THE INSURANCE SECTOR
TRENDS AND SYSTEMIC RISK IMPLICATIONS

Based on Global Financial Stability Report, IMF, April 2016

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Motivation and Main Findings
Motivation (1)

- Insurance sector:
  - Big player in financial markets
  - Important economic functions

Relative Size of Financial Intermediaries
(Percent of GDP)

- United States
- Canada
- Euro area
- United Kingdom
- Japan
- Korea

- Insurance
- Banks
- OFIs
- Pension funds
• Two views on systemic risk

**Domino View**
- **Individual insurers**
- Large complex interconnected
- Distress?
- Default, stop funding, stop lending, securities.

**Tsunami View**
- **System of insurers**
- Shock to asset prices
- Common exposures
- Correlated sales, fire sales, stop/reduce funding.

Counter-party stress ... risks to real activity
Questions answered in GFSR

Has insurance sector’s systemic importance changed over time/countries?

What explains changes in systemic importance?
- Investment behavior
- Maturity mismatches
- Business models
- Broader market dynamics

Implications for insurance regulation?
Main findings

Systemic importance
- Increased, esp. life, but lower than banks
- More homogenous, higher commonalities
- Increased market risk and interest rate sensitivities

Spillovers
- Insurers transmit shocks across financial system
- Especially in Europe and North America

Life insurers’ assets
- No major shift towards “riskier” assets
- But assets have become “riskier”
- Search for yield among weaker, smaller firms

Regulatory implications
- Macro-prudential approach needed
- International capital and transparency standards
- Focus on smaller and weaker firms
Insurance Sector: Systemic Importance
Increased price comovement among insurers

**Time series clustering**  
*Number of clusters*

1. North America
   
2. Europe

**Insurers’ Equity Return Due to First Principal Component (Percent)**

- Life United States
- Nonlife United States
- Life Europe
- Nonlife Europe
- Mixed
Systemic Risk – rising CoVaR and capital shortfalls

CoVaR Indices \( (\text{Normalized}, \ 2006=100) \)

North America

Europe

Advanced Asia

Conditional capital shortfall \( (\text{USD trillions}) \)
A +10 percent value for the top 100 indicates that there are 10 percent more insurance firms among the top 100 than justified by their sample share.
Systemic Risk Spillovers: Insurance is shock transmitter.
Systemic Importance Drivers
Investment behavior

• Take on greater asset risk in low interest rate environment? *Across asset categories true only for weaker, smaller firms*

• Increased similarity in asset composition? *Not apparent*

• Greater procyclicality in investment behavior? *Mixed evidence*

• But greater common exposure to *aggregate risk* *interest rates*
1. More risky investments: at lower cap, smaller firms and those with more annuity/min. return products

- In low interest environments, factors that contribute to higher exposure to riskier assets are lower-capitalization.

- With low interest rates, the propensity of lower-capitalized firms to hold riskier assets is strengthened.

- A higher share of annuity products in total liabilities...

- ...and the size of the firm, with smaller being more exposed.

- With low interest rates, the propensity of smaller firms to hold riskier assets is strengthened.
2. Procyclicality  
- Mixed evidence

U.S. insurers acted countercyclically in 2008 and contributed to stability

But... *turnover* at firm level did not increase in recent years

3. Duration mismatches  
- Higher *i-rate* sensitivity

US and European Insurers' Equity Returns' Interest Rate Sensitivity Increases ...and so does their net duration mismatch

Note: For a negative (net) duration, insurers' liabilities are longer than their assets. Insurers' future business prospects get better (worse) when interest rates increase (fall).
4. Liability side developments *may also contribute to riskiness*...

Unit-linked products are a form of long-term insurance whereby the policyholder chooses the investment strategy. These products can, but do not necessarily have to, include guarantees.
5. Changed Market Dynamics
Higher cross-asset correlations post-2010

Temporary factors
- Search for yield
- Lower risk aversion

Structural changes
Increase risk of market illiquidity
Benchmarking more widespread

Greater similarity across insurance firms’ stock prices
Insurance stocks more affected by common shocks
Implications for Regulation
Recent Regulatory Developments

• Regulations now more risk-based and accounting principles more market-based
  – valuations more market-sensitive
  – investment horizons of risky investments shortened
  – the maturity of safe assets extended

• Wide variations in capital requirements and the use of internal models
  – These are among the main problems in developing a global capital framework
  – But progress is being made
Compliance with ICPs

1. Selected IAIS Core Principles on Regulation
   - Observed
   - Unobserved

2. Selected IAIS Core Principles on Business Strategies
   - Observed
   - Unobserved
Forward looking lessons for Regulation

- Macro-prudential approach
  - address risks related to common exposures

- Market-consistent valuation standards
  - enhance transparency
  - address duration mismatches

- Supervisory follow-up of smaller and weaker firms
  - Focus should not be restricted to only large firms
  - Too-many-to-fail problem
  - Contagion

- Vigilance to avoid regulatory arbitrage