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**Research Report**

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## Managing commodity price risks – the cases of cotton in Burkina Faso and Mozambique and coffee in Ethiopia<sup>1</sup>

Cornelia Staritz, Bernhard Tröster, Karin Küblböck

Price instability is a major concern for commodity producers in developing countries. Commodity derivative markets have become the central pricing mechanism for international commodity trade. This is problematic given the high volatility and increased short-termism of these markets in the context of financialisation. The effects on producers depend on the market structure in producer countries. Burkina Faso and Mozambique have different types of national cotton price stabilization schemes in place while global coffee price fluctuations are transmitted directly to producers in Ethiopia. Policy reforms are required at two fronts – on commodity derivative markets to reduce excessive speculation and stabilize commodity prices and in producer countries to ensure fair and stable prices for producers.

Commodity prices have crucial implications, in particular for developing countries that are often dependent on the import and export of commodities. As many developing countries import basic commodities, commodity prices have direct effects on food and energy security, poverty and economic development. Many developing countries are also dependent on the export of a few commodities. They benefit from rising revenues when commodity prices are high. But they are also affected by price volatility, which leads to major difficulties for local commodity producers as well as for managing economies as macroeconomic indicators (i.e. trade and fiscal balance, inflation and interest rates) are strongly affected by commodity prices.

Commodity derivative markets have become the central pricing mechanism for international commodity trade, given in particular the dismantling of international and national price stabilization systems. In the 1950s and 1960s instruments that emphasized the stabilization of prices and export earnings such as buffer stocks and export quota in the context of International Commodity Agreements and national commodity boards had prominent roles. These institutions were largely dismantled in the 1980s and 1990s in the context of structural adjustment and market-based instruments, particularly commodity derivative markets have been promoted as the central instruments for price discovery and price risk management (Nissanke 2011). Today, futures markets are generally used as a benchmark in contracts between physical traders. They also offer an insurance function as physical traders can hedge against the risk of price fluctuations.

Trading on derivative markets has changed dramatically since the early 2000s. This is mainly related to the influx of traders from outside physical commodity markets, especially financial investors, i.e. banks, institutional investors and hedge funds, in the 2000s, which has been labeled as financialisation of commodity markets (Domanski/Heath 2007). There is a controversial debate on the effects of financialisation on commodity prices and market structure. However,

an increasing amount of research shows that trading strategies of financial investors have impacted on short term price developments in addition to fundamental factors (Ederer et al. 2013). Also the microstructure of commodity derivative markets has changed particularly in terms of increased complexity, speed and short-termism. Large physical traders, particularly international traders, tend to profit from these developments, as they are increasingly involved in financial activities and owning separate financial units in addition to physical commodity trading. For local actors in developing countries and also smaller physical traders that do not have the resources to interact actively with financial markets, recent changes have further increased the complexity, costs and risks of hedging (Heumesser/Staritz 2013).

This note summarizes the results of recent ÖFSE research conducted in the second phase of the research project „Financial Markets and the Commodity Price Boom“.<sup>2</sup> It assesses the implications of the financialisation of commodity markets on price risks and risk management in producer countries. The focus is on the cotton and coffee sectors in three commodity dependent Sub-Saharan Africa (SSA) countries that are priority countries of the Austrian Development Cooperation – the cotton sectors in Burkina Faso and Mozambique and the coffee sector in Ethiopia. Cotton and coffee are the most important cash crops in SSA and have an important role in job creation, poverty reduction and foreign exchange generation.

### Price risks and risk management in producer countries

Results show that commodity derivative markets have become increasingly important for price setting in producer countries. The effects on price risks in producer countries are however different, depending on their specific price setting mechanism. In all settings, local actors do not use derivative markets for risk management as this involves high costs and risks and the necessity to have permanent access to finance and monitor market developments.

### ***Role of derivative markets in producer countries***

For the global price of cotton and coffee, commodity futures markets play a crucial role. Physical cotton and coffee prices are generally determined by applying a differential to prices in futures markets. For cotton, there is one major cotton futures contract, which is traded at the Intercontinental Exchange (ICE) in New York. For Arabica coffee, ICE Coffee C futures serve as a global benchmark. The rise of importance of futures markets in price setting is related to the dismantling of national price stabilisation systems in many producer countries as well as to the trading practices of international traders. International traders are the lead firms in global cotton and coffee chains, handling the large majority of these commodities traded internationally. These traders increasingly prefer using futures prices as a reference in physical contracts as they use derivative markets for hedging. For hedging to be effective (by taking the opposite position to the physical position on derivative markets) physical prices have to reflect futures prices. This has bound together futures prices with producer prices on the ground (Newman 2009).

