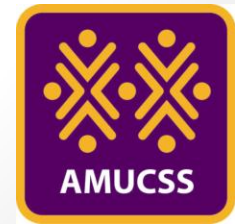


Climate Risk Management Case Study: Mexico

Josh Ling – 11 April 2013
Bonn, Germany



Who and Where?



- From Sydney, Australia
- Fellow of the Institute of Actuaries of Australia (FIAA)
- ILO Microinsurance Fellow in Mexico City
 - Asociación Mexicana de Uniones de Crédito del Sector Social(AMUCSS)
 - Network of rural finance providers



What is the Mexican setting?

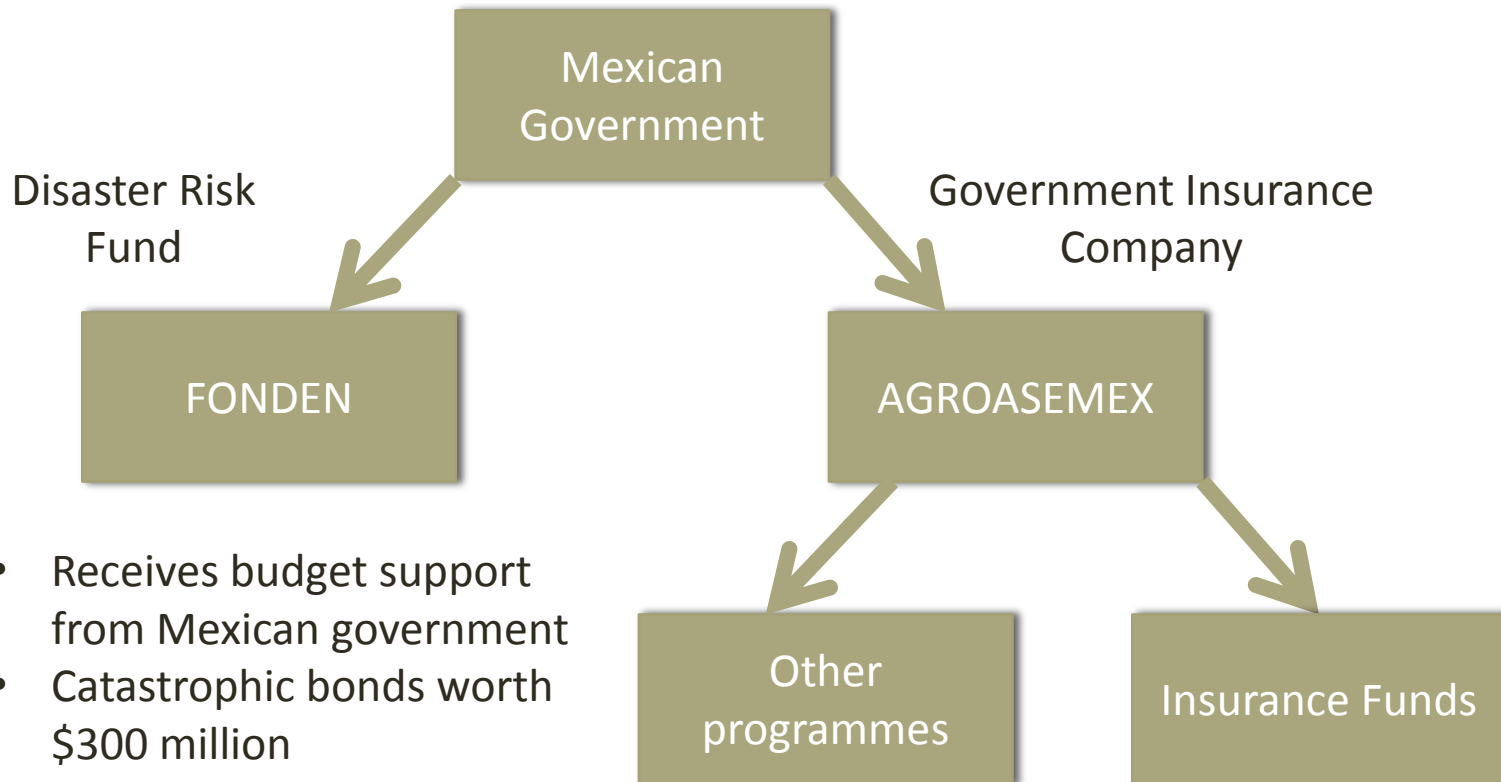
- Agricultural sector employs 21% of labour force
- Agriculture accounts for 3.8% of GDP
- Agriculture is predominant source of income for rural clients

- Large country, varying climates
- At high risk of natural disasters
 - Drought represents 80%
 - Tropical cyclones represent 18%

- Most insurance products: 50% concentration in Mexico City
- Mexico City contains 20% of the population



What is in place?



