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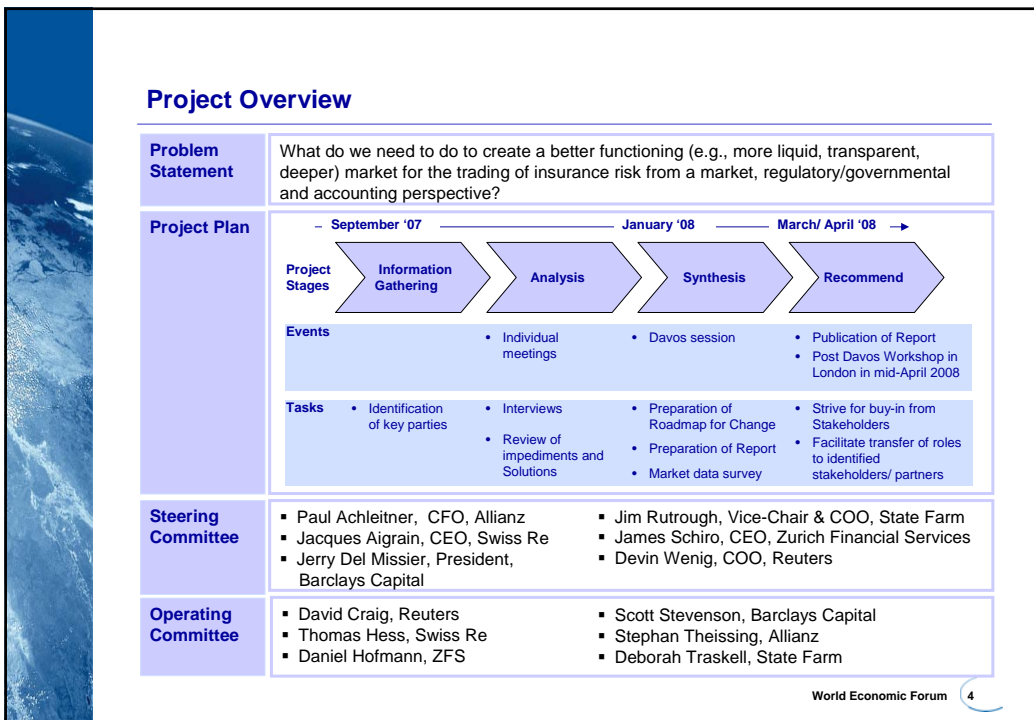
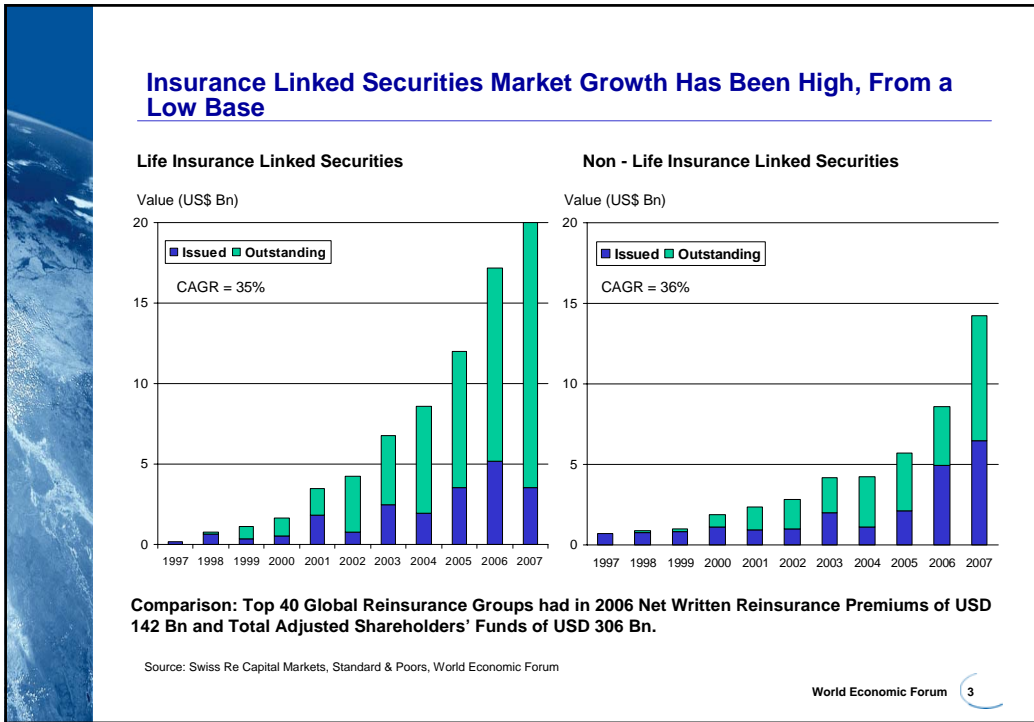
Layout & Distribution: Valéria Kozakova

