The State of the Property Reinsurance Market

Casualty Actuarial Society

May 16th, 2011

The Breakers

Palm Beach Florida

AON BENFIELD

Agenda

Section 1	Insurance Impact of Tōhoku Earthquake
Section 2	Reinsurance Market at April 1, 2011
Section 3	Expectations for June and July Renewals
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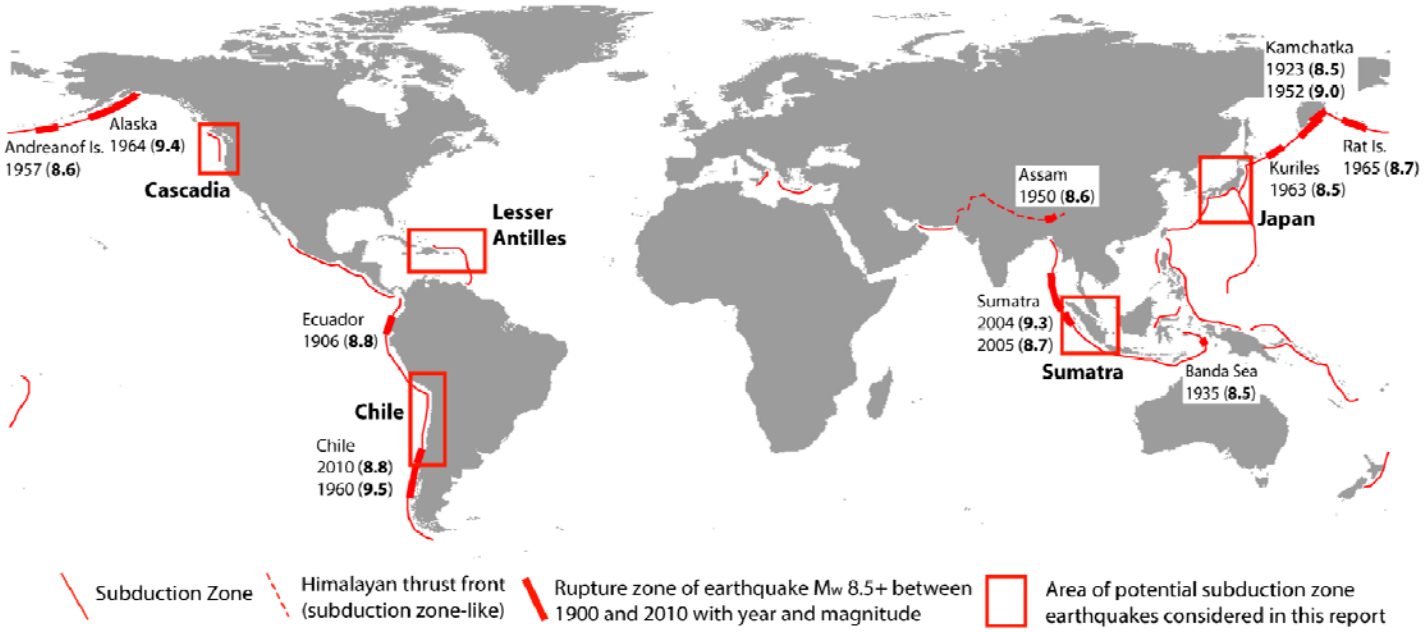
Section 1: Insurance Impact of Tōhoku Earthquake



Source: Aon Benfield Report "When the Earth Moves: Mega-Earthquakes to Come", June 2010

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Insurance Impact of Tōhoku Earthquake

- Losses to international reinsurance markets likely contained within an earnings event
  - Contingent business interruption losses very uncertain
  - One cat bond (Muteki, Zenkyoren) trading as a total loss and several others trading at discounts of 5 to 10%

- Financial market reaction surprisingly sanguine
  - Aggregate indices rebounded after initial dip
  - Insurer and re*i*nsurer stock price reaction also rebounded ex. Flagstone Re
  - CDS rates only impacted for domestic carriers

- Model miss continues: chronic under-estimation of risk
  - Event more severe than any in commercial model event sets
  - **Tsunami not modeled but covered under Japanese policy**

- Japan earthquake not the global peak peril (US wind)
  - Regional pricing adjustments will have no impact on peak peril exposure pricing

- Possible surge in demand for earthquake insurance

- **Tohoku is not a "Black Swan" event…a Black Swan is a Mw 10.0 earthquake in LA or Tokyo**

