

GUY CARPENTER



Property Insurance in Pacific Rim: Opportunity and Challenge

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Property Insurance in the Pacific Rim: Opportunity and Challenge

Discussion topics

- **Macro view**
 - Diversity is the norm
 - Sustainable growth
- **Specific market views**
 - Mature, developed, emerging and frontier
- **Leading indicators of risk management**
 - Regulatory strength
 - Catastrophic risk model availability
- **Opportunities for non-life actuaries in the Pacific Rim**

Diverse Languages and Cultures



■ Languages:

- Mandarin, Hindi, English, Japanese, Korean, Bahasa Indonesian, Bahasa Malay, Khmer, Laos, Vietnamese, French, Dutch, Filipino, Thai, and others

■ Population

- from 1.3 billion in China to 4.4 million in New Zealand
- 55% of population, 26% of GDP

■ Literacy rate

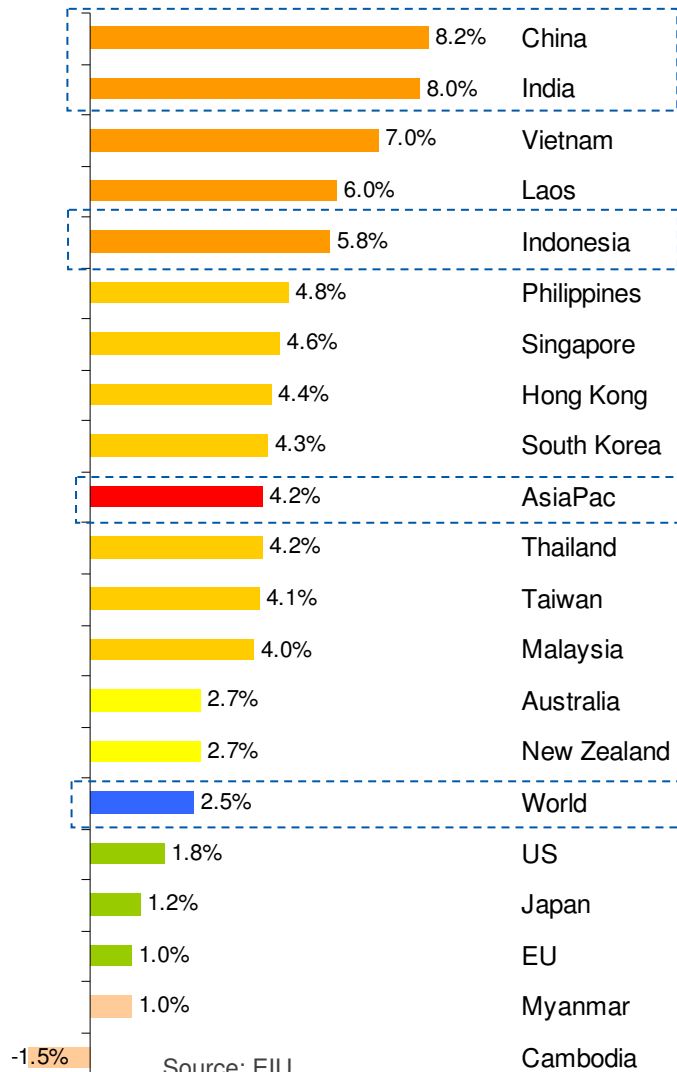
- from 99% (Japan, South Korea) to 66% (India)

■ Geographic Spread

- Tokyo to Singapore – 7 hours
- Singapore to Sydney – 8 hours
- Beijing to Hong Kong - 3 hours

What Countries are Growing the Most Rapidly?

