Securitization
Of
Catastrophe Risk:
A USAA Example

Presentation to: IACA
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How will USAA insulate itself from the next mega-hurricane?
Hurricane Andrew made landfall in South Dade County, Florida, devastating Homestead Air Force Base.

1992 Hurricane Andrew

USAA: $600,000,000

Industry: $16,500,000,000
A storm the size of Andrew just 40 miles north would have resulted in insured losses of over $50 billion.
Strategic Challenge: Industry Perspective

- Since 1989, a series of natural disasters has resulted in variability in insurance losses.
- Prior to Hurricane Hugo, the insurance industry had never suffered losses from a single disaster over $1 Billion.
- Since then, 11 natural disasters have exceeded this amount.
- Traditional reinsurance mechanisms are limited in capacity.
- Recent events have caused the insurance industry to reconsider its approach in handling low frequency, high severity occurrences.
- The questions have centered around the following:
  - What steps can we take to reduce losses from future disasters?
  - What steps can we take to reduce variability in insurer results from future disasters?

Strategic Challenge: USAA Perspective

- Serving members who live in catastrophe-prone areas requires maintenance of a high level of capitalization and liquidity.
- If such exposures could be mitigated, then transferred or separately securitized, USAA could more efficiently deploy its capital resources.
Options Considered By USAA To Address The Strategic Challenge

- Expanded Traditional Reinsurance
- Catastrophe Bonds
- Catastrophe Options
- Surplus Notes and Contingent Surplus Notes
- Contingent Equity
- Catastrophe Swaps

Options’ Issue: Financing vs. Hedging

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Financing</th>
<th>Hedging</th>
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<tbody>
<tr>
<td></td>
<td>Risk Transfer</td>
<td>Yes</td>
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<td>Impact on:</td>
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<td></td>
<td>PML</td>
<td>No</td>
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<td></td>
<td>Surplus</td>
<td>Yes</td>
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<td></td>
<td>Liquidity</td>
<td>Yes</td>
</tr>
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<td></td>
<td>Balance Sheet</td>
<td>Yes *</td>
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* Contingent type can be kept off balance sheet until exercised.
USAA Preferred Hedging Strategy

- Competitive
- Financially Strong
- Highly Rated
- No regulatory concerns

USAA Preferred Hedging Strategy

Hedging Design Field

Source: "Financial Risk Management For Catastrophes". Neil Doherty
## Capital Market Contracts: Index vs. Indemnity Approaches

### Index Approach
1. Index based payment
2. Speculative
3. May/may not transfer risk
4. Basis risk
5. Accounted as investment
6. Low transaction cost
7. Very small capacity

### Indemnity Approach
1. Actual loss based payment
2. Non-speculative
3. Risk transfer
4. No basis risk
5. Accounted as reinsurance
6. Transaction cost material
7. Medium capacity for now

## Selected Hedging Instruments

- Expanded Traditional Reinsurance
- Catastrophe Bonds
Characteristics Of Catastrophe Bonds

- Rated security
- Renewable process
- Supplement to traditional reinsurance
- Objective risk assessment
- Potentially attractive to investors

Special Purpose Reinsurer
How it Works

- Company
- SPR
- Reg 114 Trust Account
- Investor

Reinsurance

Premium

To secure obligations under the Reinsurance Agreement
The Reinsurance Agreement

- Obligates Residential Reinsurance to pay USAA for the claims in the layer between $1.0 billion and $1.5 billion resulting from a single Class 3, 4 or 5 hurricane in the Covered States during a 12 month claims period

- USAA will retain not less than 10% of the risk

Catastrophe Bond Transaction Timeline

- Risk Period: June 1, 1999 - May 31, 2000
- Extended Claims Period: June 1, 2000 - Dec 1, 2000

Typical Hurricane Season
Key Issues Encountered

- Federal Tax
  - SPR off-shore
  - Debt vs. equity interest
- Regulatory
  - Recognition that investors are not in the business of insurance
- Securities
  - Public vs. private offering
- Bond Structure
  - Principal at risk vs. principal protected
  - Single year vs. multi-year transaction

The Investor’s Perspective
Why Do I Buy?

- Increase Yield
- Reduce Portfolio Variability

What Do I Need To Know?
Questions that need to be answered from Investor's Perspective

- How do I assess the risk?
- How credible is the risk assessment?
- When do I feel that I have become educated enough to buy?
- Is this the first transaction of this kind?
- Is there a pipeline of future deals to further increase diversification?
- Why have they bypassed the reinsurance market?
- Can I afford to lose all my principal?
- What are the regulatory impacts (especially for life insurers and pensions funds)?
- Isn't one year too short; wouldn't a multi-year commitment improve the utility of this instrument?
Who Are The Investors?

**Bottom line:** 90 - 95% of the money is new to the P&C Insurance Industry. This is "found money"; capital that would never have been applied to the problem of catastrophe protection through either investment in primary insurers or reinsurers.

Categories Of Investors: This is a Global Market

- Life Insurers
- Pension Funds
- Reinsurers
- Hedge Funds
- Banks
- Investment Advisors
Observations

• Traditional reinsurance capacity is plentiful, but limited
• Capital markets offer the potential to supply additional capacity
• USAA’s success in renewing its transaction at reduced cost is evidence that:
  – Securitization of catastrophe risk on a large scale is possible and sustainable
  – Improving efficiency and cost is also possible; multi-year transaction could help in this regard

Note: There have been about 51 capital market risk transfer securitizations to date

Observations

• Growth of capital markets reinsurance will be slow due to:
  – Lack of expertise, basis risk/low risk transfer/speculative nature of investment, accounting and regulatory restrictions (index options)
  – High transactions costs, tax issues/offshore nature, need for more investor education (indemnity catastrophe bonds)
  – Soft traditional reinsurance market with large capacity and declining reinsurance prices
• Significant growth in capital market reinsurance will require:
  – Addressing the issues mentioned above
  – NAIC adopting changes to support securitization of insurance
  – Changes at the Federal level and removal of tax disincentives so these SPR transactions can take place on-shore
Conclusion

- This pioneering (and now renewed), mutually beneficial transaction fulfills the strategic purposes of:
  - Tapping into the vast pool of capital for capacity
  - Introducing a new asset class which supplements reinsurance
  - Providing a vehicle for investors to increase yield, while reducing portfolio risk through diversification

USAA

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