BRIEFING NOTE

Functioning of the futures market

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The Living Income Community of Practice

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This note is a complementary explainer to the publication 'Components for creating living income policy initiatives: Insights from 3 policy case studies' (2026) co-authored by Joost Backer, Anna Laven, Christopher Wunderlich, and Friedel Hütz-Adams. This note specifically forms a companion to the case study focused on the Living Income Differential (LID) implemented in Cote d'Ivoire and Ghana in 2019. A key lesson of the policy was the need to better understand how the futures market influences cocoa prices. This is due to the fact some industry members resisted a cocoa floor price and later the LID because it affected commercial interest, disturbed the preferred market set up and presented the potential to create additional costs and risks for companies. This resistance affected the policy's implementation and ultimately the initiative's ability to support farmers in attaining a living income.

Overview

Most physical cocoa traders, grinders, and chocolate producers can estimate their profit margins from all the steps along the cocoa value chain as cost structures are relatively predictable. There might be fluctuation concerning freight rates or energy costs, but the impact of the volatility of these is much lower than the impact of the volatility of cocoa prices. To reduce this, and in some cases minimize it almost completely, most medium and large companies in the cocoa sector use the futures market to hedge cocoa prices. Hedging allows companies to reduce the financial risk associated with sudden price changes and helps them plan their operations with greater stability and predictability.

History

Futures markets have existed since the end of the 19th century. They serve as an intermediary between sellers and buyers by providing a platform for commodity trading, where a variety of players meet. This includes not only traders who are directly involved in buying and selling cocoa and its physical derivates, but also speculators (trading companies seeking additional profits, funds, banks and individuals. Some participants expect prices to rise, while others bet on falling prices.

Cocoa is traded at the Intercontinental Exchange (ICE) in New York and London. The ICE is a profit-oriented, publicly listed company, with a turnover of nearly US$10 billion in 2025. Among many other commodities, the ICE facilitates the trading of cocoa, maize, soy, sugar, cotton, coffee, oil, gas, and others.

The volumes of cocoa physically traded at the ICE are usually very low – only approximately 250,000 MT of cocoa are currently stored in warehouses owned by the ICE. But according to estimations, at least 3 million MT (60%) of the annual cocoa crop is directly connected to the futures market. Indirectly this amount is even greater, as trading companies see the futures market as potential buyers and follow the rules to keep this door open. The ICE has its own grading system and strict regulations to guarantee quality for physically stored and traded cocoa.

Sellers and buyers can buy and sell at any moment. Contracts usually run towards specific delivery dates, in March, May, July, September, and December of every year. Cocoa can be traded up to 10 contract maturity dates in advance - nearly two years in the future. Futures prices are transparent and continuously updated by the ICE on its website.

Insurance against risk of delivery

Futures contracts are based on prices for standard quality. If the delivered cocoa is of a better quality than standard cocoa, the price difference based on its quality must be covered. This is known as the "country differential" - an additional premium paid for cocoa from a specific country due to the quality of the cocoa and its reliability of delivery. Cocoa from Ghana, which usually has a higher than average quality, might for example be traded with a price of US$2,000 per tonne, which is the price at the futures market for the date of delivery, plus the country differential of US$250 per tonne due to the better quality and the high reliability of getting the cocoa on the contracted day of delivery.


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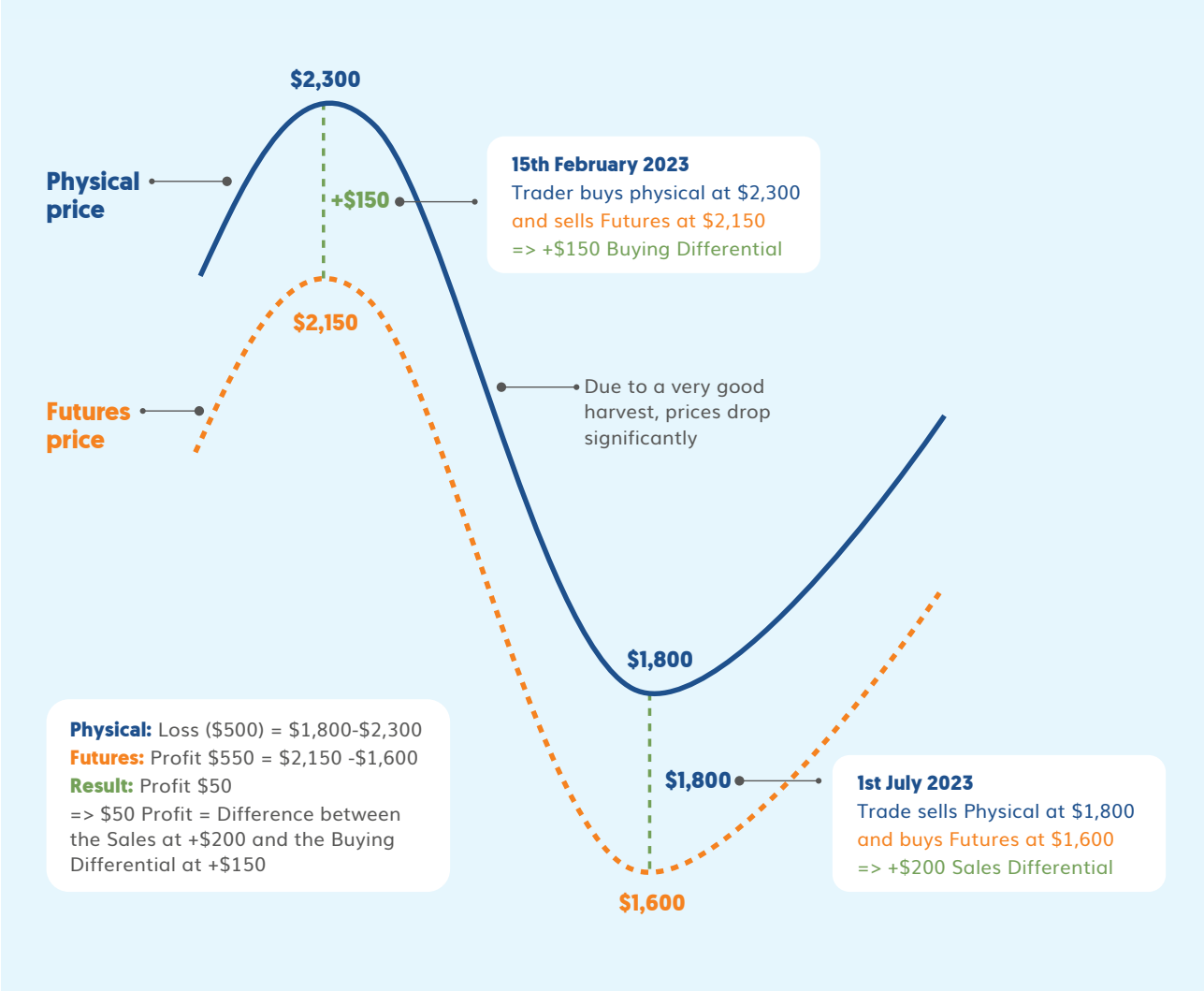
The ICE protects buyers and sellers against the bankruptcy of the other counterparty and guarantees the fulfilment of contract. As a safeguard, the ICE requires a security deposit ("initial margin"), to secure the market position against price fluctuations (usually, 10% of value of cocoa in the futures contracts). If a seller defaults, this margin allows ICE to cover potential losses for buyers who now must buy cocoa at the present market price. In addition, the ICE requires the seller or buyer of the futures contract to top up the security deposits (known as "margin calls" – the difference between "entry price" and the current futures price) in case of rising prices at the market. By doing this, the ICE guarantees that sellers of cocoa can deliver, even if prices rise.