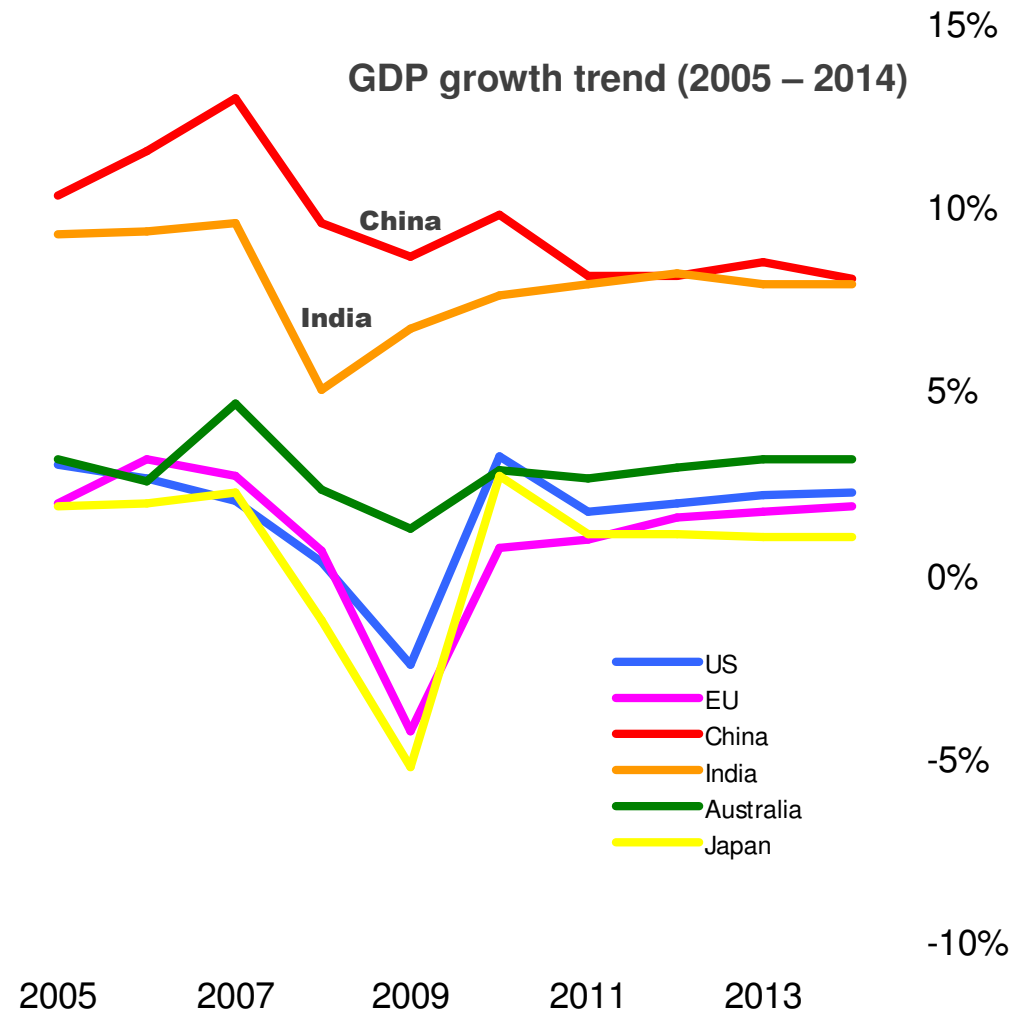
GDP growth rate (2011 Est.)



Source: EIU

