 70% of global cocoa production based on rain-dependent agriculture across 4 West African countries, the recent EL-Nino weather patterns which has caused drier conditions in West Africa has exacerbated cocoa production that was already constrained by fertilizer problems, causing arguably the worst drought the region has experienced in 20 years.

Consequently, the price of cocoa and its by-products continue to surge driven by rising demand for cocoa amidst limited supply constrained by adverse weather conditions, low utilization of fertilizers, diseases, and floods in certain major cocoa-producing countries. Additionally, heightened tensions in the Red Sea have led to a surge in freight rates, further contributing to the rise in cocoa prices in 2023 and early 2024.

As at December 2023, the International Cocoa Organization (ICCO) reported that the average price of cocoa in the ICE futures Europe market was US\$4,467 per tonnes, marking a significant increase of 77.7% from the previous year's average of US\$2,514. Similarly, short-term contracts in the ICE futures US market averaged US\$4,300, compared to US\$2,517 in December 2022.





02

Recent Developments in the Cocoa Market

Recent Developments in the Cocoa Market

Prices are now 40% higher from the start of the year!

The cocoa market enjoyed a period of relative calm which kept prices stable between 2017 and 2022, with cocoa trading at an annual average of US\$2,000 per metric ton in 2017.

In recent times however, the market has recorded a sustained surge in cocoa prices since October 2022. By the end of January 2024, the bullish run of the cocoa market had pushed prices to more than 75% in value compared to the same period last year (2023), the highest year-on-year gain recorded since October 2002 as cocoa price settled at US\$4,452.60 per metric ton.

Majorly driving the bullish run of the cocoa market are supply-side factors linked to the spread of diseases, high costs of fertilizers and adverse weather conditions caused by the reinforcing impacts of climate change and the naturally occurring phenomenon termed El Nino Southern Oscillation (ENSO), which occurs when tropical eastern Pacific Sea surface temperatures rise at least 0.5 degrees above their long-term average.

Like other crops, cocoa is affected by El Nino as it is sensitive to both weather extremes, but most vulnerable to hotter and drier weather conditions causing poor harvests and diseases to the crop. The effect of El Nino is seen in underproduction in strategic cocoa growing and exporting regions like Cote d'Ivoire and Ghana on the back of the adverse weather conditions, flooding, and diseases such as swollen shoot virus and black pod caused by higher rainfall in Africa.

In Cote d'Ivoire and Ghana, for example, total cocoa shipment since the start of the cocoa season stood at approximately 1.04 million and 341,000 metric tons, representing significant reductions of about 39% and 35% compared to the same period last year, respectively.

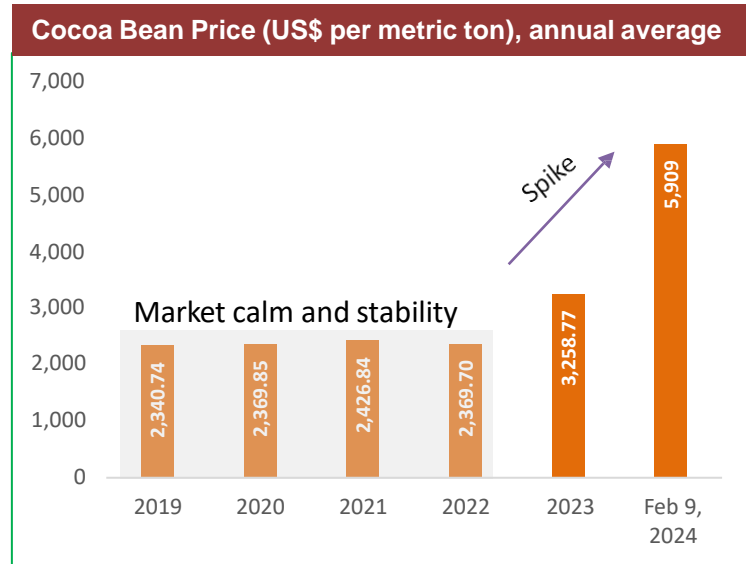


Figure 5: Cocoa bean price, annual average
Source: International Cocoa Organization

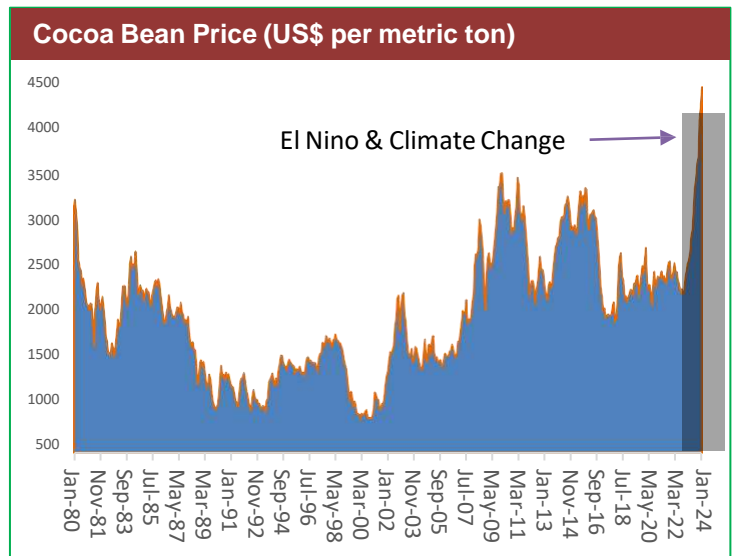


Figure 6: Cocoa bean price, monthly
Source: International Cocoa Organization

Country	Period	Cocoa shipment (metric tons)	Y-o-Y Change (%)
Cote d'Ivoire	1 Oct 2023 – 4 Feb 2024	1.04 million	-39%
Ghana	1 Sep 2023 – 31 Jan 2024	341,000	-35%