Integration of Insurance Risk with the Capital Markets - The Context of recent Market Developments

Daniel Hofmann

Agenda for our discussion

- A word from the Sponsor
- Review of the World Economic Forum's project, what we presented at Davos and what we learned
 - Are we on 'the right track'?
 - Given the recent issues around Systemic Financial Risk, Sub-prime, etc what are the 'so whats' for the insurance risk market?
 - What's the difference between direct insurers and reinsurers when it comes to securitization?
 - Will reinsurance be the more cost-effective solution for the long run?
- Review of the next steps post Davos
 - Are these the correct next steps and will this result in impact?
- Review of the potential owners of the implementation initiatives
 - How do we manage the implementation process?

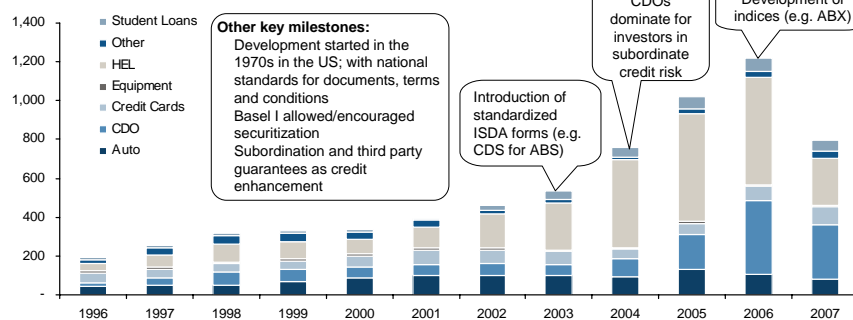


The Pros and Cons of Non- Traditional Risk Transfer

	Reasons to transfer or invest	Reason not to transfer or invest
Sponsors	<ul style="list-style-type: none"> ▪ Additional capacity ▪ Diversification of risk transfer ▪ Multi-year coverage ▪ Fully collateralized (lower counterparty risk) ▪ Regulatory arbitrage ▪ Create "capital light" insurance 	<ul style="list-style-type: none"> ▪ Pricing of traditional reinsurance ▪ Regulatory and rating treatment ▪ Time and cost ▪ Difficulty for sponsors in evaluating
Investors	<ul style="list-style-type: none"> ▪ Higher yielding assets ▪ Portfolio diversification (little correlation with other markets) 	<ul style="list-style-type: none"> ▪ Current small market and limited secondary market ▪ Valuation requires specific knowledge, models and data ▪ Uncertainty of low probability risk (cat risk) ▪ Instruments partly below investment grade
Public	<ul style="list-style-type: none"> ▪ Competitiveness/Level playing field ▪ Capacity for primary insurance 	<ul style="list-style-type: none"> ▪ Financial stability?

Credit securitization – Model for Expansion and Lessons Learned

The Growth in Credit Securitization in the US (\$Bn)




Major Differences between Insurance and credit securitization

- Lower moral hazard for cat bonds
- Fully funded structures (Liquidity)
- So far, less vulnerable to asset bubbles and crowd behaviour
- However, life embedded value & XXX securitization similar to conventional ABS

Recent Lessons Learned from the credit crisis


- Opaque structures cannot be effectively monitored
- Liquidity risk has to be considered more
- Quality of the underwriting of the underlying assets must be understood




How can we think of the impediments to market growth?