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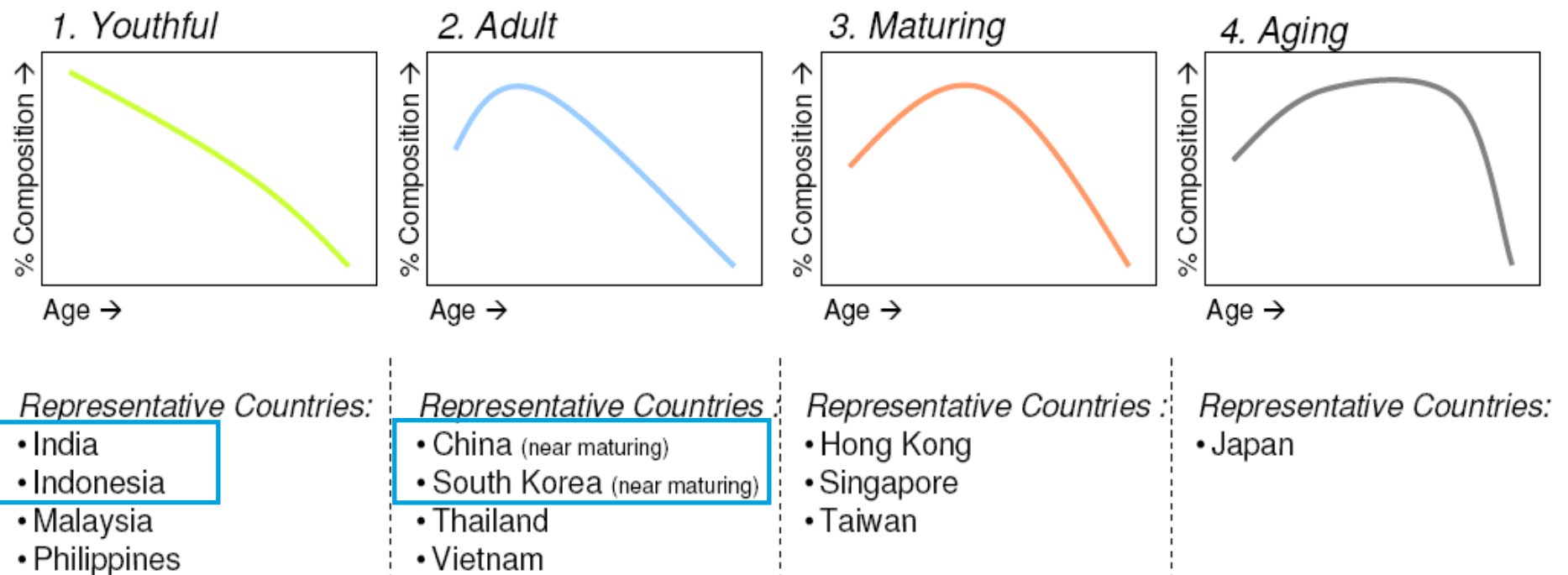
GDP growth trend (2005 – 2014)



