

The political economy of pricing and price risk in Ghana's cocoa marketing system

Sophie van Huellen*, Fuad Mohammed Abubakar, Nana Amma Asante-Poku, Robert Fig

*University of Manchester

sophie.vanhuellen@Manchester.ac.uk

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Motivation

The puzzle:

- Between Jan and **Apr 2024**, the London ICE cocoa futures **price tripled** in value.
- Prices reached 10,000 GBP per metric tonne for the first time in history.
- News of a particularly poor harvest in West Africa and low stock-to-use ratios drove the spectacular price rise.

Yet,

- Ghanaian cocoa farmers receive a meagre 33,120 GHS (just below 2,000 GBP) per metric tonne.
- This is after an **58% increase** in the farmgate price in April 2024 from just above 1,200 GBP per metric tonne.

NY ICE Cocoa prices

(in USD per metric tonne)



source: tradingeconomics.com

London ICE Cocoa prices

(in GBP per metric tonne)



source: investing.com

Argument

- Institutional structures that underpin pricing in the cocoa sector have been created during colonial times and maintained by powerful stakeholders.
- An unequal distribution of the burden of price risk has been met by the Ghanaian government with the introduction of a forward-selling system.
- As a result, Ghana's price risk is managed by its counterparties to its disadvantage, with large multinational companies reaping the benefits.
- The analysis is based on
 - interviews in and outside of Ghana between 2013 and 2024,
 - document analysis and existing literature,
 - the research team's knowledge of the cocoa sector.

Theoretical Approach

Literature

- Despite the central role of price in the determination of value creation, extraction, and distribution along commodity chains, the **analysis of price** is largely **absent from** the **GVC** literature.
- Some **recent contributions** have started addressing this gap for tropical cash crops such as coffee and cocoa; e.g. see van Huellen (2015), Bargawi and Newman (2017), and Starlitz et al. (2018; 2022).
- Drawing on **economic sociology** and **institutional economics** by **Commons**, we propose a simple analytical framework to understand pricing along commodity chains.

Theoretical Approach

Literature (cont.)

- Price within GVCs
 - van Huellen (2015): adoption of Commons' transaction framework and futurity.
 - Bargawi and Newman (2017): Develop the price chain, drawing from sociological and institutional approaches to price.
 - Starlitz et al. (2018; 2022): centrality of price setting power; price setting as a political and contested process.
- Institution theory on price
 - Tool (2002): an institutional theory of discretionary (administered) pricing (based on Veblen's work).
 - Gloria and Palermo (1996): price determination is largely conventional, and pricing is therefore an evolutionary and path dependent process (based on Commons' work).
 - Kaufman (2006): develops an institutional theory of price, closely based on Commons' work.
- Economic sociology on price
 - Beckert (2011): prices as the outcome of social and political forces.
 - Caliskan and Callan (2010): valuation conventions shaping perception of a fair price.

Theoretical Approach Literature (cont.)

Commons' institutional economics

- **Fundamental uncertainty** and **incomplete contracts** motivate the introduction of transaction (**futurity**) as opposed to exchange.
- Transaction is a **legal transfer of ownership** or the right of future ownership of physical things (mode) versus the exchange of commodities (matter).
- The **price formation mechanism** is not a harmonic (equilibrium) relationship between man and nature, but characterised by conflict, in a relationship between man and man.
- Order is a necessary characteristic of transactions because of the true uncertainty of the future. The security of expectations is guided by **working rules**.
- Working rules can be formal (e.g. laws) or informal (e.g. conventions) and guide **what is legally and ethically accepted** by society.

Theoretical Approach

Literature (cont.)

Commons' institutional economics (cont.)

- The enforcement of working rules is the **gain for one** which comes at a **loss for the other**; when it creates security for one party, it demands conformity from the other.
- Working rules hence do not only **determine** the distribution of wealth, but also the distribution of the **burdens and benefits of wealth creation**.
- This entails risk, which is allocated according to security and conformity, liberty and exposure.
- **Legal power** is the control over agents' future behaviour and hence as important as **economic power** in shaping the outcomes of transactions.
- Distinguishes between three **different types of transaction**: (1) bargaining, (2) rationing, and (3) managerial transaction characterised by different degrees of **economic and legal power asymmetries**.