- We see three major categories (with a overall theme of need for standardization)
 - Data
 - Culture, complexity and cost
 - Regulation and rating


- It can also help to think of impediments by:
 - geography (US vs EU) and product line (life vs non-life)
 - Trigger type

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Impediments & Solutions – Data

Impediments	Solutions	Existing Initiatives
<ul style="list-style-type: none"> • Different data metrics in EU; inconsistent and insufficient data collected 	<ul style="list-style-type: none"> • Standardized data metrics – industry standards • Improvement of data reporting processes and formats • Insurance product standardization 	<ul style="list-style-type: none"> • Acord working group on catastrophe exposure reporting standards; CRESTA; data files required by modelling firms (UNICEDE)
<ul style="list-style-type: none"> • Poor data quality 	<ul style="list-style-type: none"> • Quality standards for data reporting 	<ul style="list-style-type: none"> • See above and internal improvement programmes
<ul style="list-style-type: none"> • Reluctance by insurers to disclose portfolio data 	<ul style="list-style-type: none"> • Improve transparency of non proprietary data and technical availability 	
<ul style="list-style-type: none"> • Lack of track record for insurance-linked instruments 	<ul style="list-style-type: none"> • No solution apart from time 	
<ul style="list-style-type: none"> • Lack of Industry Loss indices in Europe and Asia 	<ul style="list-style-type: none"> • Development of such indices (definition and data contribution by the industry; aggregation by independent organization) • Develop loss indices for other types of risk 	<ul style="list-style-type: none"> • CRO Forum: European windstorm industry loss index
<ul style="list-style-type: none"> • Lack of granular parametric data in US 	<ul style="list-style-type: none"> • Build hardened network of wind measuring stations in US and ensure data delivery 	<ul style="list-style-type: none"> • WindX joint venture (RMS and WeatherFlow) building network of hurricane-hardened weather stations

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Impediments & Solutions – Culture, Complexity, Cost