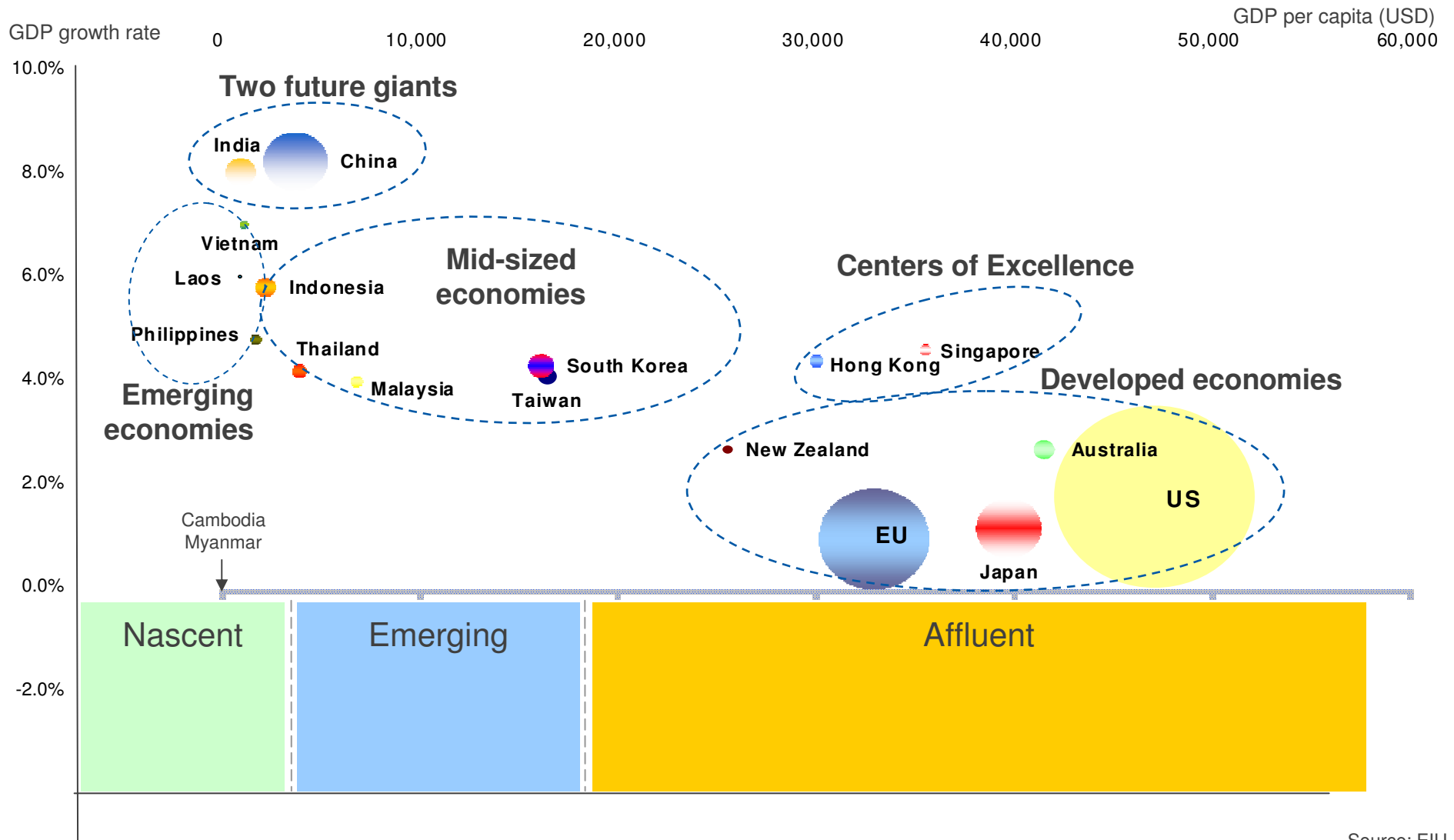
Source: EIU

How Sustainable is the Growth?

Density of Population Age



Putting it Together



Source: EIU

How Much Should Companies Invest?

GDP projections

Country	2011	2025	2050
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Source: PwC main scenario model projections for 2010-50

US	15,051.17	21,010.83	38,060.89
China	10,656.45	25,501.22	57,784.54
India	4,412.91	10,721.09	41,373.68
Japan	4,322.31	5,535.43	7,641.40
Russia	2,948.64	4,635.98	7,422.46
Brazil	2,265.08	3,950.27	9,771.54
UK	2,338.80	3,208.02	5,616.50
Germany	3,108.00	3,834.14	5,629.18
France	2,235.54	3,046.22	5,339.13
Italy	1,962.14	2,557.97	3,805.81
Spain	1,495.61	2,036.10	3,198.53
Canada	1,362.20	1,892.54	3,348.14
World	78,579.03	131,185.61	280,612.66

