

## **The World Bank**

### **Commodity Risk Management Group, Agriculture and Rural Development (ARD)**

#### **Risk Management in the West African Cotton Sector**

##### **1. Objectives**

Although West Africa is only moderately important in the world cotton market, cotton is of enormous importance to some of the West African countries for whom it constitutes their major, or one of their major, exports. The World Bank sees cotton as an ideal crop in much of West Africa. Given more favourable market conditions, considerable potential remains in these and other African countries for increases in cotton production, and hence for increased exports. Cotton can provide remunerative returns to African farm households in regions where there are few other profitable crops and much-needed dollar export revenues at the national level. Support for the sector can provide a direct means of attacking poverty in some of the world's poorest economies.

The West African cotton sector faces a number of problems. These include the need to compete in a world market place in which major competitors are heavily subsidized and the need to privatise and liberalize the cotton sectors in order to compete effectively. Further, this is in an environment which exhibits high price volatility and, in certain countries, variable weather conditions which can result in significant yield variability. These factors give rise to a serious risk management problem.

##### **2. The Risk management Context**

The objective of this note is to address the risk management problem. We aim to do this in a manner which is consistent with the sector's privatisation and liberalization objectives and which should be complementary to moves towards a more equitable cotton trading system. Relative to other African smallholder crops, and in particular cocoa and coffee, there is one major plus point and one major minus point for risk management intermediation. On the positive side, cotton farmers are effectively tied to ginneries and ginneries rely on local farmers. This creates a community of interest which allows ginneries to intermediate risk management to farmers. Ginneries widely follow the practice of paying farmers an initial price at the time of purchase followed by a second payment later in the season if the price subsequently realized on the market justifies this.

A major advantage of using international financial markets to provide commodity risk management is that this facilitates diversification of the commodity risk outside the producing countries themselves. It is important to emphasize that countries as poor as the West African cotton producers

have very limited domestic risk absorption capacity. The negative aspect of cotton risk management in this context is the absence of an active futures market for non-U.S. cotton, most of which is priced against the CotLook A Index. The lack of futures gives rise to both basis risk and liquidity problems.

We consider three possible modalities for risk management intermediation. These are

- a) A self-insurance stabilization mechanism along the lines proposed by AFD.
- b) An options purchase scheme along the lines suggested by Rabobank.
- c) A hedging scheme.

We argue that the third of these schemes is likely to be most effective in achieving the objectives set out in section 1 of this document. The details of the hedging scheme are set out in the next section.

### **3. The Proposed Hedging Scheme**

We have already discussed the existing system in which ginners make an initial payment to farmers at the time they purchase cotton followed by a second payment once the final sale price has been received. We propose to maintain and build upon this structure. In so doing, we set three objectives.

- a) The price which will be paid at the date of the initial payment should be as high as is realistically and safely possible in relation to prevailing forward prices on the world market.
- b) This price should be announced as early as possible so that farmers can use this price as a basis for input decisions.
- c) The final payment should take place as early as possible and, if this proves feasible, at the same date as the initial payment. If this can be done, the two stage payment scheme will reduce to a single payment with an early guarantee of a minimum price.

At the start of the season (between February and May), ginners will be encouraged to set guaranteed minimum prices which will be paid at the date of purchase. Where there is competition, each ginner will be free to set its own minimum price, and there is no expectation that these will necessarily converge, although they may do so. These minimum prices will be for unlimited quantities – ginners will be committed to purchasing at or above these prices.

These commitments give rise to a long exposure on behalf of the ginners. They lose money if the world price falls relative to the price they need to justify their minimum price offer to farmers. The ginners will therefore need to offset this price risk. They can do this in either of two ways.

- They can make forward sales to customers or with the cotton trade.

- They can purchase OTC (“over the counter”) put options (alternatively construct synthetic puts through forward OTC sales) to protect their guaranteed minimum purchase prices.

In practice, ginnerers will wish to follow both of these strategies. They will wish to establish an initial OTC hedge position, based on an estimate of production, which they will progressively lift as they market their cotton through forward sales to customers and the trade.

All of this will require technical assistance. The assistance will relate both to hedging and to estimation of likely production levels. The World Bank can provide this assistance and other donors may wish to contribute to this provision. Any such contributions would be for pre-specified sums and would not involve any open-ended financial commitment. ICAC could be involved in the estimation of likely production levels.

The proposed scheme leaves ginnerers with three residual components of risk:

- A combination of high output and low prices – ginnerers will be obliged to purchase output in excess of estimate production at an unhedged minimum price
- A combination of low output and high prices – ginnerers will be obliged to close out loss-making forward or put positions on output shortfalls.
- Basis risk – profits from hedge positions may not fully compensate for losses on physical positions.

We propose that a regional agency will provide ginnerers with insurance in relation to the first two of these risk components. Basis risk will remain with the ginnerers. Insurance might relate to production in excess of 110% of recent production (estimated, for example, from a moving average) or falling short of 90% of this level, and prices in excess of 110% of the forward CotLook A price at the time minimum prices were announced, or falling short of 90% of this level.

This insurance, which may be relatively inexpensive (because it only relates to residual quantities and relies on coincidence of high output and low price, and vice versa) may be fairly inexpensive. It will need to be costed.

#### **4. Comparison with the Options Purchase Scheme**

Rabobank has proposed a scheme in which donors contribute to the purchase of put options to protect farmers. It is not clear to us whether these purchases would be made directly by ginnerers or by an agency acting on behalf of the sector. In the latter case, it is unclear how benefits will be transmitted to farmers. There must also be a worry that the recipients of subsidized options will

attempt to capture the subsidies by taking offsetting market positions. In that case, the scheme does nothing for risk management but becomes an inefficient revenue subsidy. Finally, we remain concerned that a scheme of this sort will do little to build capacity to manage the risks which will remain in the system once subsidies are ended.

## **5. The Proposed Self-Insurance Scheme**

The proposed scheme is in many ways reminiscent of stabilization schemes operated throughout francophone Africa until the nineteen eighties and, in certain countries, even later.

- Such a scheme will only deliver very limited reductions in revenue variability (our simulations of a similar scheme suggest reductions of the order of 2%-3% against actual variability of around 50%, on an annual basis).
- Without periodic recapitalization, it is likely the funds will lack the resources to compensate farmers. In our simulations of a scheme similar to that proposed, this happens in around 50% of years. Such cash shortfalls would likely result in further calls on donor funds.
- We do not see the scheme as building the capacity of ginners to compete in world markets or as promoting further liberalization and privatisation in the sector.
- Self insurance fails to diversify risk outside the participating countries. As noted, these countries have very limited risk-bearing capacities.
- Revenue movements across the West African countries are highly correlated. We therefore expect only very limited benefit from risk-sharing across countries.

Stabilization schemes work well when they are least required; they tend to fail in the periods in which they are most needed, as in the mid nineteen eighties. In that sense, they offer farmers a false guarantee which they take up at their peril. Further, they fail to provide strong incentives for cost reduction and have enormous potential to be used for disguised taxation. There is a worry that the 47% payments envisaged as going to producer organizations in the ADF's proposed scheme may fall into this category.

## **6. The Way Ahead**

The World Bank is committed to supporting risk management initiatives in the West African cotton sector. We congratulate the EU on providing the forum in which a range of possible schemes can be discussed. While recommending the hedging initiative which we have proposed, we remain open to discussion of the entire range of possibilities.

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