Breaking Down the Japan Loss Estimates

RMS

	In JPY billion		In USD$ billion		Subject to Private Non-Life Reinsurance In USD$ billion		Hurricane Katrina USD$ billion
Classificaiton	Low	High	Low	High	Low	High	
Residential	330	460	4.0	5.5			
Co-operatives	540	710	6.5	8.5	6.5	8.5	
Commercial/Industrial	460	750	5.5	9.0	5.5	9.0	
Other (railway, marine and aviation, auto)	170	250	2.0	3.0	2.0	3.0	
Property total	1,500	2,170	18.0	26.0	14.0	20.5	
Life (death benefits)	250	670	3.0	8.0			
Overall total	1,750	2,840	21.0	34.0	14.0	20.5	41

Source: Risk Management Solutions

AIR

	In JPY billion		In USD$ billion		In USD$ billion		
Classificaiton	Low	High	Low	High	Low	High	
Non-Life	267	457	3	6			
JER	115	115	1	1			
Commercial	457	722	6	8	6	8	
Agriculture	722	1,267	9	16	9	16	
Total	1,561	2,561	19	31	15	24	41

Source: Applied Insurance Research

Analysis: Aon Benfield Analytics

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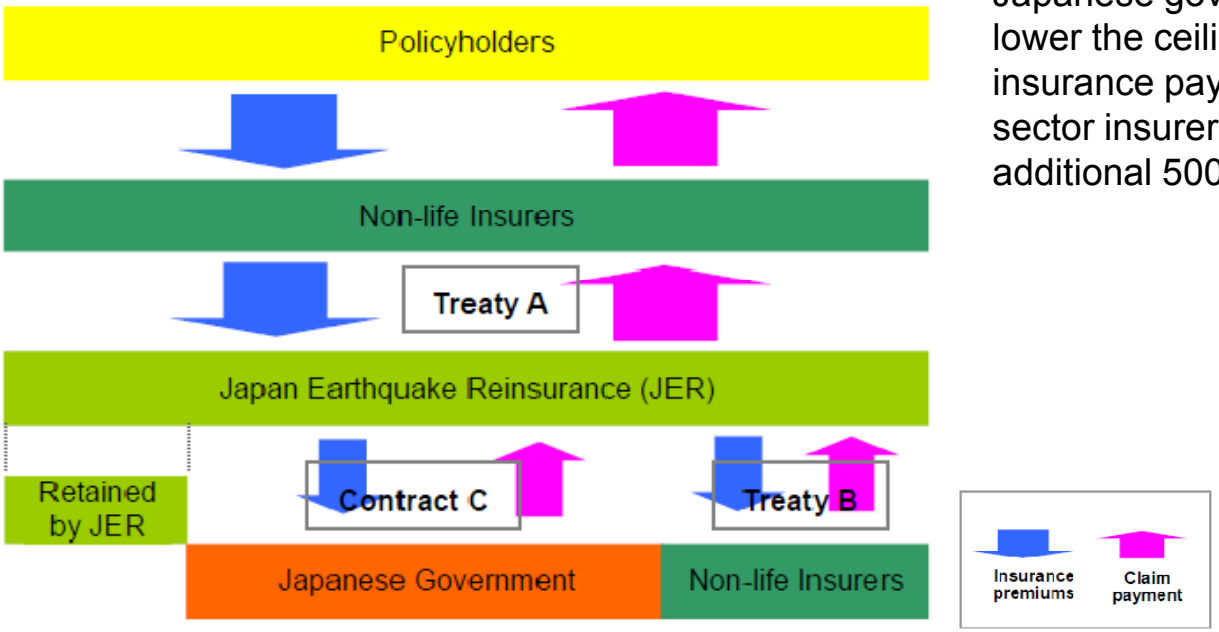
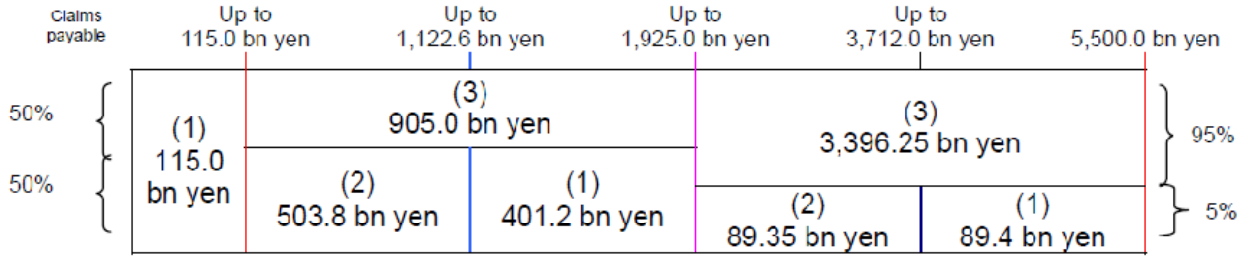
Understanding the Significant Role of the Japanese Government

