
Discussion of Prof. Jerry Skees'
Risk Management Challenges in Rural
Financial Markets: Blending Risk Management
Innovations with Rural Finance
AN INDIAN CASE STUDY and a discussion of
BASIS RISK

By Ulrich Hess
(World Bank)

Risk Management in Rural Finance: an application in India

- Context
 - scarce access to rural finance – but banks need to expand rural portfolio
 - ICICI Bank lends through a agricultural service provider agent Mahindra Shubhlabh
- Main challenge to portfolio expansion
 - Monsoon and price risk can drive up “systemic” loan defaults to unsustainable levels
- Proposed solution
 - Link interest and principal payments to Monsoon index that correlates with farmers crop income exposure
 - In exchange for slightly higher interest rates the farmer pays lower or no interest in a severe drought year



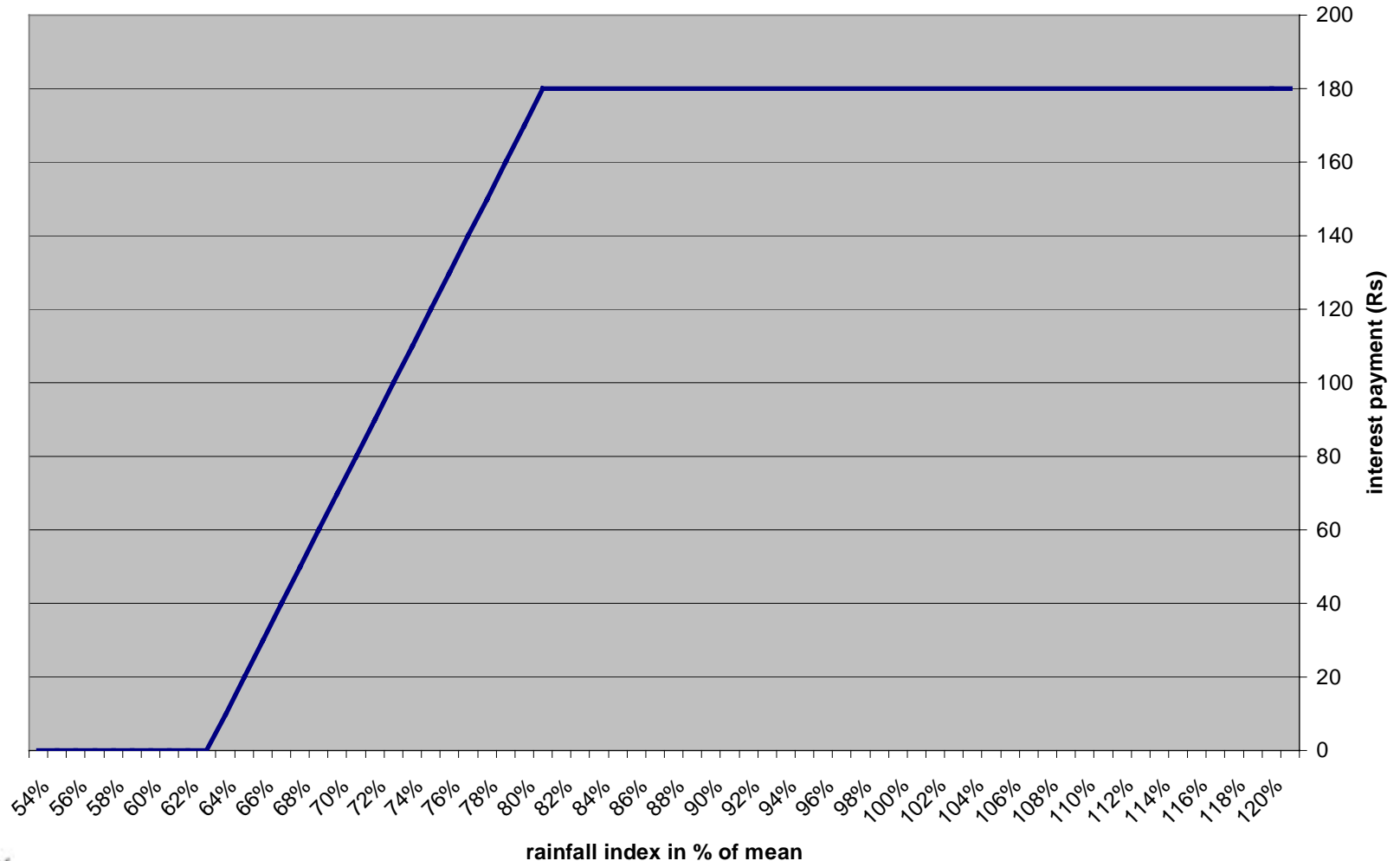
Indian pilot case

- World Bank/IFC and ICICI Bank worked on concept, feasibility analysis and modeling
 - Correlation between soya yields – monsoon index 80%
- Soya farmer loan indexed to monsoon
 - Ujjain, Madhrrar Pradesh (MP)
 - Crop loans of Rs. 2000 per hectare
 - Normal interest rate: 17.5%, with insurance index 20.5%, will be lowered
 - Farmer receives interest waiver of Rs. 10 per %point if monsoon index <80% of normal
 - If monsoon index is 65% of mean, interest payment is Rs. 30 instead of 180