Theoretical Approach

Our framework

Drawing on the literature and especially Commons' work:

- Pricing is understood as an **institutionally embedded** and **contested** process which is **temporally and geographically dislocated** from the exchange process.
- This dislocation is reflected in the notion of **transaction**, which provides the foundation for our framework.
- **Pricing processes** are part of the transaction (alongside other modalities of the transaction) with these processes being governed by **working rules**.
- **Working rules** are characterised by **asymmetric** legal, economic, and social **power relations**.
- The working rules that shape these processes are **upheld through** a claim of **legitimacy**, or **force**, or both.

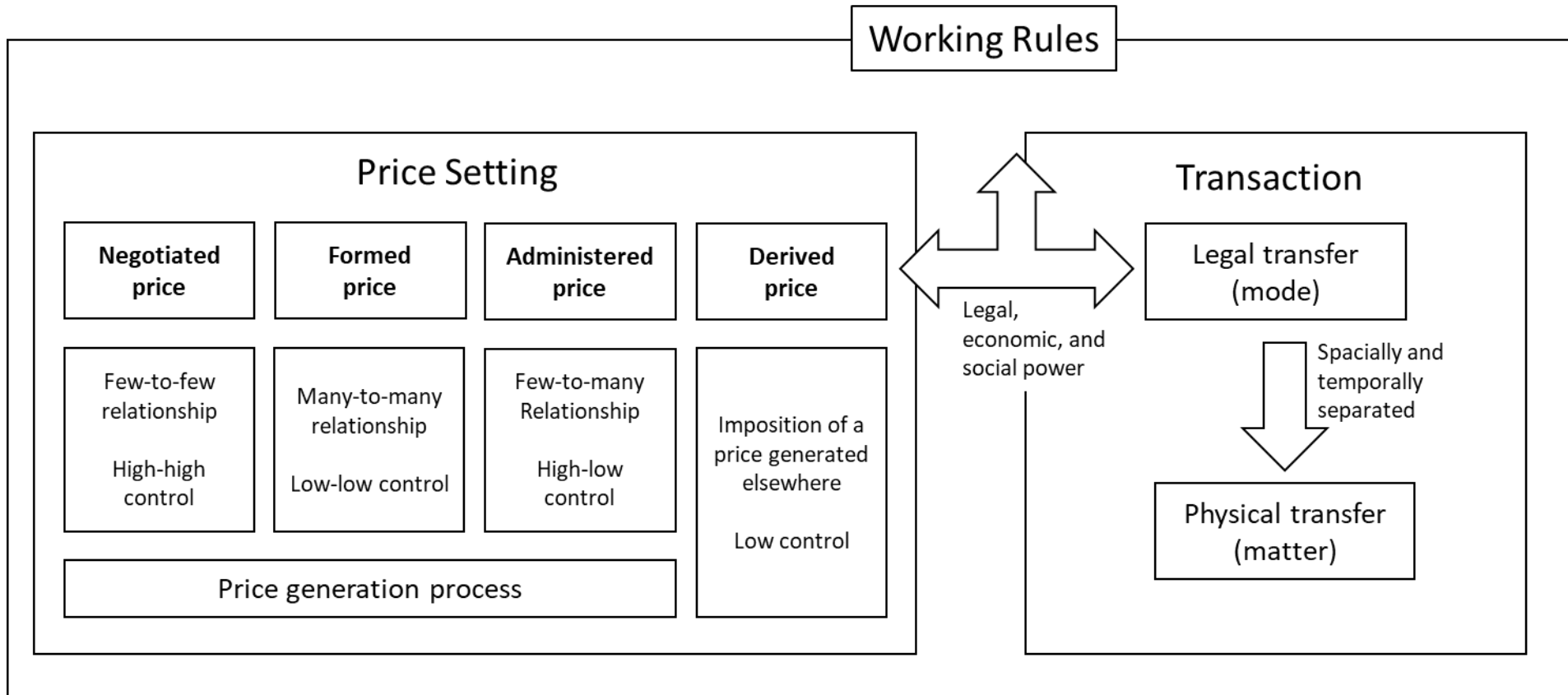
Theoretical Approach

Our framework (cont.)