Flowchart of residential earthquake insurance



- Japanese government intends to lower the ceiling on earthquake insurance payouts by private-sector insurers by assuming an additional 500 billion yen

2. How Liabilities are Apportioned



(1) Japan Earthquake Reinsurance
(2) Nonlife insurers
(3) Japanese government

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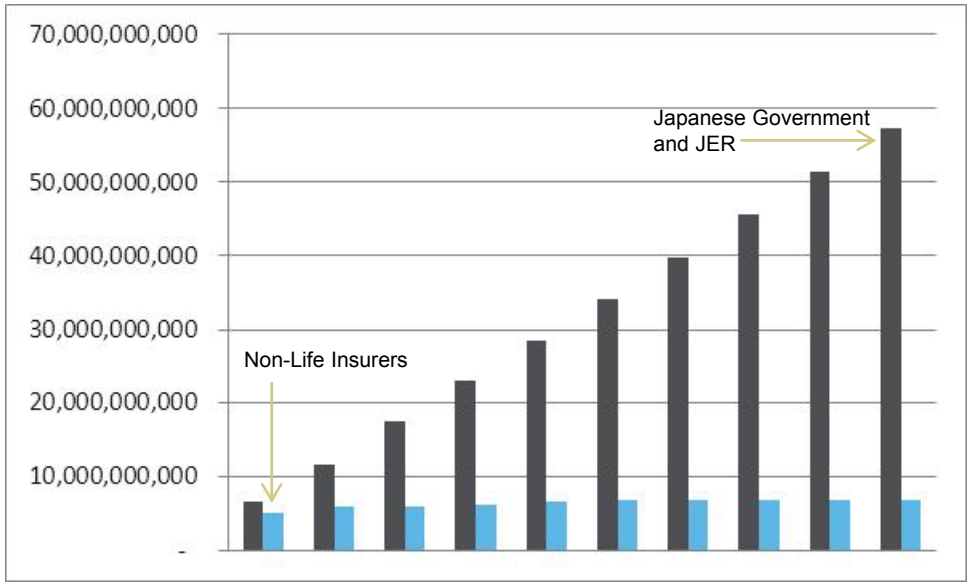
Understanding the Significant Role of the Japanese Government



- AIR and RMS appear to have Non-Life Insurer Ground-Up loss estimate d in the ¥1 trillion range
- At this level the retrocession back to the Non-Life Insurers is about 44.3% of the loss or around $5.2 billion
- If the industry loss estimate goes up the Japanese Government picks up an increasing share of the loss
- Losses retroceded to the Non-Life insurers are not reinsured in to the private reinsurance market
- Losses insured by Japanese mutuals are not part of this JER program and are reinsured into the reinsurance market

Non-Life Insurers Ground-Up Insured Loss in Yen	Non-Life Insurers Ground-Up Insured US$	Non-Life Insurers Retrocession from JER in Yen	Non-Life Insurers Retrocession from JER in US$	Retrocession as a % of Ground-Up Loss
5,500,000,000,000	64,274,862,686	593,150,000,000	6,931,751,782	10.8%
5,000,000,000,000	58,431,693,350	593,150,000,000	6,931,751,782	11.9%
4,500,000,000,000	52,588,524,015	593,150,000,000	6,931,751,782	13.2%
4,000,000,000,000	46,745,354,680	593,150,000,000	6,931,751,782	14.8%
3,500,000,000,000	40,902,185,345	582,550,000,000	6,807,876,592	16.6%
3,000,000,000,000	35,059,016,010	557,550,000,000	6,515,718,126	18.6%
2,500,000,000,000	29,215,846,675	532,550,000,000	6,223,559,659	21.3%
2,000,000,000,000	23,372,677,340	507,550,000,000	5,931,401,192	25.4%
1,500,000,000,000	17,529,508,005	503,800,000,000	5,887,577,422	33.6%
1,000,000,000,000	11,686,338,670	442,500,000,000	5,171,204,862	44.3%

Note above figures are respects dwelling policies
Analysis: Aon Benfield

The loss to Non-Life Insurers (**stock** insurers) is not very sensitive to adverse development.

