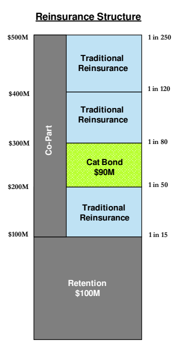
# Cat Bonds
## Cedant's Perspective

John Lebens, FCAS, MAAA
Vice President, Corporate Risk Management and Reinsurance
Nationwide Insurance

CAS Annual Meeting, November 4th 2013

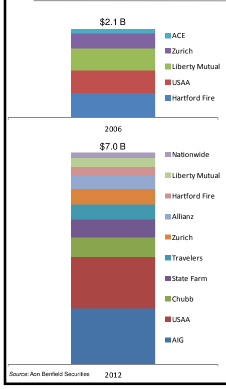
## The Role of Cat Bonds




- Cat bonds provide a diversifying risk transfer source to a Property Cat risk transfer program
- Diversification of risk transfer source helps to
  - Increase capacity
  - Reduce pricing pressure
  - Provide greater stability in program
- Cat bonds are often structured to mirror the terms of the traditional reinsurance as closely as possible and serve as one or more layers of the reinsurance program
- Key considerations in using Cat bonds as a layer of protection
  - Trigger type (indemnity, industry, index etc.)
  - Perils covered
  - Factor based coverage for Auto, LAE, Residual market losses etc.



## Cat Bonds are becoming a more prominent feature in Cat reinsurance structures



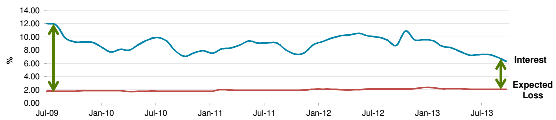

*Source:* Aon Benfield Securities

- In early years of catastrophe bonds, most sponsors were reinsurers (63%)
  - Competitive pricing relative to retro covers
  - Quick recoveries for those using parametric triggers
  - Basis risk less of a concern
- Now the majority of sponsors are primary insurers (53%)
  - Convergence with traditional market terms
  - More capacity available in the market
  - Greater comfort of cedants
  - Favorable pricing
- Recently even some residual markets have issued catastrophe bonds
  - Citizens Florida
  - North Carolina JUA/IUA
  - California Earthquake Authority
- $7B of outstanding cat bonds by Top 20 US insurers in 2012 versus only $2.1B in 2006

## Cat Bond market continues to evolve toward traditional reinsurance

- Size of the market has increased from $8 billion in 2006 to $17 billion in 2013
- Move towards indemnity based bonds (versus parametric or industry loss triggers)
  - 2007: ~19% was indemnity
  - 2012: ~41% was indemnity
- Pricing spreads (difference between interest rate and expected loss to bond) have reduced over the past few years, especially this year

*Cat Bond Historical Rates – US Multi-peril*




| | July-09 | Jan-10 | July-10 | Jan-11 | July-11 | Jan-12 | July-12 | Jan-13 | July-13 | Sept-13 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Interest** | 12.01% | 8.36% | 9.89% | 7.54% | 9.10% | 9.30% | 9.97% | 9.39% | 7.35% | 6.29% |
| **Expected Loss** | 1.81% | 1.89% | 1.83% | 1.83% | 1.96% | 2.12% | 2.15% | 2.33% | 2.08% | 2.08% |

*Source:* Aon Benfield Securities



## Advantages of Cat Bonds

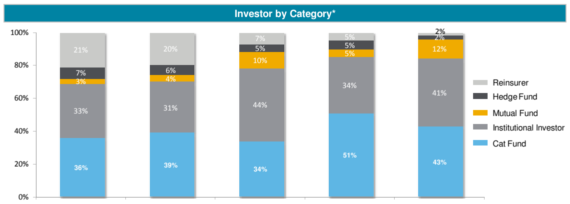
- Collateralized protection
  - 100% of reinsured limit is held in trust and invested in secure instruments
  - Traditional reinsurance is subject to the ability of the reinsurer to pay the claim
- Reduces “roll over” risk
  - Cat bonds typically have multi-year duration
  - Allows cedant to lock down a component of reinsurance capacity and price for multiple years
  - Traditional reinsurance has historically been predominantly single year
- No mandatory reinstatement
  - If a catastrophe loss occurs towards the end of the term, the insurer does not have to pay mandatory reinstatement premium
  - Traditional reinsurance typically has a mandatory reinstatement provision requiring payment of a premium in relation to the proportion of limit used regardless of the remaining risk period