- We distinguish between price **negotiation**, price **formation**, price **administration**, and price **derivation** as institutionally distinct pricing processes.
 - **Price negotiation** is akin to Commons' **bargaining transaction**.
 - **Price administration** is akin to the rationing transaction in the sense that price setting is driven by profit expectations by an economic (and possibly legal) superior.
 - **Price formation** is an extension of price negotiation but with both buyers and sellers having low control over price as bargaining is limited by working rules that anonymise and standardise the transaction.
 - **Price derivation** is the process of setting a price which is neither negotiated nor formed in the specific transaction, but instead derived from another transaction and imposed by a legal superior.
- Derived prices are hence a specific form of administered prices, but without any agent involved in the transaction being able to exercise control over the price.

Theoretical Approach

Our framework (cont.)



The Price of Cocoa

Ghana context

- Ghana has consistently been the **second largest producer** country globally after neighbouring Cote d'Ivoire.
- The Ghana Cocoa Marketing Board (Cocobod) maintains a unique **forward-selling system** that enables Cocobod to borrow “cheap” on international money markets, and the Bank of Ghana to obtain foreign reserves.
- **Cocobod**, through its subsidiary the Cocoa Marketing Company (CMC) is the **monopoly seller** of Ghanaian cocoa beans.
- In March 2024 Cocobod had to revise its cocoa **crop forecast** to a maximum of 425,000 metric tonnes for the 2023/24 season, just above **half the initial forecast**.

The Price of Cocoa

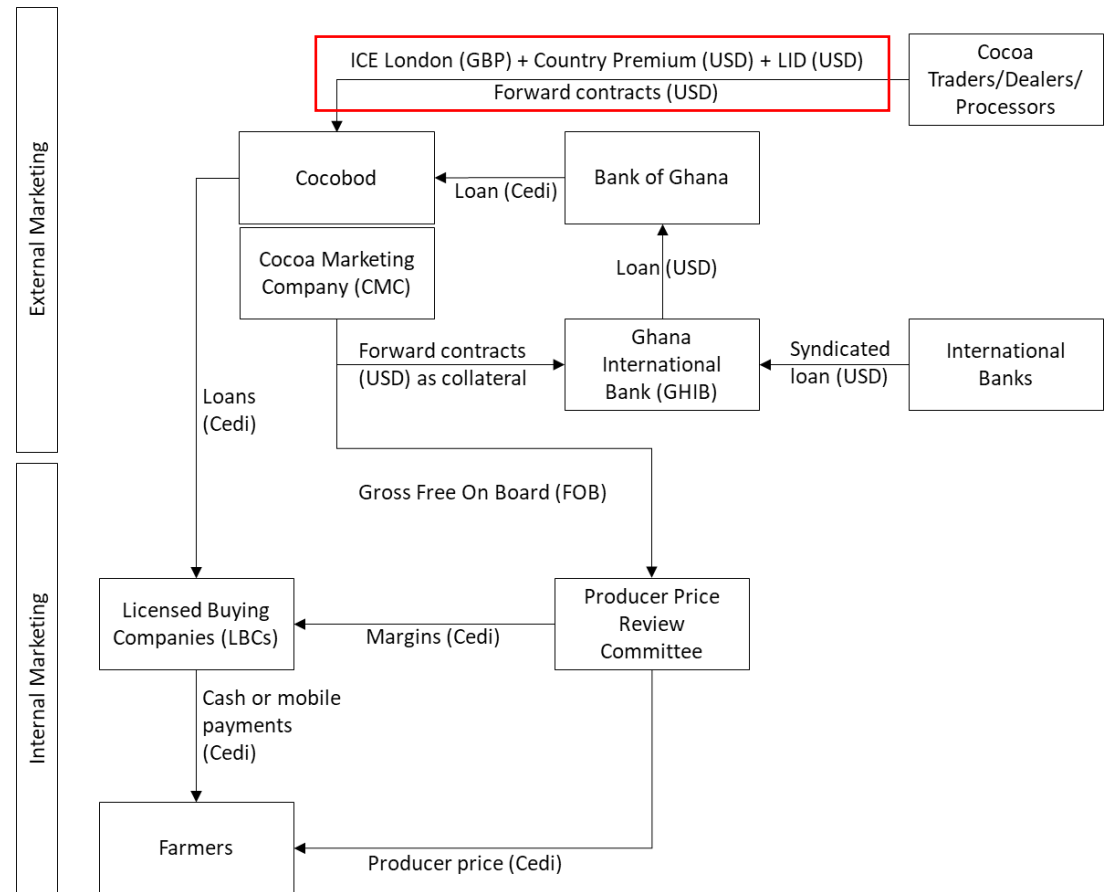
Ghana context (cont.)

