



ASSOCIATION ACTUARIELLE INTERNATIONALE  
INTERNATIONAL ACTUARIAL ASSOCIATION



Institute of Actuaries of India



# 13<sup>th</sup> Global Conference of Actuaries 2011

## *Emerging Risks... Daring Solutions*

### ERM in Pensions

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Finland

February 20 – 22, 2011

# THE INCREASING ROLE OF RISK MANAGEMENT

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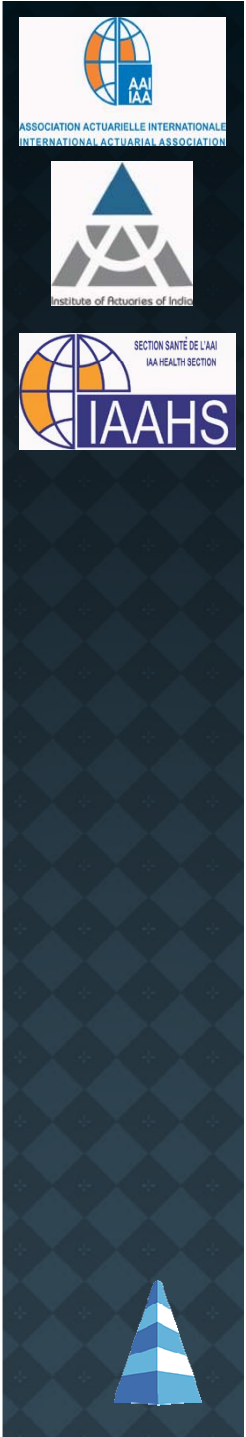
# Euromoney on the Chief Risk Officer:

*"First he sat in the back seat and then he had his foot on the brake, now he has got one hand on the steering wheel! Is there no end to the risk manager's advancement into every aspect of risk-taking in a financial firm? Next, he'll be right there in the driving seat..."*