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Specific Market Views

Japan

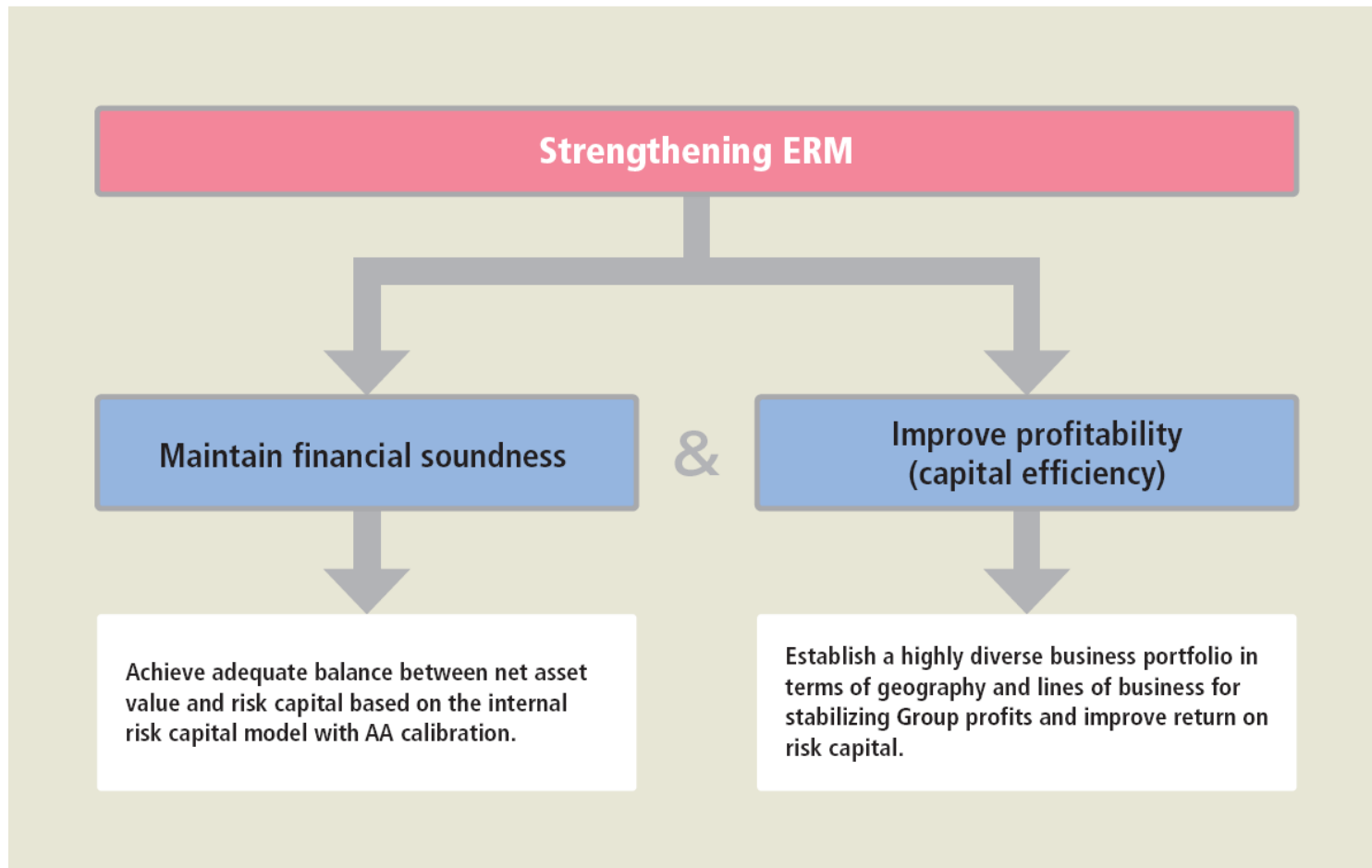
Snapshot – Mature Market

(USD billions)	2005	2006	2007	2008	2009
Real GDP	4,552	4,363	4,378	4,887	5,068
Real GDP Growth	-1.2%	-4.2%	0.4%	11.6%	3.7%
Direct Property Premium	14.6	14.6	14.2	14.4	14.2
Property Insurance Penetration (GWP/GDP)	0.32%	0.33%	0.32%	0.29%	0.28%
Gross Property Loss Ratio	37.9%	40.3%	33.9%	32.5%	32.1%

- Domestic premiums declining slightly in year ended March 31, 2010
 - Fewer auto sales, exports
 - Revised insurance rates upward in 2010
- Subject to significant catastrophe exposure
- Mergers and overseas expansion key strategies
 - MS&AD, NKSJ Holdings + Tokio Marine have 90% market share
 - Tokio Marine acquisition of Philadelphia Insurance (2008)
- Regulation believed to be headed toward Solvency II type system
- Technical risk management embraced

Japan Technical Risk Management

1. Overall Profile of Risk-Based Management (ERM: Enterprise Risk Management)



Australia

Snapshot – Mature Market

(USD billions)	2005	2006	2007	2008	2009
Real GDP	738	784	950	1,059	997
Real GDP Growth	12.1%	6.2%	21.3%	11.5%	-5.9%
Direct Property Premium	5.9	6.1	6.4	7.2	7.6
Property Insurance Penetration (GWP/GDP)	0.80%	0.78%	0.68%	0.68%	0.76%
Gross Property Loss Ratio	48.2%	59.2%	75.4%	79.0%	69.1%

Source: AXCO, International Monetary Fund

- High insurance penetration
- Sixth largest country, fiftieth most populous
- Premiums rising in 2010 due to catastrophes and low interest rates
 - Very competitive market
- Catastrophes not a huge part of expected insurance cost but have been very troublesome recently
- Highly regulated environment