- Receives budget support from Mexican government
- Catastrophic bonds worth \$300 million

- Insurance to state governments
- Parametric insurance programmes
- Insurance funds

Insurance funds

- AGROASEMEX created scheme of self-insurance funds
- Farmers must form a group (a fund)
- AGROASEMEX sets premiums (by region, crop, weather event)
- AGROASEMEX subsidises premiums
- Premiums of fund sit together to pay claims of fund
- Indemnity coverage



Insurance funds

- North Mexico –
 - Large extensions of land
 - Higher technology
 - Better access to credit
 - Better marketing, commercialisation
- South Mexico – the same scale requires far more producers
- RedSol Agrícola plays the role of aggregator
- Agroasemex provides subsidy and reinsurance



RedSol Agrícola: Product

- Insurance Coverage

Over investment.

By plant.

- Climatic Risks

- Drought.
- Flood.
- Hail.
- Fire.
- Drop in temperature.
- Frost.
- Hurricane.
- Cyclone.
- Winds.
- Tornados.

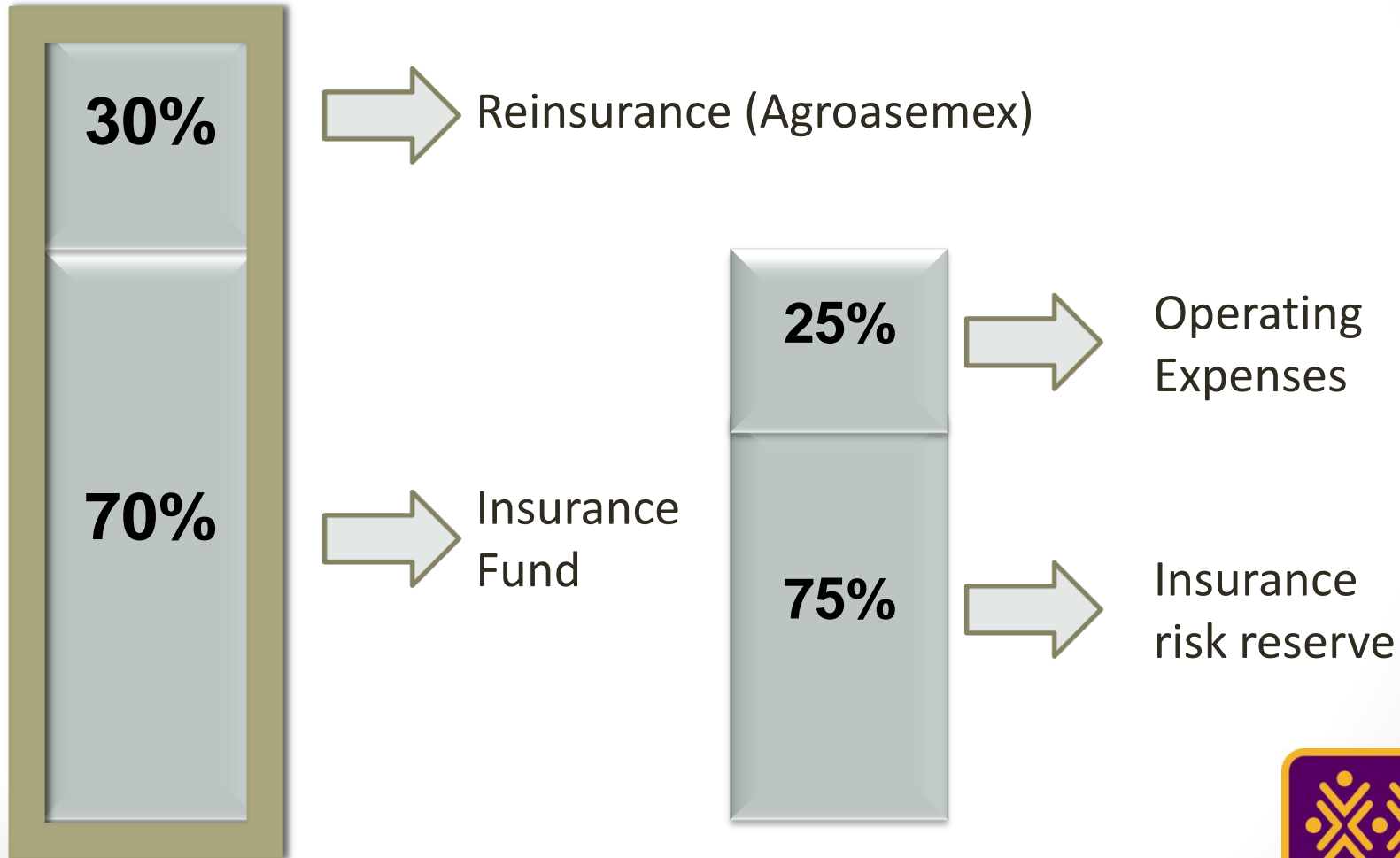
- Biological Risks

- Plagues.
- Sickesses.