Key drivers of the recent price hikes of cocoa in the international market

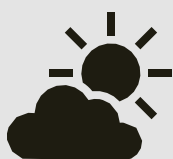
Being the largest cocoa producers in the world, developments in Côte d'Ivoire and Ghana are important in influencing the global cocoa market as well as the price of the commodity. The recent surge in the price of cocoa can be attributed mainly to the following supply-side factors in the major cocoa-producing countries:

Spread of diseases



Côte d'Ivoire and Ghana continue to grapple with the spread of the Swollen Shoot Virus, which continues to affect output. While Côte d'Ivoire produced 2.2 million tonnes of cocoa in the 2022/2023 season, several estimates have shown that output for the 2023/2024 season could drop to 1.8 million tonnes, due to the fast-spreading disease, among other factors. According to the Tropical Research Services, about 20% of cocoa crops in Côte d'Ivoire are infected with the disease.

Adverse weather conditions



Linked to the spread of disease, heavy rains (more than expected) witnessed in Q4 2023 in the cocoa-producing regions of Côte d'Ivoire and Ghana enabled the spread of black pod disease in the region. This is in addition to the El Nino weather events and the rise in temperature, which can result in insufficient soil moisture, amidst the challenges associated with the dry/harmattan season. This has negatively affected outputs in both countries..

High cost of fertilizers



Farmers in several African countries including Côte d'Ivoire and Ghana have faced higher costs of fertilizer, owing to the ongoing war in Ukraine. The spike in the price of fertilizer and the accompanying shortage has severely affected the yields of cocoa, slowing the growth of cocoa output, particularly in the world's large producing economies - Côte d'Ivoire and Ghana. Although the fertilizer price index has trended downwards from its peak of 293.73 in April 2022 to 115.9 in January 2024, it remains over 50% higher than pre-COVID levels (December 2019: 72.6). This continues to emerge as a pressure point for cocoa producers, especially given the limited availability of alternatives, such as manures.

Key drivers of the recent price hikes of cocoa in the international market



Potential freight costs

Disruption in the Red Sea, following the Israel/Palestine conflict is expected to result in higher freight rates. Already, the price of cocoa is at a four decades high and such disruptions further weaken the prospects of lower prices in the near term.



Aging trees

Many cocoa trees are reaching the end of their productive lifespan, requiring investment in new plantations.



Declining Inventories since Pandemic

Declining cocoa inventories adding to the concerns about global cocoa production and therefore pushing cocoa prices higher.



03

Implications of the Trend



a. Macroeconomic Implications of the Trend

The new elevated price environment in the cocoa market comes with diverse implications, presenting both opportunities and challenges. **This depends however on whether price increases will more than offset output loss for cocoa producers. In other words, is the proportion of output decline in major output centers less than the percentage rise in prices?** If the reverse holds, however, **this could negatively impact key macroeconomic indicators such as exchange rate, export earnings and public finance. We are however betting on price rises outstripping output decline and our analysis on likely implications is drawn from this position. This is premised on our believe that chocolate and other cocoa based products are largely price inelastic and demand will be sustained in cocoa consuming countries.** We have clustered these implications into two aspects- macroeconomic and social.

Trade:

Trade balance and balance of payments may be sustained by the higher price prevailing in the cocoa market which would attract significant investments and innovations into cocoa production as higher prices signal opportunities for greater profitability. These investments are expected to come from new entrants and existing cocoa producers with the capacity to upscale production. The surge in cocoa prices presents a dual impact on international trade dynamics, influencing both export earnings and trade competitiveness. The challenge lies in balancing this surge with potential declines in cocoa output due to supply constraints. Striking this equilibrium is paramount for sustaining international trade relationships and ensuring the economic resilience of cocoa-dependent economies.

Economic growth & poverty reduction:

Apart from attracting local and foreign investments into cocoa production, the higher export earnings in a period of sharp currency depreciation across the region is expected to improve the revenue and expenditure of households and the government. The ensuing rise in purchasing power and aggregate demand are expected to spur economic growth and reduce poverty.

Inflation:

The increase in cocoa prices is expected to exacerbate inflationary pressures in cocoa-exporting and consuming countries via two channels namely; money supply and imports. The possible greater money supply to the economies of cocoa-exporting nations has the potential to exert greater pressure on domestic price levels, but the degree of impact on already-high domestic inflation would depend largely on the reaction function of the relevant Central Banks. Also, because the composition of the cocoa export basket are largely primary products and not processed items, the higher price of exported cocoa is likely to filter back into domestic prices through finished cocoa-based products in the cases of import-dependent cocoa exporting economies.