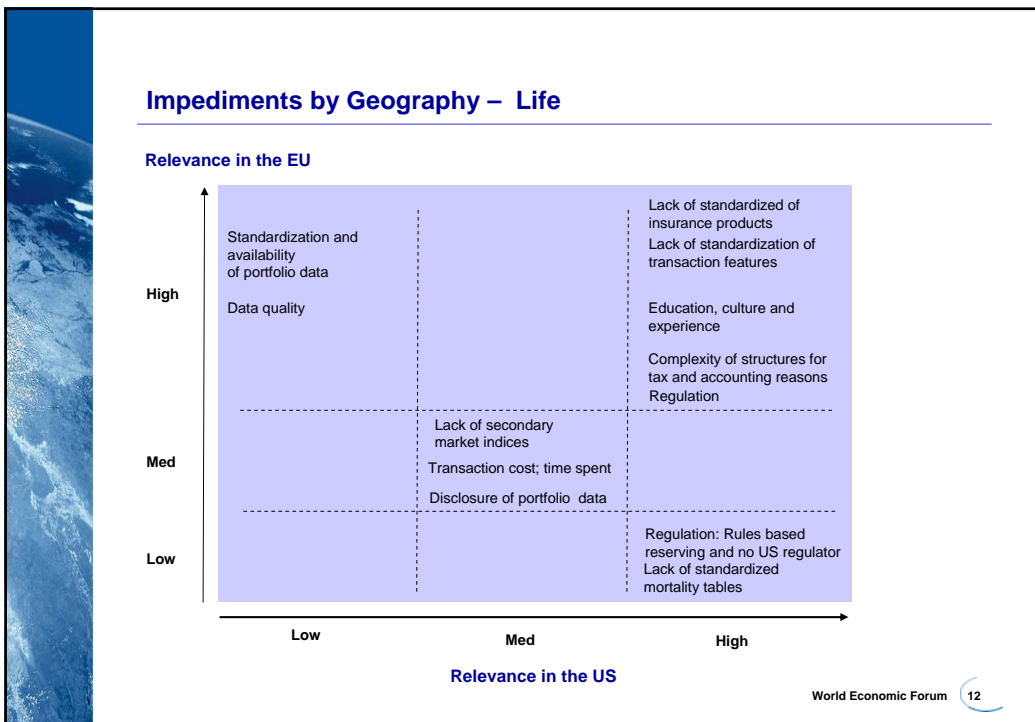
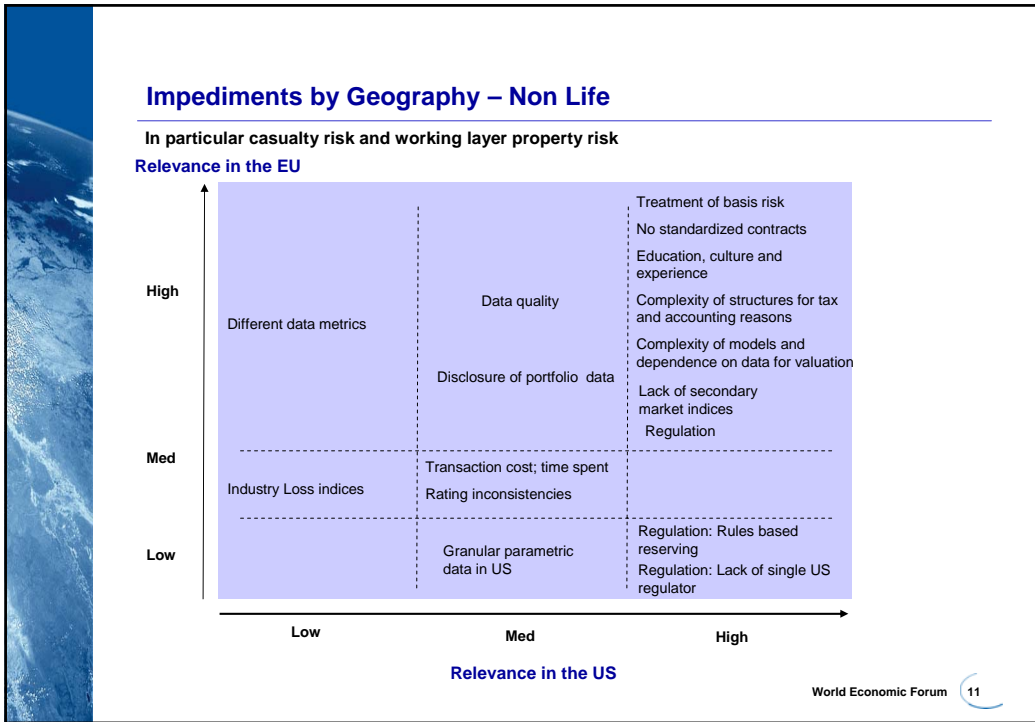
Impediments	Solutions	Existing Initiatives
<ul style="list-style-type: none"> • Insurer's lack of experience with securitization; traditional insurance mindset ; lack of common language 	<ul style="list-style-type: none"> • Education; publications on existing transactions • Develop common language 	<ul style="list-style-type: none"> • This project • Swiss Re Sigma, etc
<ul style="list-style-type: none"> • Complexity of cat models and dependence on data for valuation 	<ul style="list-style-type: none"> • Development of internal models to manage basis risk 	
<ul style="list-style-type: none"> • Management of basis risk 		
<ul style="list-style-type: none"> • Dependency on 3 firms for cat modelling 	<ul style="list-style-type: none"> • Open source cat model 	
<ul style="list-style-type: none"> • Complexity of transactions 	<ul style="list-style-type: none"> • Development of trigger indices (industry loss or modelled industry loss) • Standardization of triggers (parametric, industry loss, unified mortality tables in the US) • Standardization of insurance products (e.g. term life insurance) 	<ul style="list-style-type: none"> • European Industry Loss Index for Windstorm • Development of modelled industry loss indices by modelling firms (based on industry exposures)
<ul style="list-style-type: none"> • No standardized contracts 	<ul style="list-style-type: none"> • Launch multi-stakeholder discussion, including modelling firms, rating agencies, accounting, and ISDA, for the development of standardized documentation for event scenarios and certain other structural transaction features (but still allowing for reinsurance accounting) 	
<ul style="list-style-type: none"> • Limited secondary market; market not yet efficient 	<ul style="list-style-type: none"> • Standardization of instruments • Increasing market transparency by working with information providers, portfolio managers, etc, and by development of indices • Development of derivative instruments 	<ul style="list-style-type: none"> • Swiss Re Cat Bond Indices
<ul style="list-style-type: none"> • Transaction cost; high management involvement in first transaction 	<ul style="list-style-type: none"> • Repeated issues, shelf offerings increase deal sizes • Standardized documentation 	