- The export **price achieved by CMC (FOB) is a composite** of:
 - the terminal price at the time of signing the forward contract (or spot),
 - the country premium that is negotiated (used to be 300 USD over terminal),
 - the living income differential (more recently, set to 400 USD over terminal).
- From the projected FOB, **cocoa stakeholders receive a margin** for their work (LBCs and haulage companies).
- The remainder (as a **proportion of the FOB**) goes to farmers, from which the **farm gate price** is derived.
- The **FOB is forward-looking**. It is based on a projection of the earnings from cocoa exports.

The Price of Cocoa

Mapping pricing points

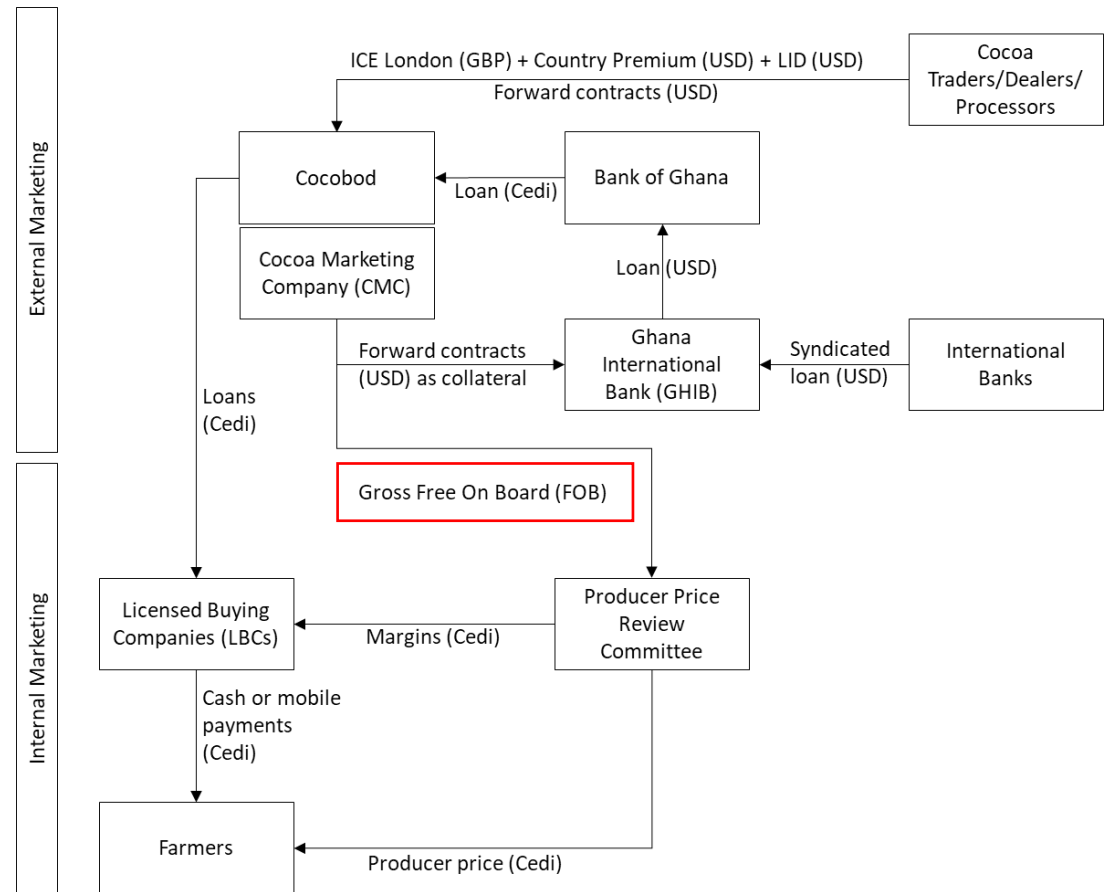
- The sales prices achieved by CMC are a composite of
 - a **derived price** (the terminal price at the time of signing a forward or spot contract),
 - a **negotiated price** (the country premium), and
 - an **administered price** (the LID).
- More than 80% of the price is derived, and CMC has no control over this pricing process.
- The legitimacy of this working rule is derived from the belief in the efficient market hypothesis.