Interviews with local actors in the cotton sector in Burkina Faso and Mozambique and the coffee sector in Ethiopia confirm that price instability is a central concern particularly for small holder farmers but also for local processors. This problem has intensified particularly in the context of recent high price volatility and increased short-termism at commodity derivative markets with intra-day volatility being a new phenomenon in cotton and coffee markets.

Although futures prices are used as a benchmark for local prices in all market structures, local actors do not use derivative markets for risk management. For farmers and farmers' groups as well as local processors this is too costly, risky and complex, particularly in the context of financialisation. Further, it requires access to financial resources and brokerage services. Even Burkina Faso's Sofitex, the largest state-owned cotton company in SSA, sees hedging as too complicated and expensive and not as their business. Only processors affiliated to international traders hedge most of their trades through their headquarters' financial units. Farmers have largely no alternative price risk management option available other than adapting their production volumes or inputs from season to season. Larger exporters can sell through fixed price forward contracts to international traders – an option that smaller exporters do often not have as they cannot guarantee delivery.

### ***Importance of local context***

The extent to which futures prices are transmitted to farmers depends however on the national market and price setting structure. Inter-seasonal price instability is a reality in all three market structures as national prices are based on and increasingly aligned to global prices – in competitive and regulated systems. Hence, producers bear the brunt of price risk between seasons. There are however differences concerning within seasonal price volatility. In contrast to most other commodities and countries, in the cotton sectors in Burkina Faso and Mozambique there exist national producer price stabilisation measures in the context of regional con-

cession systems. For a season fixed producer prices are negotiated in tripartite structures between farmers, processors and the government based on a formula linked to global prices. This protects farmers from intra-seasonal price volatility. In contrast, in Tanzania, the most liberalized cotton sector in SSA, price fluctuations within the season are also transmitted directly to producers.

The price systems in Burkina Faso and Mozambique are however different concerning the share of farmers' prices in export prices. The system in Burkina Faso secures stable and relatively high prices to farmers compared to Mozambique. In Burkina Faso farmers are paid a floor price at the delivery of cotton and a potential premium at the end of the season if the realized export price is above the negotiated floor price. A further unique feature is the existence of a smoothing fund. The fund compensates processors partly if export prices during the season drop below fixed national producer prices. While the price system in Mozambique also secures minimum producer prices the share of world prices going to farmers is comparatively low as there is no potential premium for farmers at the end of the season. Hence, the precise mechanisms of price stabilization are crucial to ensure stable prices and high shares for farmers.

In Ethiopia, coffee trade is characterized by strong national regulation that aims at a transparent national trading system. A milestone was the introduction of the Ethiopian Commodity Exchange (ECX) in 2008. Prices on ECX are highly related to ICE futures with global price volatility being transmitted through the exchange to local processors and farmers. Local processors have to sell through ECX to exporters and are paid linked to ICE futures prices. They buy from farmers based on their sales prices deducting margins, processing and transport costs. Farmers bear the majority of the price risk within and between seasons as local processors and exporters can transfer export price volatility largely to farmers. There is however limited price inequality in the Ethiopian coffee sector given the role of the exchange in making prices transparent and the institutional structure of primary transaction centres that local processors have to use to buy from farmers.

### ***Policy proposals at the international and national level***

Results show that price volatility and short-termism are major concerns for actors in producer countries. Uneven exposure to price instability and access to price risk management have important distributional implications. Whilst international traders have the capacity to deal with price risks through hedging in addition to expanding their profit possibilities through pursuing financial trading strategies and providing financial services on commodity derivative markets, local actors in producer countries face the challenge of price instability with very limited access to risk management (Newman 2009). In light of this, policy reforms are necessary at two levels – on commodity derivative markets and in producer countries.

### ***Commodity derivative markets***

In the context of the global economic crisis, a political consensus emerged within the G20 and other countries on the

necessity of reforms to reduce excessive speculation. In this context, important regulatory initiatives have been under way in the US in the context of the Dodd-Frank Financial Reform Act and in the EU. In the EU, legislative instruments have been revised and new regulations have been introduced since 2009, influenced by the G20 commitments and modeled on the US reforms. The two most important legislative acts are the European Market Infrastructure Regulation (EMIR), adopted in August 2012, and the Markets for Financial Instruments Directive/Regulation (MIFID II/MIFIR) that entered into force in July 2014, and will be applicable starting January 2017 (EC 2014).<sup>3</sup>