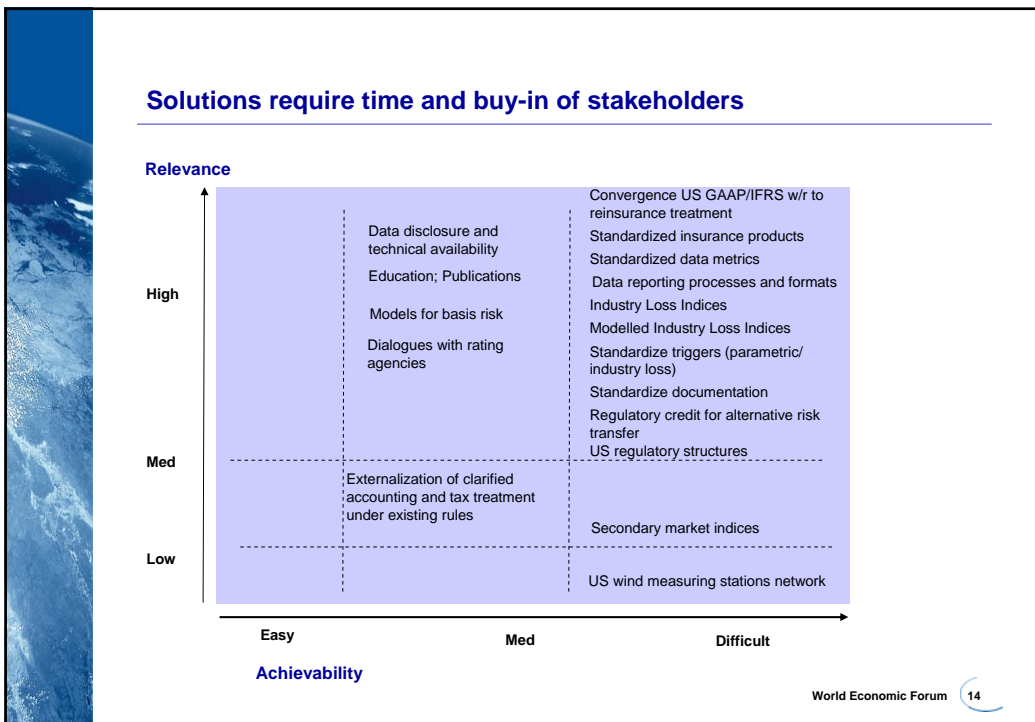
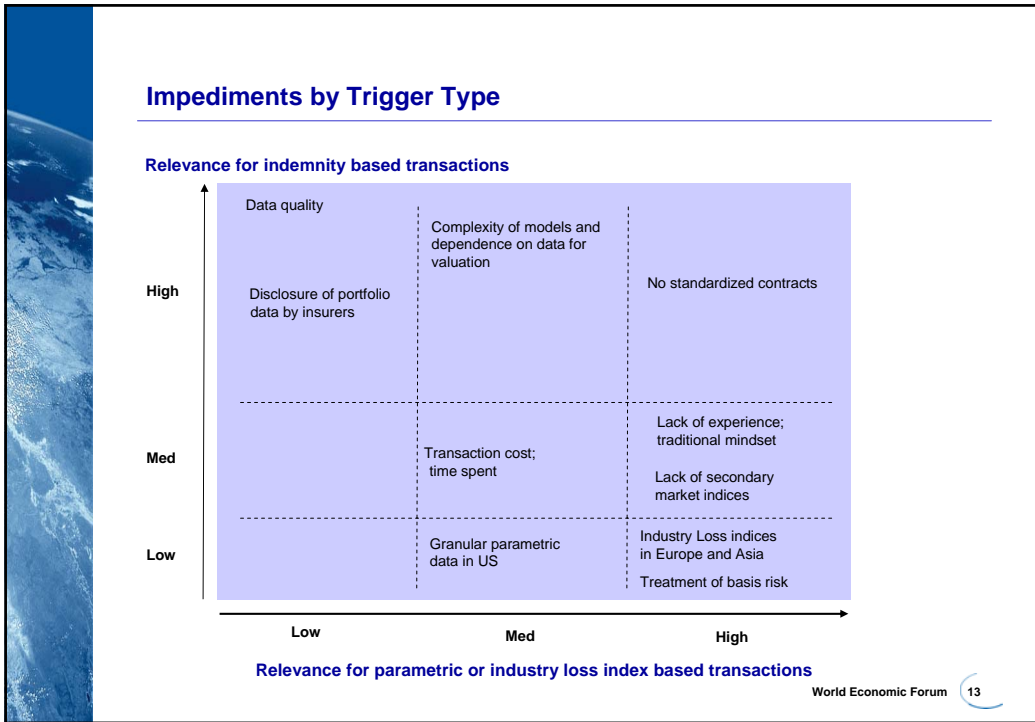
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Impediments & Solutions – Regulation and Rating