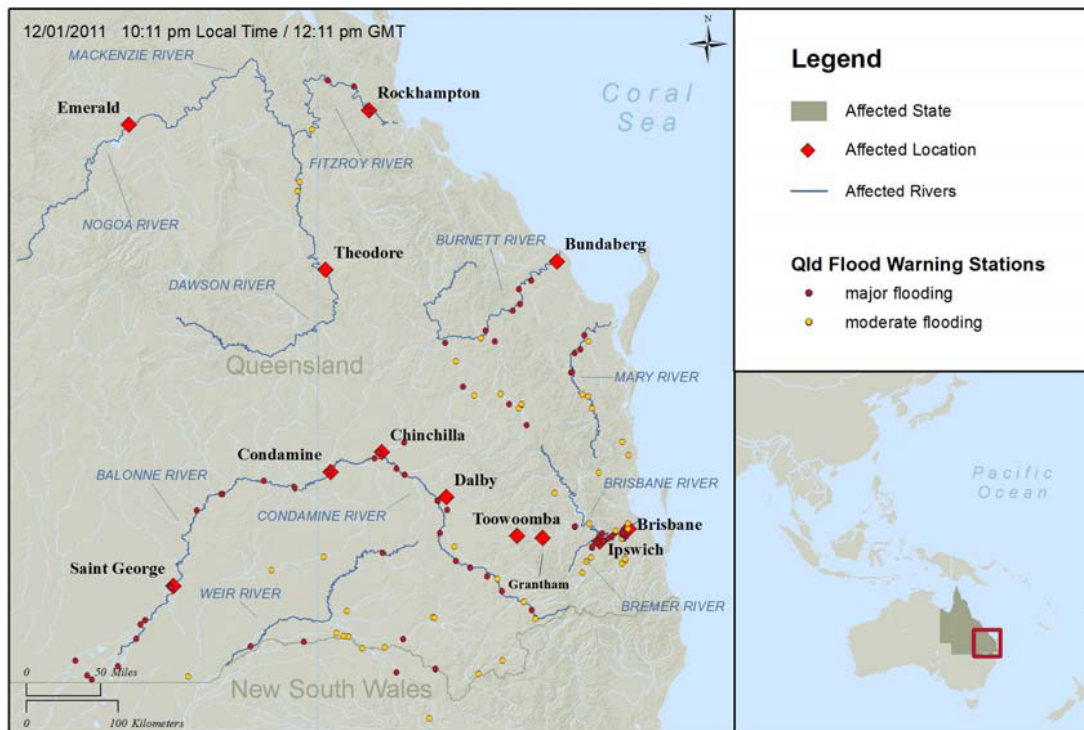
Australia

Catastrophe Impact – Queensland State Flood

CAT-i

Report Date: 12 January 2011 Event Date: December 2010/January 2011

Floods in Queensland, Australia



- Worst flood in Queensland State since 1974
- Large economic loss (likely greater than AUS\$6B)
- Insurance loss will be significant since floods moved into Brisbane, however
 - Flood coverage not widely available
 - Suncorp deciding to pay regardless of coverage
 - Will reinsurers pay?
 - Event definition troublesome

South Korea

Snapshot – Developed Market

(USD billions)	2005	2006	2007	2008	2009
Real GDP	845	952	1,049	931	833
Real GDP Growth	17.0%	12.7%	10.2%	-11.2%	-10.6%
Direct Property Premium	1.1	1.1	1.2	1.2	Not available
Property Insurance Penetration (GWP/GDP)	0.13%	0.12%	0.11%	0.12%	Not available
Gross Property Loss Ratio	31.7%	30.1%	58.4%	35.7%	Not available

Source: AXCO, International Monetary Fund

- Relatively weak economic environment recently but improvement in 2010
 - Motor premium increasing, although loss ratios worsening
 - Long term (short term insurance with a savings element) insurance improving results
- Insurance penetration
 - Property insurance is compulsory for certain commercial structures
 - Homeowner's insurance penetration low (below 5%)

South Korea

Importance of Investment Income

South Korea Non-Life – Key Figures* (2006-2010) (KRW Billions)

Year	NPW	Operating Income on Investment	Net Income
2006	23,651.4	2,089.8	1,199.3
2007	27,411.1	2,239.9	1,067.8
2008	31,874.4	2,669.8	1,658.8
2009	35,885.0	2,630.7	1,310.7
2010	41,403.7	3,141.3	1,541.4

*All figures are for year-end March.
Source: Financial Supervisory Service

Taiwan

Snapshot – Developed Market

(USD billions)	2005	2006	2007	2008	2009
Real GDP	365	376	393	403	379
Real GDP Growth	7.3%	3.1%	4.5%	2.4%	-5.9%
Direct Property Premium	0.7	0.7	0.7	0.7	0.6
Property Insurance Penetration (GWP/GDP)	0.19%	0.19%	0.18%	0.17%	0.16%
Gross Property Loss Ratio	61.1%	21.8%	17.1%	25.6%	28.7%

