	The Actuarial Profession making financial sense of the future
A Rating Agency's V Management	/iew of Risk
Simon Harris, FIA Team Managing Director, Insura Moody's Investors Service	ince EMEA

A Rating Agency's View of Risk Management

Moody's and Insurance Ratings

■ Where Risk Management fits in

Risk Management and Ratings

- What Moody's looks for
- Benefits of Risk Mgt in a Rating discussion
- Risk Management and Internal Capital Models

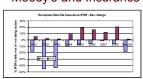
Lessons from the Banking Crisis

■ Did Risk Management help?



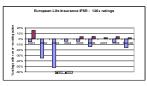


Moody's and Insurance Ratings



Major rating (downgrade) activity in 2002/3 with WTC and equity market falls.....

....but impact of recent capital markets crisis has been more muted





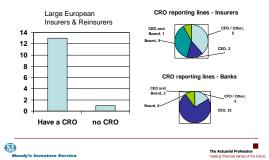
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Risk Management and Insurance Ratings	
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How does Moody's assess Risk Management?	
Risk Management Assessment Framework published March 2007 **Monday Testings** **Birk Management Assessment** **Framework published March 2007 **Monday Testings** **Birk Management Assessment** **Non-file Insurance Companies** **Showard O'Robon** **Show	

Risk Management – What Moody's Looks For



Risk Governance - Some Observations



Benefits of Risk Management in Ratings

Generally, good Risk Management will help to maintain ratings stability

- Risk Mgt should be "appropriate" for the Group concerned
 - Strongly-rated Groups should have best-in-class Risk Mgt
- Risk Mgt unlikely to drag a rating up, but can drag it down if we believe that it is inconsistent with the Group's risk profile
 - Catastrophe events in excess of expectations
 - Extensive financial market losses beyond tolerances
- Increasingly, a cost of doing business (Solvency II)
- Not having a [strong] function raises several challenging questions



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Rating Methodologies stipulate implifice of goods controlled with the second se	Internal Capital Model	Reviews (1)	
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Risk Management and Capital Mo Analysis	odel	
The combination of Risk Management and Qualitative Model Assessment defines the credibility given to Capital Model Results	d e	
With improving model quality, better risk management improves reliance on capital model very Good Adequate Weak		
Risk Management Score Adequate Weak	Weak model quality implies low reliance on model results irrespective of risk mgt quality	
Moody's Investors Service	The Actuarial Profession making francial sense of the future	
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A 'business requirement', particularly for more complex Groups Without strong risk management and cult		
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Common criticisms of Banks' Risk Management Failures

Risk Area	Possible failures
Risk Governance	Risk managers had insufficient power Board of directors or Mgt did not have appropriate expertise Skewed compensation systems
Risk Management	Limit systems were not comprehensive Over-reliance on liquidity No/low allowance for off Balance Sheet risks
Risk Measurement	Model errors eg poor capture of basis or tail risk; underestimated counterparty or contagion risk Limitations of models ignored or not known
Risk Infrastructure & Intelligence	Systems unable to respond quickly enough Poor communication to management



Risk Governance Failures - and how Insurers are responding

"Without support from top management, it didn't matter much what the chief risk officer said or to whom they said it"
BIS 79th Annual Report, "Rescue, Recovery, reform"; June 2009; p.10

"There is a strong prima facie case that inappropriate incentive structures played a role in encouraging behaviour which contributed to the financial crisis" FSA; The Turner Review; March 2009; p.80

- Ensure appropriate governance structures for CRO function (and have a CRO function); does the risk function reach into the business lines / underwriters?
- 2. Compensation deferring bonus payments for underwriters and management



Risk Management Failures - and how insurers are responding

- Off-Balance Sheet Risks Trading activities where nominal risk (included in bank's risk management framework) was substantially lower than actual full economic risk
- Reliance on liquidity for banks with deliberate funding shortfalls, absence of (cheap or any) lending provoked dramatic deleveraging. [Lack of] liquidity was often not perceived as a risk
- Limit systems did not always allow for enough risk dimensions
 - Emerging risks / latent claims similar to Off-Balance Sheet Risks
 - => tighten underwriting clauses; 'think the unthinkable' Liquidity tends to be little concern for non-life insurers – more so for life and certainly for those involved in credit derivative-related
 - cover
 3. Quantification of risk tolerance (eg max. Florida wind loss) is key



Risk Measurement Failures – and how	
insurers are responding	
Badly constructed models – financial complexity not helped, but probably overblown as a root cause? Over-reliance on models, or ignorance of model limitations Insufficient use of stress testing	
-	
Model sophistication for <u>insurance</u> risks seems generally good to very good; asset risk modelling continues to improve Insurers' capital models are usually good at what they are designed to do (eg capital needed for 99.5% survival over 1 yr) – but remain aware of the shortcomings	
Stress testing usually an important part of risk discussion (eg Lloyd's RDS)	
The Achierial Profession Moody's Investors Service mostly francis serse of the future	
Risk Infrastructure Failures – and how	
insurers are responding	
Risk systems could not respond quickly enough to changing environment or provide an aggregate view	
Opaque risk disclosures – difficult for external parties to gauge risk profile	
** Lack of understanding at Management level and poor communication with 'quants'	
Trade-off between model complexity and model usefulness? Where are insurers on this?	
Insurers' risk disclosure generally poor, but we expect to improve Senior mgt need to continue to improve understanding of models – CROs and others need to continue to ensure the message is	
- CROs and others need to continue to ensure the message is delivered well	
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Conclusions	
Risk management discussion is an increasingly	
important element of rating agency analysis o Important role in evaluating credibility of internal capital model	
results Insurers have avoided many of the recent pitfalls of	
banks, but risk management should continue to improve	
 Governance structures, especially the power of CRO functions Ensure management understand the uses, and limitations, of 	
models	

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