Alternative Strategies for National Food Reserve Management

1) Unintended consequences of intervention in markets - current
2) Alternative strategies
3) The consequences of intervention in markets – future?

Unintended Consequences of Intervention

- National food security
  - Fair prices for producers
  - Fair prices for consumers
  - Unpredictable policy environment
    - Inability to predict prices and mitigate price risk
      - High risk, high margin trading environment
        - Disincentive to produce
        - Disincentive to finance
        - Disincentive to store
          - Volatile prices for producers
          - Volatile prices for consumers
          - National food insecurity
So what are the alternatives?

1) South African-style liberalisation?
   - Some very beneficial consequences but:
   - Difficult to mimic – each country is different
   - Even if we wanted to liberalise to the same extent, need a step by step process

2) Tailor-made Zambian approach:
   - Targeting specific Zambian constraints
   - Market-based approach
   - Reaching the same objectives:
     a) National Food Security
     b) Consumer Price Stability
     c) Producer Price Stability

So what are we looking for?

Key Points
   - Crowd in rather than crowd out private sector participation
   - Aim for lower cost market engagement
   - Lower profile interventions aligned to market fundamentals
   - Maintaining a public sector role of last resort in case of:
     - Domestic prices exceeding acceptable levels
     - Domestic stocks falling below acceptable levels
Approach 1) Physical stock holding

Key Points
• Small and well managed stock under direct Government control for disaster mitigation use
• Bought through smallholder-targeted market mechanisms at market-determined prices (ZAMACE?)
• Sold/revolved through market mechanisms (ZAMACE?)

Results
• Government becomes merely another market player
• No market distortion

Approach 2: ZAMACE Call Options

Objective:
Allows a market player who might need commodity in the future to secure that commodity at a known price without having to pay for it now, and without being obliged to buy if it is not needed

Commodity might be needed for:
✓ Direct provision to beneficiaries
✓ Price stabilisation by increasing supply in the market

Solution:
A call option gives the buyer the right but not the obligation to buy the underlying commodity at a set price at a set time in the future
Key Points

• Buyers of call options are interested in securing a **ceiling price** or maximum price for the commodity

• The price level at which the buyer secures the ceiling price is known as the **strike price** of the option

• The buyer buys the option at an agreed price known as a **premium**, similar to an insurance premium. Sunk cost.

• When the option **expires** the buyer decides whether to exercise the option (and then buy the underlying commodity) or let it lapse

Approach 2: ZAMACE Call Options

**How a Call Option works:**

1. A call option Buyer puts a **bid** on ZAMACE for x tons at a **strike price** of $x/ton in x month’s time

2. Sellers (with stock to match bid) compete on price to offer a **premium** against this bid

3. **Contract** signed and Buyer pays Seller the agreed premium

4. Buyer now has a **lien** on the Seller’s crop. Crop under ZAMACE certification

5. When the option **expires**, Buyer can either exercise or let it lapse
Expiry ‘out of the money’

- Call Options bought in August for January expiry
- Options lapse – no action taken. ‘Lien’ on commodity lifted. Seller free of obligation to sell

Expiry ‘in the money’

- Call Options bought in August for January expiry
- Options exercised and Buyer pays for, and takes possession of commodity
- Commodity offloaded onto market, bringing price down

Maize Price

Strike Price

April June August October December February

April June August October December February
What might a Call Option Cost?

Call Options for 100,000t bought in August for January expiry (est. $15/ton??)

Strike Price ($350/ton)

Maize Price

April June August October December February

Net Cost of Intervention: $1.5m

Expiry ‘in the money’

Call Options for 100,000t bought in August for January expiry (est. $15/ton)

Total Cost:
Premium: $1,5m + Cost of Crop: $350 x 100,000t = $36.5m

Commodity offloaded onto market @ $350/t

Net Cost of Intervention: $1.5m
Potential sellers are happy with this theoretical approach with the following conditions:

1. There is full market disclosure of how what volume of crop is under Call Option and the Strike Price (ZAMACE market information is public)

2. If Option is not exercised, crop reverts to ‘full’ ownership of Seller and Seller must be able to export crop into regional market

ZAMACE Options: Key conditions

The benefits of ZAMACE Options

• Entirely *market-based approach*

• Totally *transparent*: Market knows within which parameters it can operate

• Relatively *cheap*: $15-20/t ‘insurance premium’

• Effectively and without distortion this ‘caps’ *market prices* at the strike price
Approach 3: ZAMACE Import Options

What about years of actual domestic shortage?

• ZAMACE can offer ‘import call option’

• Concept the same, but Option Seller secures underlying commodity on international market (through SAFEX call options)

• Buyer secures ‘right but not obligation to buy’ Non-GMO crop delivered into shed Lusaka

• Possible to buy SAFEX options directly, but complexities of currency hedge, logistics, etc

Approach 3: ZAMACE Import Options

How an Import Call Option works:

1. A call option Buyer puts a bid on ZAMACE for x tons at a strike price of $x/ton in x month’s time DELIVERED LUSAKA

2. Sellers (with international call options) compete on price to offer a premium against this bid

3. Contract signed and Buyer pays Seller the agreed premium

4. When the option expires, Buyer can either exercise or let it lapse, with loss of premium

5. Seller obliged to import IF Buyer exercises option
The benefits of ZAMACE Import Options

• Entirely market-based approach

• Totally transparent: Market knows within which parameters it can operate

• Allows private sector to import under market conditions, but maintains Government role of last resort

Summary of Possible Approaches

Small Strategic Grain Reserves

Portfolio of ZAMACE Domestic Options

Portfolio of ZAMACE Import Options

Immediate needs

Food availability

Fair consumer price

National food security
How does the producer benefit?

• Helps to create transparent, lower margin, lower risk trading environment
• Keeps price risk to a minimum – market-based fluctuation only
• Encourages investment in production and volume
• ALL producers benefit from market evolution

The Consequences of Intervention

- Transparent, market-based interventions
  - Predictable policy environment
    - Ability to predict prices and mitigate price risk
      - Less risky, lower margin trading environment
        - Incentive to produce
          - Fair prices for producers
          - National food security
        - Incentive to finance
          - Fair prices for consumers
        - Incentive to store
          - Regional competitiveness
Thank You!