The hedging process

Figure 1. An illustration of the hedging process, adapted Tom Lebreton, 2023



A simplified model for buying cocoa (Fig. 1) from the COCOBOD or the Cocoa Marketing Company (CMC) explains the process:

1. A trader buys 10'000 MT of cocoa at US$ 2,300 per ton for delivery in February 2023. This US$2,300 per ton is the price of cocoa for contracts that mature in July 2023 (i.e. at the same time as the trader is trading).

2. The trader sells ("hedges") his purchase of physical cocoa at the ICE London at the same time as buying it for US$ 2,300 per ton.

The reality is more complicated: Currency risks (London trades in British Pound, New York in US-Dollar), fees for the ICE, country differentials, delivery costs et cetera also have an influence. But traders can reduce their potential loss to the relatively low additional payments on top of the average cocoa price noted at the ICE. These extra payments are called differentials.

3. The trader buys on 15th of February 2023 from COCOBOD/CMC: 10'000 MT at US$ 2,300 per ton for delivery in July 2023

4. The trader "hedges" his purchase of physical cocoa versus the ICE: The trader immediately sells the "same" 10'000 MT cocoa for US$ 2,150 per ton - the Futures price currently traded at the ICE.

Scenario 1: Buying Differential of "plus US$150 per ton" = potential loss

Let's assume there is a massive decline in the physical cocoa price between February and July from US$2,300 down to US$1,800 on the physical market and even to US$1,600 at the futures market:

5. In July 2023, physical price is US$1,800 / Futures price is US$1,600.

6. The trader sells physical cocoa to the industry at US$1,800 per ton and makes a loss of US$500.

7. The trader buys cocoa futures at US$1,600 per ton, fulfils the contract with the buyer who is to pay US$2,150 per ton and makes a profit of US$550.

Sales differential of "plus US$200 per ton" = potential profit

8. The difference between the sales at US$200 and the Buying differential at US$150 leads to a profit of US$50 per ton.

To reduce their risk, traders negotiate hard with other participants on differentials in the production countries and with customers. Margins are usually very low. The introduction of the Living Income Differential (LID) in Cote d'Ivoire and Ghana of US$400, which could not be hedged at the futures market, therefore threatened the system in which companies could more or less completely avoid any risk.

Figure 2. An illustration of the "Outright price"[1]

*Figures are shown as an example and NOT indicative of real value

YEAR	FEBRUARY	RECOMMENDED TRADE	JULY	PROFIT - LOSS (US$)
Cost to buy physical (US$)	2,300	Sell physical	1,800	-500
Price to sell on ICE (US$)	2,150	Buy ICE	1,600	550
Differential (US$)	-150		200	-
Profit (US$	-		-	50

1 Adapted from Graph 5: Price composition at the futures market, Oxfam België/Belgique, 2024. 'The Living Income Differential for cocoa: futures markets and price setting in an unequal value chain.' https://oxfambelgique.be/publications/living-income-differential-cocoa-futures-markets-and-price-setting-unequal-value-chain

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This research breifing was conducted in partnership with Living Income Community of Practice and ISEAL.

The Living Income Community of Practice

Community of Practice is an alliance of partners dedicated to the vision of thriving, economically stable, rural communities linked to global food and agricultural supply chains. The goal of this community is to support activities focused on improving smallholder incomes towards living incomes, aiming to enable smallholder farmers to achieve a decent standard of living. This community is a result of a partnership between Sustainable Food Lab, GIZ and ISEAL.

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Friedel Heutz-Adams has been a researcher at Suedwind- institute since 1993. His research interests are in the cocoa, coffee, palm oil, automotive and technology value chains. He is a well-respected expert in the sustainable cocoa field, having co-authored several Cocoa Barometers and an active participant in the VOICE network.

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