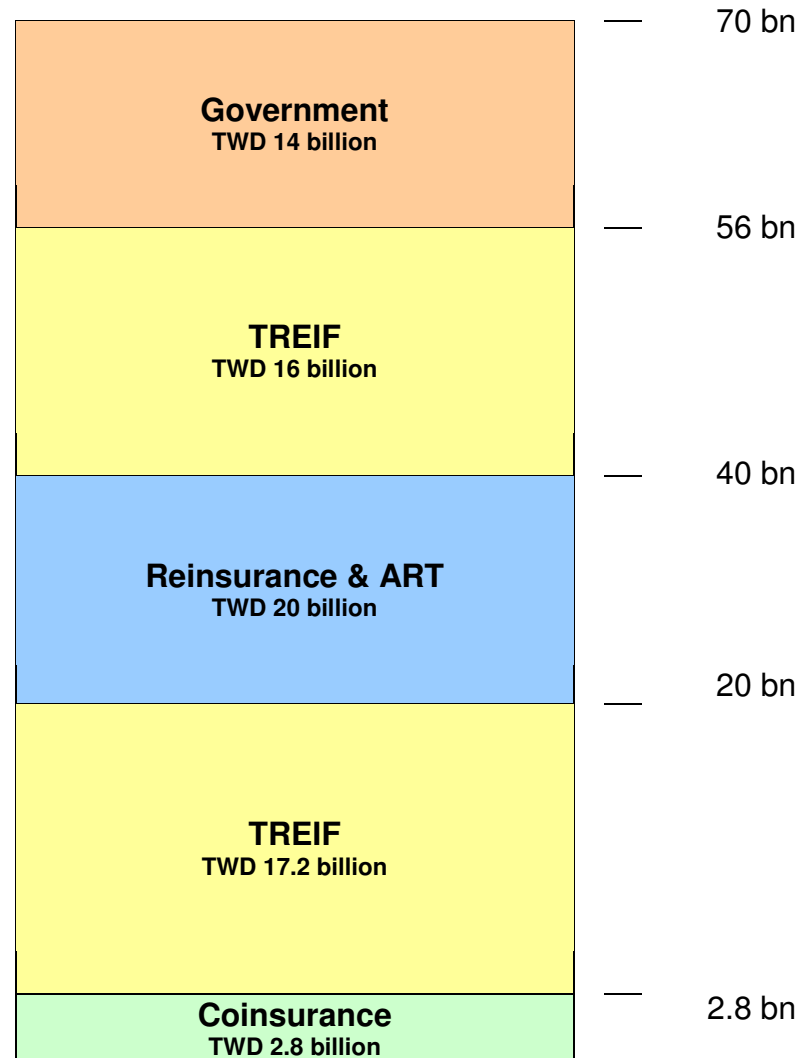
Source: AXCO, International Monetary Fund

- Last stage of insurance deregulation
 - Prices decreasing, future consolidations likely
- Active solvency regulatory environment
 - Enterprise risk management important
- Large catastrophes have shaped property insurance environment
 - 1999 Chi Chi earthquake: insured loss – US\$850M
 - 2001 Typhoon Nari: insured loss – US\$600M

Taiwan Residential EQ Insurance Fund (TREIF)

Currency:
TWD

- Innovative structure
 - Provides up to approximately USD 41K of coverage
- Precursor to micro-insurance
 - Pre Chi-Chi, take up rate for EQ insurance was less than 1%, currently at approximately 28%



China

Snapshot – Emerging Market

(USD billions)	2005	2006	2007	2008	2009
Real GDP	2,236	2,658	3,382	4,520	4,909
Real GDP Growth	15.8%	18.9%	27.3%	33.6%	8.6%
Direct Property Premium	2.5	2.5	3.7	5.4	Not available
Property Insurance Penetration (GWP/GDP)	0.11%	0.09%	0.11%	0.12%	- Not available
Gross Property Loss Ratio	57.6%	59.0%	52.1%	68.2%	Not available

Source: AXCO, International Monetary Fund

- Economic growth fueling demand
 - More automobiles purchased in China than in the U.S.
- Underwriting results generally improved in 2009
- Cat risk high, but 2008 earthquake and 2010 floods had limited impact
- Regulators becoming more assertive
- A.M. Best believes several insurers need to inject capital to support solvency ⁽¹⁾

Excerpts from 2010 PICC Interim Report

TURNOVER

	Six months ended 30 June	
	2010	2009
	RMB million	RMB million
Motor vehicle insurance	58,846	46,328
Commercial property insurance	6,937	6,496
Liability insurance	3,080	2,693
Accidental injury and health insurance	2,129	2,241
Cargo insurance	1,992	1,660
Other insurance	8,644	7,632
Total	81,628	67,050

SOLVENCY MARGIN REQUIREMENT

The Company is subject to a number of laws and regulations regarding financial operations of the Company, including maintaining a stipulated solvency margin and providing for certain funds and reserves. In accordance with the insurance laws and regulations of the PRC, the Company was required to maintain a minimum solvency margin of RMB18,237 million on 30 June 2010. The Company's actual solvency margin calculated pursuant to the regulations of the CIRC was RMB21,301 million and the solvency margin adequacy ratio was 117% (Note).