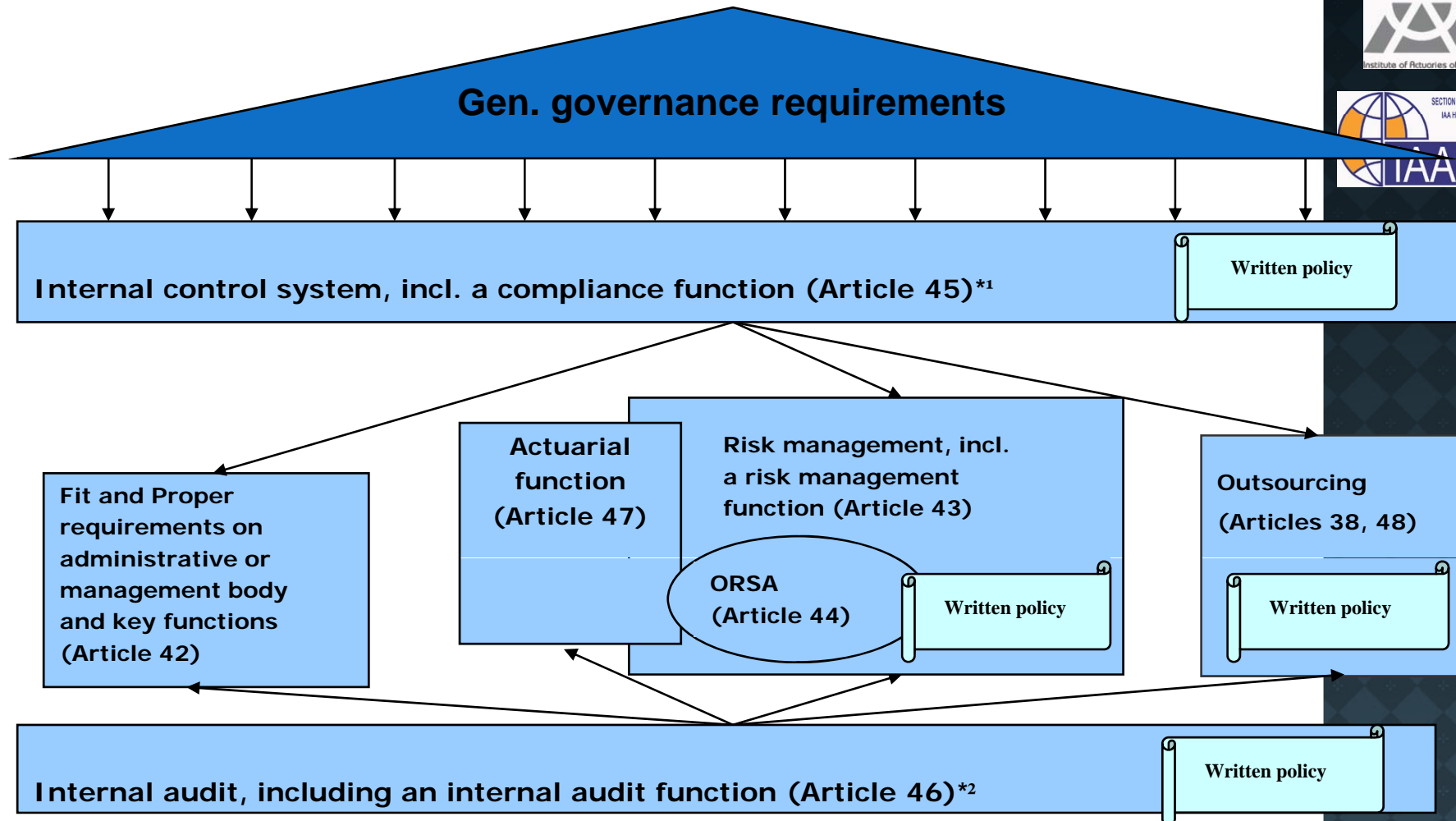


# IOPS: INTRODUCTION TO RISK-BASED SUPERVISION

- ◉ (2) Risk-based supervision (RBS) is a supervisory approach which focuses on the identification of potential risks and the assessment of the financial and operational factors that exist to minimize and mitigate those risks. It is an on-going process which can incorporate a variety of tools and techniques - both quantitative and qualitative - making it adaptable to different market situations and supervisory philosophies
- ◉ (4) The common themes of most definitions, however, are:
  - i) the focus on assessing risks; and
  - ii) the allocation of supervisory resources based on prioritisation of those risks.



# Solvency II, Pillar 2: Governance System



\*<sup>1</sup> The internal control system controls all elements of the governance system by defining internal control procedures, ect.

\*<sup>2</sup> The internal audit function includes an evaluation of the governance system.

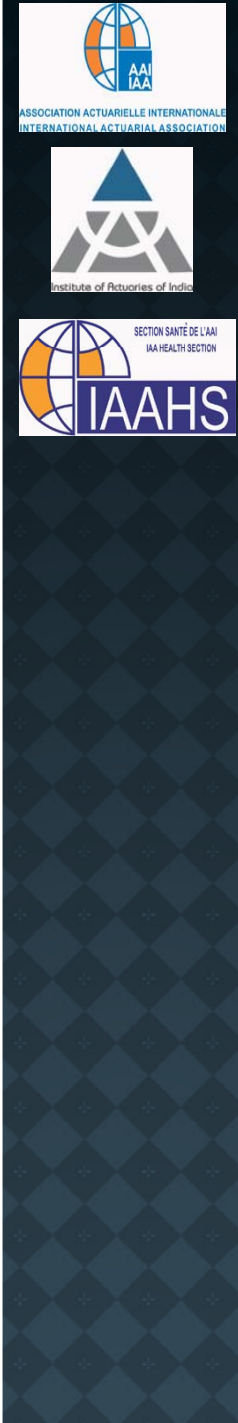
# Note on Enterprise Risk Management for Capital and Solvency Purposes in the Insurance Industry

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Alan Greenspan, Risk Transfer and financial stability,  
Federal Bank of Chicago's 41st Annual Conference  
on Bank Structure, Chicago, IL., May 5, 2005