Impediments	Solutions	Existing Initiatives
<ul style="list-style-type: none"> • Limited solvency credit for non-indemnity based risk transfer (treatment of basis risk) 	<ul style="list-style-type: none"> • Develop robust methods for evaluation of basis risk and allocation of capital to support it; (prerequisite in the US being principles based reserving) • Third parties warehousing basis risk • Dialogues with rating agencies and legislators/regulators to establish (partial) solvency credit for non-indemnity based risk transfer 	<ul style="list-style-type: none"> • Solvency II currently provides for economic approach to alternative risk transfer
<ul style="list-style-type: none"> • High complexity of transaction structures as a result of taxation and accounting rules (consolidation rules; reinsurance treatment vs. derivative) 	<ul style="list-style-type: none"> • Tax exempt reserving for onshore SPRVs (was proposed with respect to US, but highly sensitive topic) • Clarify accounting and tax treatment for parametric risk transfer (economic substance over form) 	<ul style="list-style-type: none"> • Project IFRS on Insurance Contracts
<ul style="list-style-type: none"> • Inconsistencies in rating treatment of risk transfer (rating of instruments vs. credit rating of sponsor; rating of monoline reinsurers vs. rating of traditional reinsurers) 	<ul style="list-style-type: none"> • Transparent and consistent requirements set by the rating agencies 	
<ul style="list-style-type: none"> • Inconsistent rules for acceptance of SPV as reinsurer (jurisdiction, capitalisation) 	<ul style="list-style-type: none"> • Development of consistent rules 	<ul style="list-style-type: none"> • Implementation of Reinsurance Directive in EU
<ul style="list-style-type: none"> • Many transactions are not investment grade rated 		

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Next Steps post Davos

Getting to the Roadmap for Change...

Workshop will be informed by

- Input from project sponsors and davos participants
- Data survey
- Project report
- Interviews and stakeholder discussions

Post Davos Workshop Outcome

	Stakeholder	Geography & Product	Timeline
• Input from project sponsors and davos participants	y	y	
• Other inputs from April workshop and solution nature	y	y	

- Workplan illustrating start date, duration and dependence on prior tasks

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Post Davos Workshop: Some key questions

- **What does success look like for the Post Davos Workshop?**
 1. Agreement on a set of actions that will allow the market to grow to the next level
 2. Agreement on a clear set of owners for the actions (e.g., Company X will take ownership of educating US Insurance regulators), with certain companies taking a lead in key working groups
 3. Agreement on a governance structure (e.g., Companies a, b, c will form a committee to meet quarterly to report on progress)
- **Who do we expect to attend?**
 - Insurance Companies, Investment Banks, Academics, Regulators, Investors, Modeling firms, Rating Agencies, Industry Associations, Public Figures
- **Is the post Davos workshop restricted to Forum members?**
 - No. And, participants from this meeting are welcome to attend to the extent they are the appropriate representatives for their firms

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