Foreign reserves and exchange rate:

Higher cocoa prices and greater foreign exchange earnings presents a greater opportunity for African countries to build up some reserves. This is particularly positive for cocoa-exporting African economies confronted with depleting reserves, steep currency depreciation and elevated external debt levels. However, the FX gains recorded on account of higher cocoa prices are only expected to bring mild stability to FX markets as the reserve positions of cocoa-exporting African economies are not expected to depart significantly or radically from their historical levels.

b. Social Implications of the Trend

Endangered livelihoods:

By reducing the arable lands available for cocoa cultivation and increasing the need for higher altitude lands, El Niño and climate change driving the surge in cocoa prices also threatens the livelihood of farmers of top producers like Ivory Coast, Ghana and Indonesia that are most vulnerable to extreme weather conditions.

Decreased Livelihood Stability:

The recent escalation in cocoa prices has introduced a complex dynamic for farmers in West African nations, particularly in countries like Côte d'Ivoire, where cocoa cultivation is integral to the economy. While the surge potentially offers increased income for some farmers adept at navigating market complexities, it simultaneously exacerbates vulnerability for those grappling with supply chain disruptions and adverse weather conditions. Statistical insights reveal a widening income gap among cocoa farmers in Côte d'Ivoire, with a notable 15% increase over the past fiscal year, accentuating economic disparities within these cocoa-dependent communities.

Child labour:

Since traditional methods which require physical labour still dominate cocoa plantation in most parts of Africa, one potential fallout of the higher cocoa prices is increased adoption of child labour as cocoa producers try to maximize revenue by filling the current supply gap while keeping costs as low as possible. This will include children who willingly take up jobs on the farm and those forced into child labour.

Therefore, more than ever before, there is the need to assist through climate adaptation and mitigation strategies tailored to the production of cocoa.

Heightened Food Insecurity:

The intricate link between cocoa and food security becomes more pronounced as cocoa prices surge. Beyond affecting the income stability of cocoa farmers, the ripple effect extends to the broader population. In regions heavily reliant on cocoa, rising food prices amplify the challenges of food accessibility, contributing to heightened food insecurity.

Impact on Education:

The social repercussions extend to the educational landscape, where families in cocoa-dependent communities face difficult choices due to increased living costs. The rising economic challenges further compound existing barriers to education, posing long-term consequences for the educational trajectory of the younger generation in these regions.

Conclusion

Climate change is unlikely to recede in its influence and more temperature extremes, hot and cold, are expected across the southern and northern poles of the world. The effect of climate change and El Niño are expected to continue driving the uptick in cocoa prices. It is also anticipated that protracted geopolitical tensions across the globe, particularly the Israel/Palestine war which has snowballed to the Red Sea forcing vessels to travel additional 4,000 miles, may push freight rates higher and result in greater landing costs for cocoa that may contribute to elevated global inflation in 2024. Early market reports for the first full week of February 2024 already puts the market price of cocoa bean at an all-time high of \$5,909 per metric ton, indicating that cocoa beans are now 40% more expensive than they were at the beginning of the year.

Although the global chocolate industry is projected to expand in the medium term, this expansion could be offset by the rising price of cocoa, if sustained for longer periods. The recent shortage in the supply of cocoa from Côte d'Ivoire and Ghana stems from structural bottlenecks and adverse weather conditions, high input costs and the spread of diseases, which may take time to address.

To address the supply deficit, both countries will need to invest in climate information services and technology adoption as well as build resilience by incentivizing the adoption of weather insurance and customized financing schemes. While other cocoa-producing African countries are also not immune to the adverse impacts of climate change, governments of these countries will need to strengthen efforts to attract private investments into the cocoa industry to increase production in the medium term and perhaps, take advantage of the rising prices.

On the part of the buyers of cocoa, risk management is critical given the anticipated global supply deficit and large variations in the market. Buyers will need to hedge against price risks by taking up a position in the futures market.

Key Takeaways

The future of cocoa prices is uncertain, as it depends on various factors like weather patterns and disease outbreaks. While soaring cocoa prices present challenges, market participants are cautiously optimistic about long-term prospects. However, we anticipate it will be short-lived looking at historical patterns which suggests a correction in one to two years. Such big push in prices translate to incentives to boost the production in the near to medium term especially by regions not as affected by weather constraints. Declining cocoa inventories add to the concerns about global cocoa production and a long-term pattern of systematically rising prices.

Given the duopoly in the cocoa market, a correction is more likely in the medium term. Most of the drivers seem transitory except climate shock which is likely to be recurrent.

1. Spread of diseases => Mostly transitory and can be treated.
2. Adverse weather conditions => Permanent, likely to be in the baseline.
3. High cost of fertilizers => Transitory in the medium term as the Ukraine-Russia conflict abates.
4. Potential freight costs => Like (3) above.
5. Aging trees reaching end of productive lifespan => Transitory to permanent depending on government actions