However the adverse development for **mutual** insurers pushes further into their significant private market reinsurance programs.

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Section 2: Property Reinsurance Market April 1, 2011

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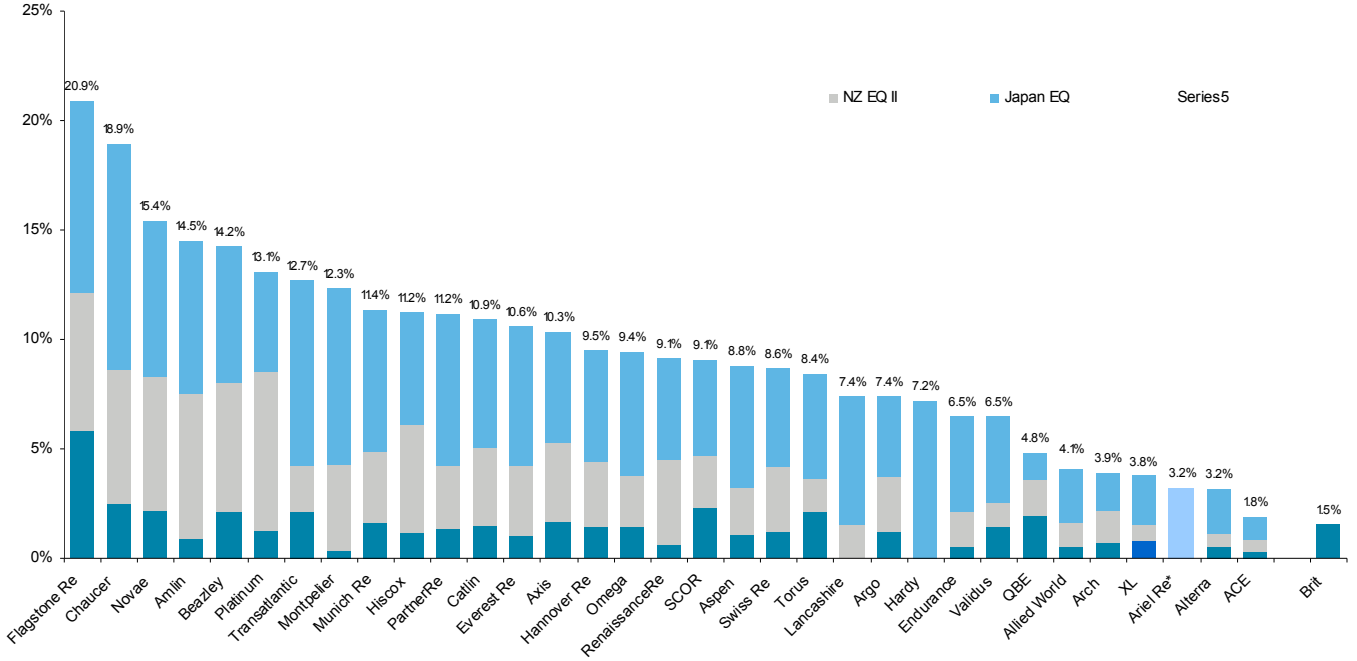
April 1, 2011 Treaty Review

Q1 Aggregate Cats: Material Earnings Event

- Multiple significant insurance events have stirred thoughts of a global market hardening
- Meaningful regional price adjustments have occurred, but as yet no global effect
- 2011 events still at level of an earnings event – less or equal to than expected full year income, after tax for most reinsurers – not a capital event
- Share buy-back programs impacted
- Existing capital remains adequate to satisfy insurer demand; no supply driven turn



**Ariel Re combined loss for all first quarter events*

Source: Company Information, Aon Benfield Market Analysis

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April 1, 2011 Treaty Review

April 1 Renewals by Region

- Japan
  - Number of major programs have extended to fully assess impact of Tohoku (4)
  - Typhoon programs increased 5 to 10%
  - Most earthquake programs increased within a range 25 to 50%
  - Marine reinsurance rates up sharply on XOL – despite minimal confirmed losses to date
- US property cat
  - 5 to 10% reductions with no capacity shortage
  - Observations on where broker views diverge
  - RMS v. 11 model change, largely in line with historical model miss, but some surprises on individual portfolios anticipated to slow rate of decrease for June and July renewals
- United Kingdom
  - Euro cat renewals completed prior to March 11 were down 5 to 7%
  - Post March 11 more difficultly for capacity programs, which were completed with small single digit declines risk adjusted vs. flat quotes
- Retro
  - Uncertainty around Japan has created a spread in the market
  - April renewals flat to +20% subject to territory
  - Collateralized market capacity may be an issue as capital may be tied up in losses