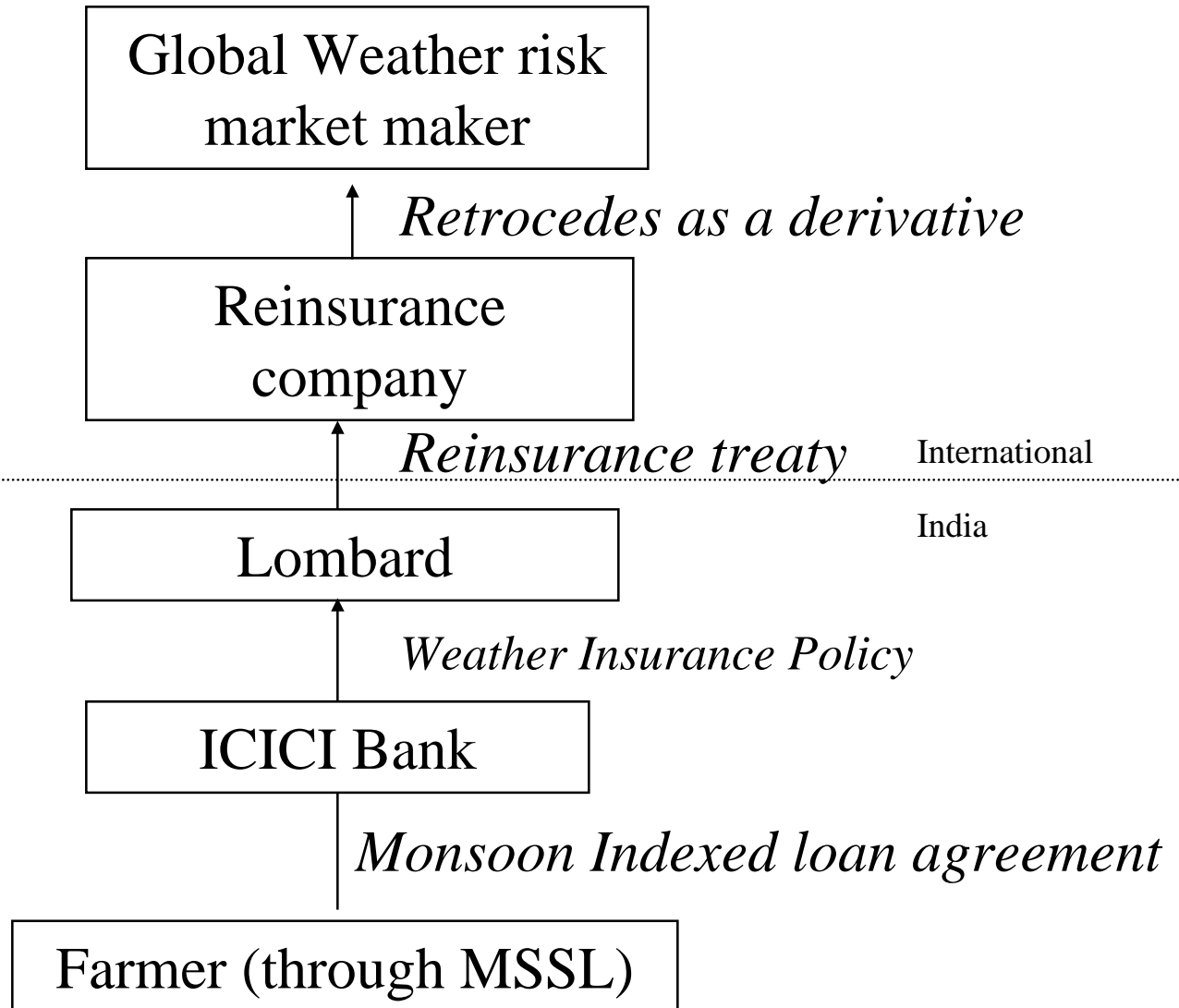


Interest payments indexed to monsoon index

Crop loan interest payments



Risk Transfer Structure



Index Insurance Prerequisites

- Data, Data, Data
 - Good historical data for yields and weather
 - Reliable, verifiable and accessible insurance settlement basis – e.g. good weather stations in the future! (also: satellites)
 - Adequate regulatory requirement
 - Reinsurance
 - Primary Insurance
 - Currency transfer (Premiums)

Risk Management in rural Finance: Basis Risk

- Traditional crop insurance vs. Index Insurance
 - Index insurance is not subject to adverse selection and moral hazard and high administrative costs but has “Basis Risk”
 - Basis Risk is the potential mismatch between insurance payout and actual insured losses

Basis Risk redefined

- What matters is the Farmers Income Risk
 - Farmers have (diversified) portfolio of income sources: crops, livestock, off-farm labour, etc.
 - Crop insurance only covers one of these sources
 - Weather index insurance covers potentially ALL of the farmers activities as probably ALL of them are exposed to weather risk
 - Problem: Insurance vs. derivative – regulatory issues



World Bank/CRMG agricultural risk management work

- CRMG: Commodity Risk Management Group in Agricultural & Rural Development Department under Kevin Cleaver
- Objectives
 - Integrate agricultural risk management into rural development strategies
 - Develop simple revenue insurance products based on indexes that correlate well with farm income exposure – such as price, weather, area-yield or their combinations
- More at break-out session #3!