Note: In calculating the solvency margin, the assessment standards for premium reserves as promulgated by the CIRC shall continue to apply to insurance contract liabilities while China Accounting Standards for Business Enterprises shall apply to non-insurance contract liabilities.

Indonesia

Snapshot – Frontier Market

(USD billions)	2005	2006	2007	2008	2009
Real GDP	286	364	432	511	539
Real GDP Growth	11.2%	27.5%	18.6%	18.3%	5.5%
Direct Property Premium	0.6	0.6	0.7	0.8	Not available
Property Insurance Penetration (GWP/GDP)	0.21%	0.16%	0.17%	0.16%	Not available
Gross Property Loss Ratio	44.9%	43.7%	50.0%	38.8%	Not available

Source: AXCO, International Monetary Fund

- Favorable business climate is fueling GDP growth
- Fragmented market - opportunity for consolidation
- Regulatory environment is emerging
- Catastrophe risk is significant (earthquake, flood and tsunami)
 - 2009 Sumatra EQ – economic damage of USD 2.3B but insured losses low due to low penetration



Leading Indicators of the Importance of Risk Management

Regulatory Environment

(Informal) Regulatory Survey

Country	Calculation of Solvency Capital Requirement		Stress Test		Risk Management Function Requirements		
	Prescribed Narrow ⁽¹⁾	Broad ⁽²⁾	Internal Model Allowed with Regulatory Approval	Asset Oriented Tests	Insurance / Catastrophic Risk	Explicitly Required	Mandatory Own Risk and Solvency Assessment
Canada		✓		✓	✓	✓	✓
Solvency II		✓	✓	✓	✓	✓	✓
US		✓					
Australia		✓	✓		✓		✓
China	✓		✓	✓	✓	✓	✓
India	✓				✓	✓	✓
Indonesia	✓						
Japan		✓	✓	✓	✓	✓	
Korea		✓	✓		✓	✓	✓
Malaysia		✓		✓	✓		
Philippines		✓					
Singapore		✓		✓	✓		
Taiwan		✓		✓	✓	✓	Recommended
Thailand		✓		✓		✓	✓
Vietnam	✓						

(1) Narrow RBC formulas would be the greater of a stated percentage of net premiums or claims

(2) Broad RBC would include risk charges for asset and/or cat risk

Cat Model Availability

Asia Pac Country, Ranked by Non- Life Premium	Earthquake				Wind				Flood
	Importance	RMS	AIR	EQE	Importance	RMS	AIR	EQE	Importance
Japan	High				High				High
Korea	Med				High				High
China	High				High				High
Australia	Low				Med				Med
Taiwan	High				High				High
India	High				Med				Low
New Zealand	Med				Low				Med
Singapore	Low				Low				Low
Thailand	Low				Low				High
Malaysia	Low				Low				Med
Hong Kong	Low				Med				Low
Indonesia	High				Low				Med
Philippines	Med				High				Med
Pakistan	High				Low				Low
Vietnam	Low				Low				Low

Key:		Detailed model
		New model expected in 2011
		Aggregate model or detailed model not updated in last 4 years
		No model



Opportunities for Non-Life Actuaries in Pacific Rim

Opportunities for Non-Life Actuaries in Pacific Rim

▪ Japan

- Low number of non-life actuaries
 - No FCAS / ACAS
- Large opportunity given focus on risk management

▪ China

- Low number of non-life actuaries but this seems to be changing quickly
- CIRC - Beginning 1/1/11, a non-life insurer with annual premium of more than RMB1b (USD150m) must establish an independent actuarial department
- 28 FCAS and 3 ACAS

▪ Taiwan and Korea

- Emerging importance of ERM and capital modeling

▪ Australia

- Robust actuarial community

Final Thoughts on Asia Pacific

Strategic Requirements

- **Ability to adapt to changing environment**
 - “Only the paranoid survive” – Andy Grove
- **Innovate**
 - Be a leader & not a follower
- **Focus on people**
 - Develop long term strategic people plan (Deng Xiaoping overseas education strategy)

Planning is Critical

- **When planning for a year**
 - plant corn
- **When planning for a decade**
 - plant trees
- **When planning for life**
 - train and educate people



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