April 1, 2011 Treaty Review

April 1 Renewals by Region (continued)

- ILW
  - Post Q1 events pricing has reacted firmly with 20 to 30% increases on average
  - Sufficient capacity at reasonable pricing available for earthquake despite recent events
- India
  - XOL flat to +5% reacting to Japan
  - Risk programs driven by experience
- New Zealand and Australia
  - Few renewals but backup covers
  - Sensitivity to potential increased retentions
- Europe: few renewals

Section 3: Expectations for June and July Renewals

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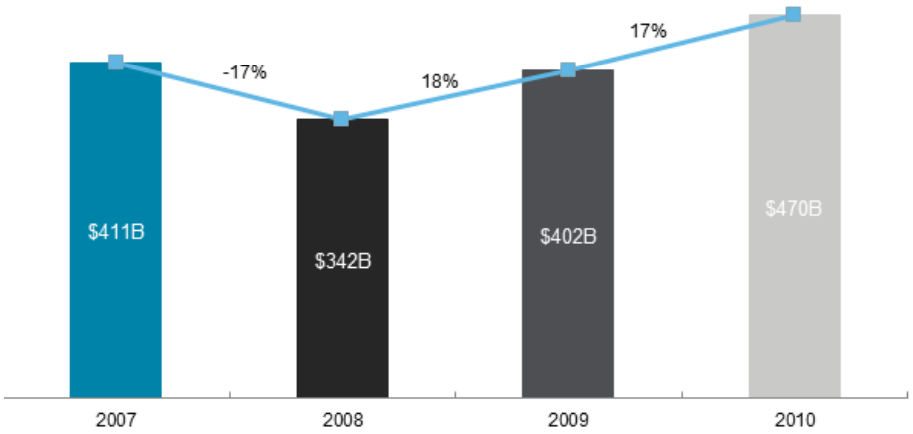
Expectations for June and July Renewals

- Existing reinsurer capital remains adequate to satisfy insurer demand
- No supply-driven turn anticipated
- Capital on sidelines likely to attenuate potential property led market hardening
- Our outlook for June and July 2011 renewals remains in line with our forecast at January 1, 2011
- Our expectation is that renewals in peak zones in the United States and Europe throughout the remainder of the year will be minimally affected by the reinsurance losses incurred during the first quarter of 2011

Change in Reinsurer Capital



US Renewal Guidance

	ROL Changes	Capacity Changes	Retention Changes
Personal Lines National	-5% to Flat	+5%	+5% to +10%
Personal Lines Regional	-5% to Flat	+10%	Stable
Florida Homeowners Specialists	-5% to Flat	+5%	Stable
Standard Commercial Lines	-5% to Flat	+10%	Stable to +10%
Complex Commercial Lines	-5% to Flat	+10%	+5% to +10%

Assumptions: No changes in insured catastrophe exposures. Rate of change measured from the expiring June/July 2010 terms.
Source: Aon Benfield Analytics

