Cocoa price forecasting as a tool to increase derivative contracts potential in managing farmers’ price volatility risk

- The cocoa market has always been affected by a significant price volatility.
- In the last decade, London cocoa prices ranged between a maximum of around 2,600 £/t and a minimum of around 1,300 £/t, with huge fluctuations either within a marketing year or across marketing years.
- Price volatility is one of the main sources of farmers’ financial risks and leads to a certain level of uncertainty about their income.
- Unanticipated changes in supply and demand often result in large price fluctuations. This is mainly due to the inelasticity of market fundamentals.
- There is a statistically significant relation between cocoa fundamentals and cocoa prices. The higher the Ending Stock-to-Use Ratio is, the higher the cocoa abundance is and the lower the cocoa price is and vice-versa.
- We exploit the relation to develop econometric models aimed at forecasting the London Cocoa price.
- Depending on the MY models can take into account the effects on prices of others exogenous variables as well (e.g. macroeconomics variables, pandemic, shocks on input costs...).
- In particular, for the last two MY we used an AR model that forecasts the log differences of London Cocoa futures.

### Conclusions:
Price forecasting could represent an instrument for market players to better take advantage of the use of derivatives (e.g. futures and options) in financial risk management. Price forecasts can provide a reference point that can be used by players to optimize strategies in terms of timing and volume.

- Creating added value directly or indirectly for farmers and, ultimately, improving farmers’ income.

### Policy Implications for improving farmers’ income:
- Improving cocoa market players access to market intelligence tools, finance and risk management instruments.
- Farmers can take advantages by the use of the aforementioned tools both indirectly and directly.
  - Promoting the development of mechanisms to shift at least part of the added value from operators like parastatal institutions, industry and traders to farmers.
  - Promoting the formation of farmers organization to increase their direct access to financial markets and their bargaining positions.
- Increasing the amount, transparency and accessibility of market information. The quality and the timing of fundamentals data and the price forecasting accuracy are positively correlated. We support the importance of the ICCO supply and demand data and forecasts.