The Price of Cocoa

Mapping pricing points (cont.)

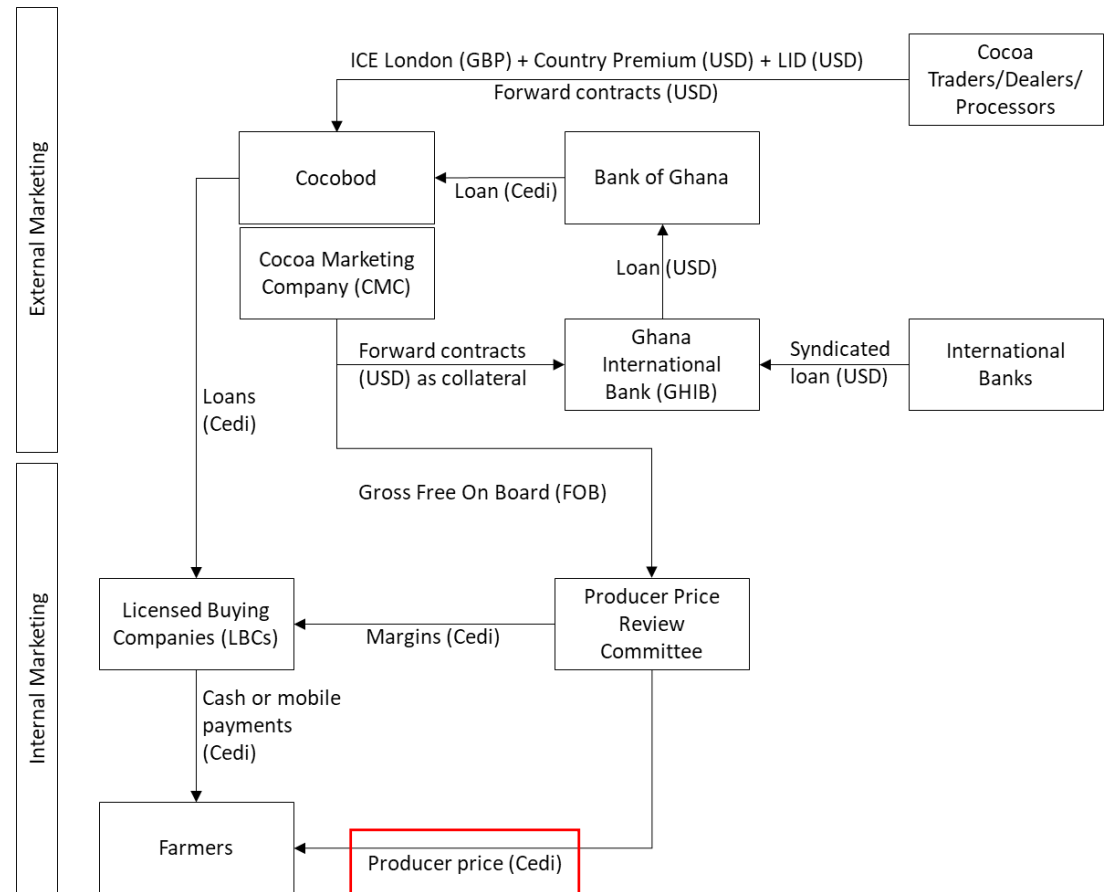
- The price farmers receive is a portion of the price that CMC can achieve.
- What CMC can achieve depends on
 - (i) timing their forward and spot sales to achieve a favourable terminal market price,
 - (ii) negotiating a country premium, and
 - (iii) administering the LID.
- Two exchange rates play a significant role in determining the gross FOB:
 - (i) the GBP-USD exchange rate at the time CMC signs the contract with a respective buyer,
 - (ii) the USD-GHS exchange rate at the time the syndicated loan is converted into GHS.



The Price of Cocoa

Mapping pricing points (cont.)

- The price farmers receive is a portion of the price that CMC is predicted to achieve.
- The gross FOB is a **derived price** that defines the boundaries within which stakeholders can negotiate.
- The **negotiation process** is managed by two additional working rules:
 - the price received by farmers cannot be lower than 70 per cent of the FOB, and
 - the nominal price received by farmers cannot be lower than the previous year.