## Advantages of Cat Bonds

- Increases available limit and diversifies source of protection for cedants
  - Cat bonds sold to mutual funds, institutional investors, dedicated cat bond funds and to some reinsurers
  - Share of capital market players has increased over time while that of reinsurers has declined
- Reduces demand on traditional reinsurance, potentially lowering total program cost

**Investor by Category***




Note: *Cat Bond Investors only, by June 30 each year
*Source:* Aon Benfield Securities

## Disadvantages of Cat Bonds

- Available capacity and pricing can be volatile
  - Cat bond market is about $17B versus traditional reinsurance capital of $515B
  - Capacity and pricing sensitive to economic conditions
    - Lehman collapse
    - Euro crisis
- Terms and conditions tend to be stricter than for traditional reinsurance
  - Certain lines of business like Auto and LAE covered via factors rather than actual loss (i.e. not indemnity)
  - Residual market loss is also typically covered by factors
  - Limitations on loss development beyond contract expiration
    - 18 months for hurricane
    - 24 months for earthquake
- Single limit over the term of the bond
  - No reinstatements available
  - Cedant may find it hard to replace limit after a mega catastrophe



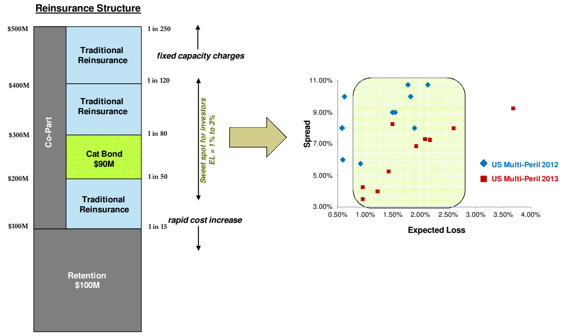
## Disadvantages of Cat Bonds

- Data and documentation burden associated with capital markets transaction are greater than traditional reinsurance.
  - More stringent standards for risk exposure data used for modeling
  - Very detailed disclosure of subject business and coverage provisions
  - Policy distribution by line and geography (state / county / zip code)
  - Legal documentation
- Higher fixed expense component
  - Bankers fees
  - Legal setup costs
  - Document fees
- Less confidentiality of data
- Lack of ‘relationship factor’ compared to traditional reinsurance
  - Cat bond claim process is mechanical and inflexible
  - Traditional reinsurance historically based more on the lines of “follow the fortunes” of insurer



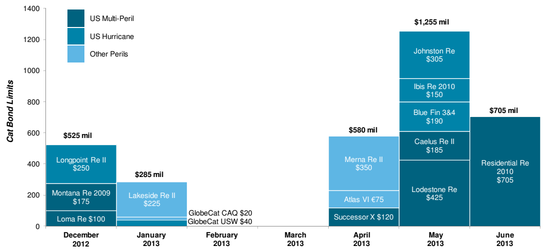
## Cat Bond Structuring
## Placement

**Reinsurance Structure**



## Cat Bond Strategy
## Issuance Timing & Potential Size

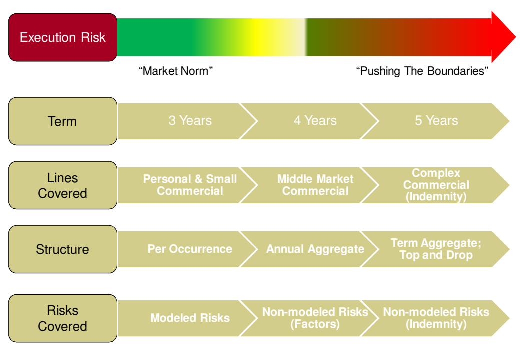
- Cat bonds maturing in the near future that will need reinvestment and new money flowing into the market ($3B in first half of 2013) can help guide decisions around
  - Timing of issuance
  - Size of issuance




*Source:* Aon Benfield Securities

9

## Cat Bond Structuring
## Other Considerations




10

## Recap

- Cat bonds can play an important role in a cedants reinsurance program
- Cat bond market has evolved over the past few years and pricing/terms are converging towards traditional reinsurance
- Cedant should be well informed about the advantages and disadvantages of Cat bonds compared to traditional reinsurance
- Cedant should balance structuring goals with execution risk

11