Integrated Risk Management Strategies: Example of Malawi Food Security Strategy

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From Financing to Financial Solutions: World Bank Better Equipped to Help Clients Today

Traditionally...

Serving: Member countries
Providing: Access to finance for development
Offering: One-size-fits all loans

...Today

Serving: Member countries and global community
Providing: Financial solutions through financial products and advisory services to access, protect and manage development resources
Offering: Broad menu of financial services
- Flexible Loans
- Credit Enhancement
- Risk Management Tools
- Contingent Financing

✔ Shift in delivery model to client-focused approach:
Customized financial solutions based on needs/risks of each client
### IBRD Financial Solutions Can Help Protect Ongoing Investments & Enable Future Projects

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<td>Transaction processing, reporting, and IT</td>
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### The Problem: Uncertainty Related to Drought

- Malawi’s maize marketing policy is dominated by concerns about food insecurity

*Malawi: A vicious cycle*

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<th>Malawi: A vicious cycle</th>
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<td>Erratic Rainfall, Recurrent Drought</td>
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<td>Production Uncertainty</td>
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<td>Food Shortages</td>
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* 2005 Drought Response Cost: > $200 million for Government
Potential Solution: Integrated Use of Weather Derivatives and Commodity Hedges

Identifying financial risks

- Recurrent droughts which affect the production of maize and lead to food insecurity and malnutrition
- High volatility in the supply of maize leading to high volatility in the price of maize

Financial Solution

Malawi bought a weather derivative from the Bank in order to receive a payout when severe droughts occur. The payout is triggered when a rainfall index falls below a certain level, reflecting the loss in maize production. This was the first time a market-based hedging tool was offered to an IDA country.

The payout from the weather derivative can be used to cap the price of maize imports used to cover shortages in the country. This will help to stabilize supply and in turn stabilize prices, without market distortion.

Weather derivatives: Advantages and Disadvantages

Advantages
- No proof of loss needed
- No insurable interest needed
- Use standard ISDA agreements
- Broader risk takers’ market

Disadvantages
- Basis risk - only pays out based on specified parameters
- Need capacity to provide reliable weather data
The Product: Index-based Derivatives

- Index-based derivatives are risk transfer instruments, available to IBRD and IDA clients.
- The client pays a premium and, in case of a weather event, receives a payout.

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<th>Risk Transfer Transaction</th>
<th>Hedge Transaction</th>
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<td>Payout</td>
<td>Premium</td>
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- The World Bank will enter into a mirroring transaction with a market counterpart.
- The weather event is measured by an index, estimating the actual loss.

Index Used by Malawi Government

- Malawi Maize Index is designed as a proxy of maize production.
- Rainfall is the only variable in the index:
  - Measured by 23 weather stations around the country
  - Data verified by independent third party

\[
\text{Maize Production Output} = \text{Area Planted} \times \text{Yield (production per hectare)}
\]

- Variable
- Fixed parameters
Partnership approach in Malawi Crucial for Success

- Government of Malawi – Ministries of Finance & Agriculture
- DFID
- European Union, All ACP Agricultural Commodities Program
- USAID
- Swiss Secretariat for Economic Affairs
- Government of Norway
- World Food Programme
- World Bank - Agriculture & Rural Development; Treasury

Next steps in Malawi: 2009 Onwards

- Funded as part of World Bank 5-yr ADP Support Project:
  - Further investment in Met Office network
  - Improve Government’s Maize Yield Assessment Model
  - Link with national early warning system to strengthen drought preparedness and planning
  - Understand the role of weather insurance in Government’s suite of risk management tools
- Establish budget line for premiums
Discussion Points: Challenges to Moving Forward?

- Political risk for policy makers - concern about backlash if it turns out the risk management product was not needed (i.e. "wasted" investment)
- Governance issues, policy frameworks, and guidelines that protect decision-makers
- Finding ways to finance ex ante solutions as opposed to ex post
  - shift in mentality is needed for both government and donors
- Careful risk assessment and thoughtful customization of the product
- Capacity of all stakeholders to understand technical & financial issues related to the product
- Negative perception of derivative instruments
  - Underlying complexity
  - Current financial crisis

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