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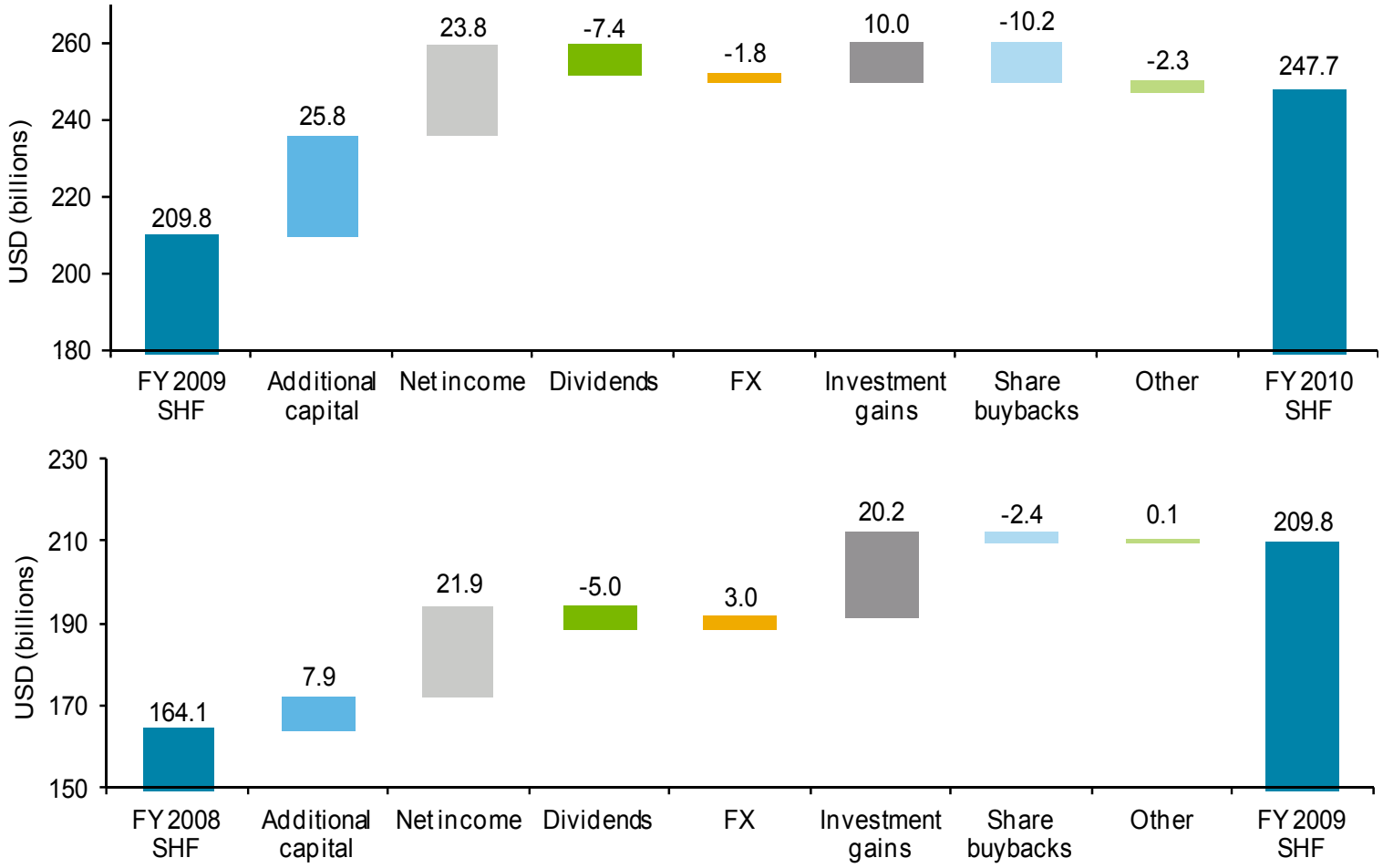
Shareholders' Funds Development – 2010 vs 2009



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Section 4: Model Change RMS V. 11 in Perspective

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Japan, NZ and Chile Model Miss Experience

- **Chile**
  - Model losses higher than current estimates (model miss factor < 1.0) in contrast to US events
  - Engineering performing per designs
  - Rigorous enforcement of building codes

- **New Zealand**
  - Position unclear and complicated by two events
  - Data and coverage differences complicate modeling
  - Magnitude of event not surprising for NZ, though location unexpected
  - Liquefaction in excess of expectations
  - Loss outcomes expected to be broadly within “secondary uncertainty” range for event

- **Japan**
  - Far too early to comment on losses
  - AIR model only considers events up to Mw 8.3 on fault that ruptured 3/11
  - AIR largest event in catalog Mw 8.7
  - RMS largest event in catalog Mw 8.7
  - **Parameter risk**: both models rely on same National Seismic Hazard Maps for Japan

RMS Version 11

- History of Model Miss
  - Model miss studies done since 2005
  - Hurricane Ike
  - Reinsurers' response to model miss
- Key points on RMS V.11 overhaul of US wind model
  - Vulnerability updates
  - Wind hazard updates
  - Secondary modifier updates

RMS Version 11

- Impact of the model change, as published by RMS
  - Biggest drivers of change:
    - Increase in inland hazard – the largest driver of change
    - Increase in commercial vulnerability
  - Nationwide increase in wind results at all return periods expected
    - Commercial will increase more than residential due to increased vulnerability of commercial risks
    - Non-coastal wind risk is increasing substantially; still minor in comparison to coastal risks
    - Coastal wind risk is decreasing in many areas, though not all
    - Florida increasing least overall
    - Texas increasing most
    - Mid-Atlantic also increasing substantially (though still contributes least to overall industry AAL)

Section 5: Implications for January 1, 2012

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Factors Influencing Reinsurance Renewals at January 1, 2012

- Increasing clarity on Tohoku earthquake
- US Wind season
- Change in reinsurer capital
- Demand for reinsurance
- Other?