EU legislation includes important measures in respect to (i) improving transparency and reporting, in particular concerning the previously largely unregulated over the counter (OTC) markets, (ii) limiting market power through the installation of position limits, and (iii) strengthening regulatory authorities. Regarding position limits, it is the first time that the EU limits the maximum size of a position that traders can hold which is an important step to prevent market abuse and manipulation. However, these regulations have limitations, in particular in the form of important exemptions. For example, limits are only applicable to individual traders and not to classes of traders which would be important to reduce the influence of certain types of traders and avoid circumvention by splitting into different entities. Further, it is not secured that position limits cover all trading platforms, including OTC trade (Vander Stichele 2012; Henn 2014). A general problem is that physical traders are exempted from many requirements, which is problematic given the difficult distinction between genuine hedging and speculative activities. Moreover, if those regulations will be effective depends to a large extent on the implementation rules that are discussed in 2015/16 and may lead to watering down regulations.

A main problem with EU reforms is that more interventionist regulations that deal with the fundamental problems of commodity derivative markets were only marginally addressed. These would include measures to stabilize commodity prices, the restriction of certain kinds of trading strategies, and taking into account the interrelated roles of large physical traders and financial investors. A multi-tier financial transaction tax (FTT) to stabilize prices in phases of high volatility and discriminate against very short term trading strategies would be useful along with tighter position limits for individual traders and trader classes or higher security requirements for certain trading strategies such as high frequency trading (HFT) to reduce their negative effects. Given the multiple and blurring roles of large physical and financial traders, rules that differ between those two types of traders do not capture the actual complexity of trading.

### ***Price stabilization in producer countries***

Reforms beyond commodity derivative markets will be necessary to stabilize commodity prices, reduce vulnerability and provide price risk management for local actors. This is of particular importance as our research shows that recent changes in commodity derivative markets have led to increased price volatility and short-termism on the one side

but on the other side do not provide an effective way to cope with commodity price risks of local actors in developing countries. Rather than promoting the costly and complex use of derivatives for local actors, price stabilization schemes at the national or regional level through pan-seasonal fixed producer prices are a useful instrument to cushion price risks for producers. A good example is the price system in Burkina Faso that ensures price stability for farmers throughout the season and potential post-season premiums, and provides a stabilization fund to cope partly with the price risk accrued to processors. The commodity exchange in Ethiopia provides important functions for coffee farmers such as price transparency but does not address price instability. It could be extended in this regard – in the form of forward contracts for farmers' groups and processors or through institutional price negotiations. Given asymmetric power structures between the involved parties, an important prerequisite for price negotiations is tripartite institutional structures as well as strong and independent farmers' associations. Through regional stabilization funds, the management of these funds could be made more professional and less influenced by national political considerations, while bargaining power vis-a-vis international traders and potential financiers could be increased.

A main challenge of national and regional price stabilization funds is securing financing, particularly in the context of long-lasting low-price periods. Hence, stabilization funds could be coupled with an international counter-cyclical financing facility to mitigate income shocks from commodity price movements and ensure the financing of price stabilization schemes and policy space for counter-cyclical macroeconomic policy. The argument behind such a facility is that commodity price movements are exogenous shocks or systemic risks stemming from external events which are not under control of developing countries. For such a facility to be effective it needs to be countercyclical – e.g. through fast disbursements of resources, no pro-cyclical policy conditionalities, and high concessionary elements (Nissanke/Kuleshov 2012).

Ultimately, developing countries need to reduce their dependence on commodities and diversify their economies not only to deal with price instability and external vulnerability but to secure structural transformation to higher value added activities, better jobs and sustained growth. An important opportunity is productive linkages from commodity sectors to other sectors (Morris et al. 2012). This involves forward linkages to processing – spinning, weaving and apparel production in the case of cotton and roasting or instant coffee production in the case of coffee with important potential for value addition and employment generation. But also backward linkages provide diversification possibilities in terms of input provision including pesticides, fertilisers, equipment and different services from IT to transport. Currently, linkages are however limited in all three countries with the majority of exports being of unprocessed nature and imports being imported. For diversification, price stabilization is an important prerequisite, but in addition it requires a broad set of industrial policies and capacities at the public and private sector as well as sufficient policy space.

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2 For an overview of results of the first research phase, see Staritz et al. (2013); for more details on results of the second research phase, see Staritz et al. (2015), Tröster/Staritz (2015) and Staritz/Tröster (2015).

3 For more details, see Staritz/Küblböck (2013) and Küblböck/Staritz (2014).



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