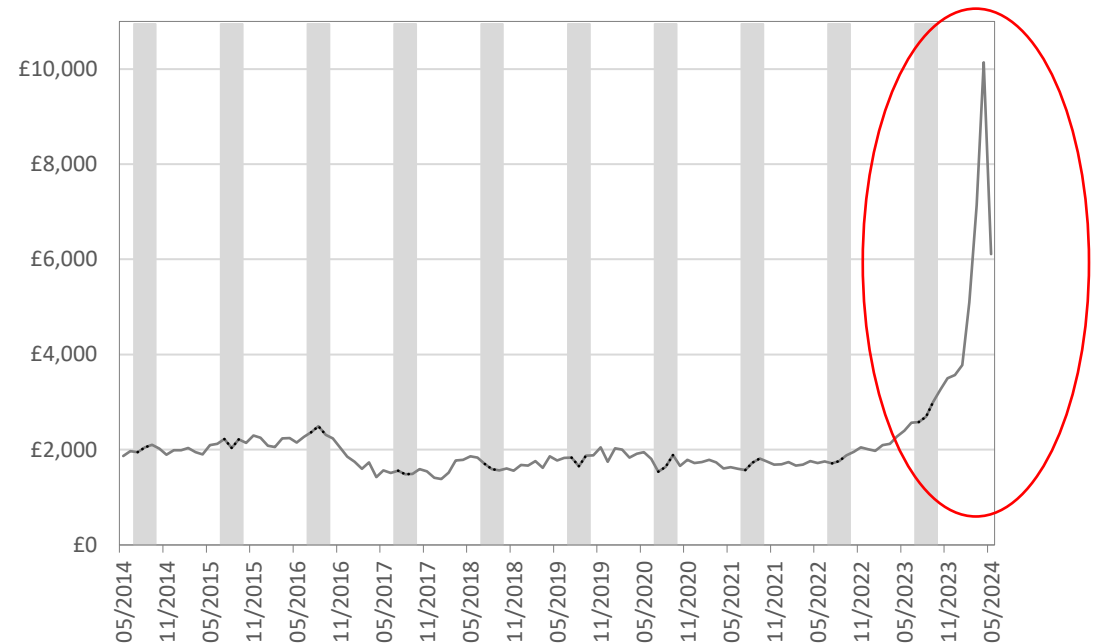


The Price of Cocoa

Price risk

- Forward sales enable CMC to finance cocoa marketing and provide the BoG with access to the international money markets.
- It also enables CMC to protect cocoa farmers against downside price risk at the start of the season.
- However, it also means that CMC's price risk is managed by its counterparties.
- CMC has limited ability to benefit from rising prices if and when they happen.

ICE London Terminal Prices (continuous next to maturity; in GBP per metric tonne) and periods where forward contracts are typically signed



Source: Datastream, authors' calculation.

Analysis

- The primacy of the derivative price and the institution that governs the standardised contracts which reference the terminal price (the FCC) are artifacts of colonial times.
- This setup benefits the commodity trading houses, i.e. the buyers, for whom and by whom this institutional structure has been established.
- While CMC has obtained FCC membership, the primacy of the terminal price and the standardised contrasts have been maintained.
- This means that the largest share of the cocoa price achieved by CMC is derived and administered, with little control by CMC.

Analysis (cont.)

- Multinational buyers as well as chocolate manufacturers can pass on rising prices to clients or consumers, by increasing the price of cocoa derivatives or chocolate or lowering the bean content in a chocolate bar.
- CMC's ability to control income through sales prices is however limited as beans are referenced against the terminal price, which only leaves the country premium and LID as a mechanisms.
- However, de-linking the bean price from the terminal market is not acceptable for the commodity trading houses which are the primary buyers for CMC.
- Further, buyers have flexibility when to buy or lock in prices, which CMC does not have due it the capital requirements of internal marketing.

Analysis (cont.)

- The current working rules expose CMC to price risk, while providing buyers with the liberty and flexibility of when and at what price to buy.
- With terminal prices three times higher than the average price locked in by CMC, smuggling is profitable, exposing CMC to quantity risk alongside price risk.
- CMC is currently unable to service its forward contracts in full and running risk of defaulting on parts of the annual syndicate loan.
- This also means that some forward contracts will be rolled over into next season committing CMC to sell future crops at a low price.

Q&A

Thank you!