RedSol Agrícola: Product

Premium



RedSol Agrícola: Product

- Plays role in rural development: premium is reinvested

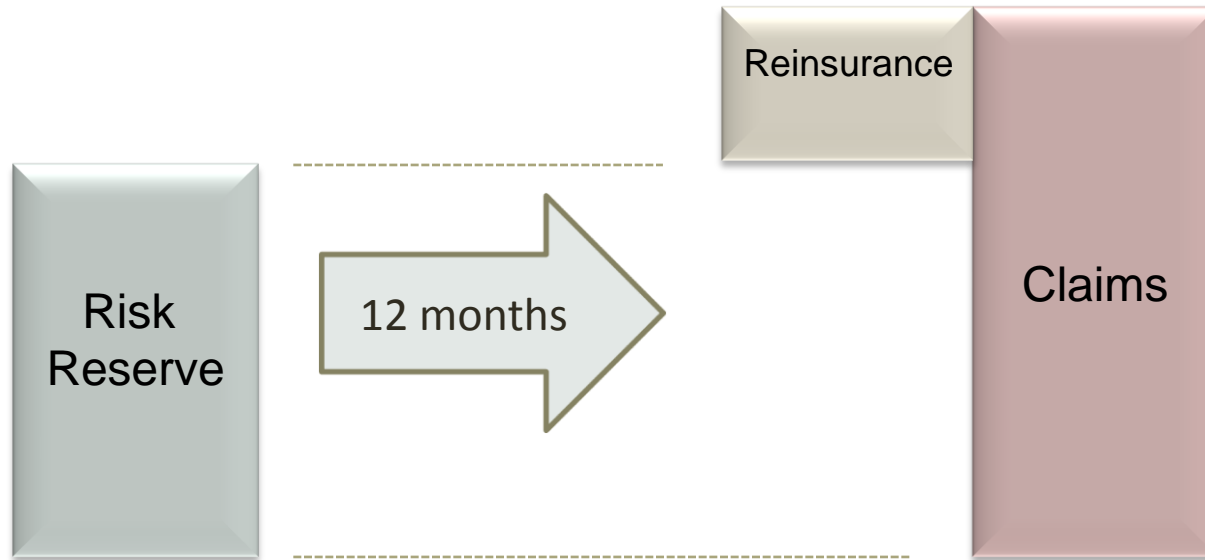


Risk Reserve > Claims

Remainder divided between contingency reserves (25%), a protection fund (5%) and a social fund (70%) used for,

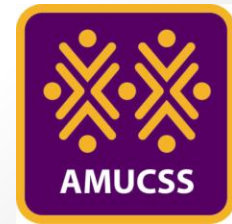
- Lower insurance costs next year
- Training
- Equipment

RedSol Agrícola: Product



Risk Reserve < Claims

Reinsurance covers the shortfall



Learning – Government

- Government insurance company (AGROASEMEX)
 - Mission with social objectives
 - Implicit government oversight
 - Efficient sharing of risk – ability to diversify at government level
- Use of private sector to make binding agreements (as well as reinsurance)



Learning – Individual Microinsurance

- Rural development through reinvestment of insurance profit
- Engagement of policyholders
- Use of pre-existing groups
 - Encourages cooperation within communities
 - Scale is reached more quickly
- AGROASEMEX as centralised entity to set premiums, reserving
 - Government has the best data to price
- Provision of reinsurance as a means of subsidising the programme
 - (although premiums are also subsidised)



Learning – Individual Microinsurance

- Evident patterns of selection of coverage by region and crop
 - Farmers know what their risks are
- Difficulty in designing an all-inclusive scheme
 - Do not want to exclude the poorest
- Parametric insurance can work well at a macro level
- But on a micro level,
 - Basis risk becomes a bigger issue, and
 - Indemnity coverage becomes difficult over a large portfolio
 - Can group structures be utilised for a hybrid approach?



Gracias.

Email: josh_ling@hotmail.com



Twitter: [@josh_ling](https://twitter.com/josh_ling)