*The use of a growing array of derivatives and the related application of more sophisticated approaches to measuring and managing risk are key factors underpinning the greater resilience of our largest financial institutions, which was so evident during the credit cycle of 2001-2002 and which seems to have persisted. Derivatives have permitted the unbundling of financial risks. Because risks can be unbundled, individual financial instruments now can be analyzed on terms of their common underlying risk factors, and risks can be managed on a portfolio basis*



# ARE PENSIONS SIMILAR TO INSURANCE CONTRACTS?

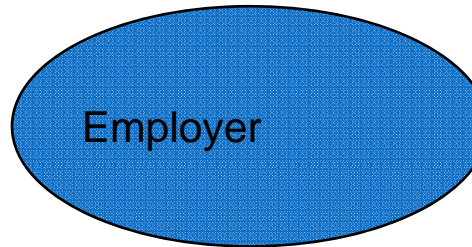
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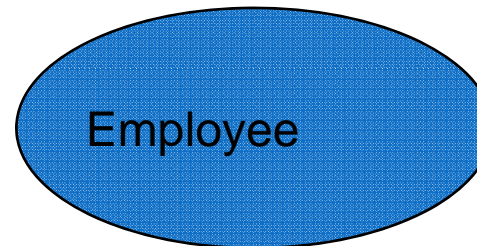




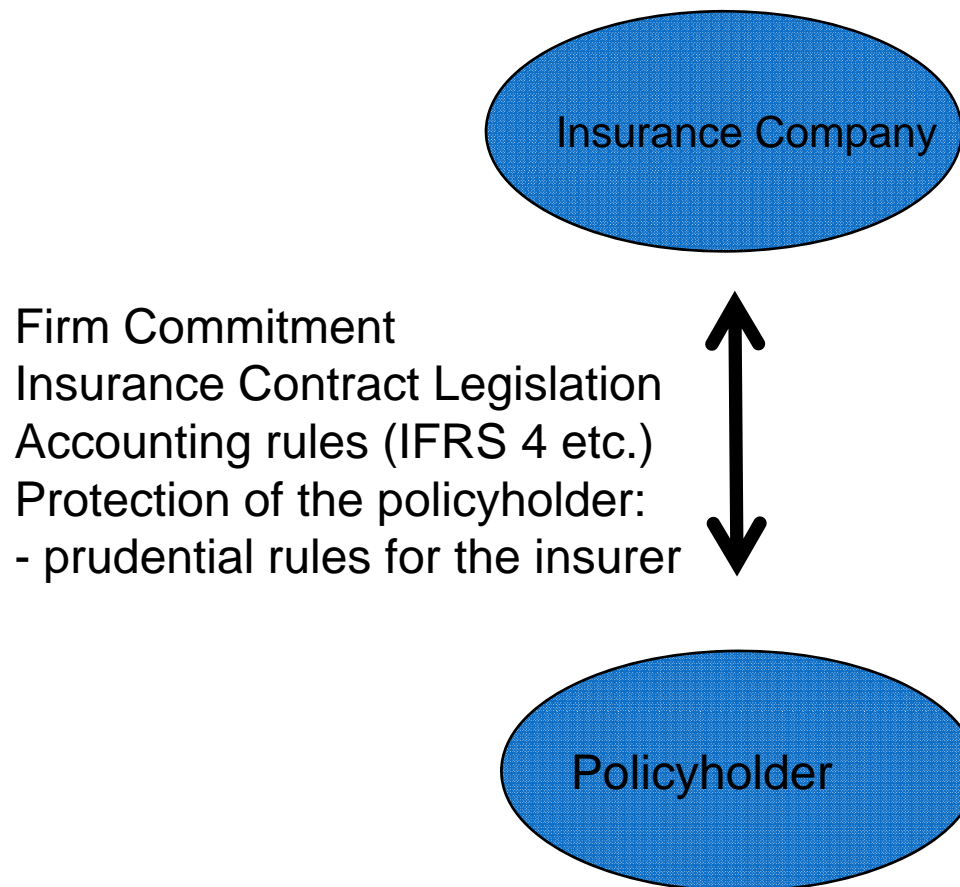
# Pension Contract is based on different rules ...



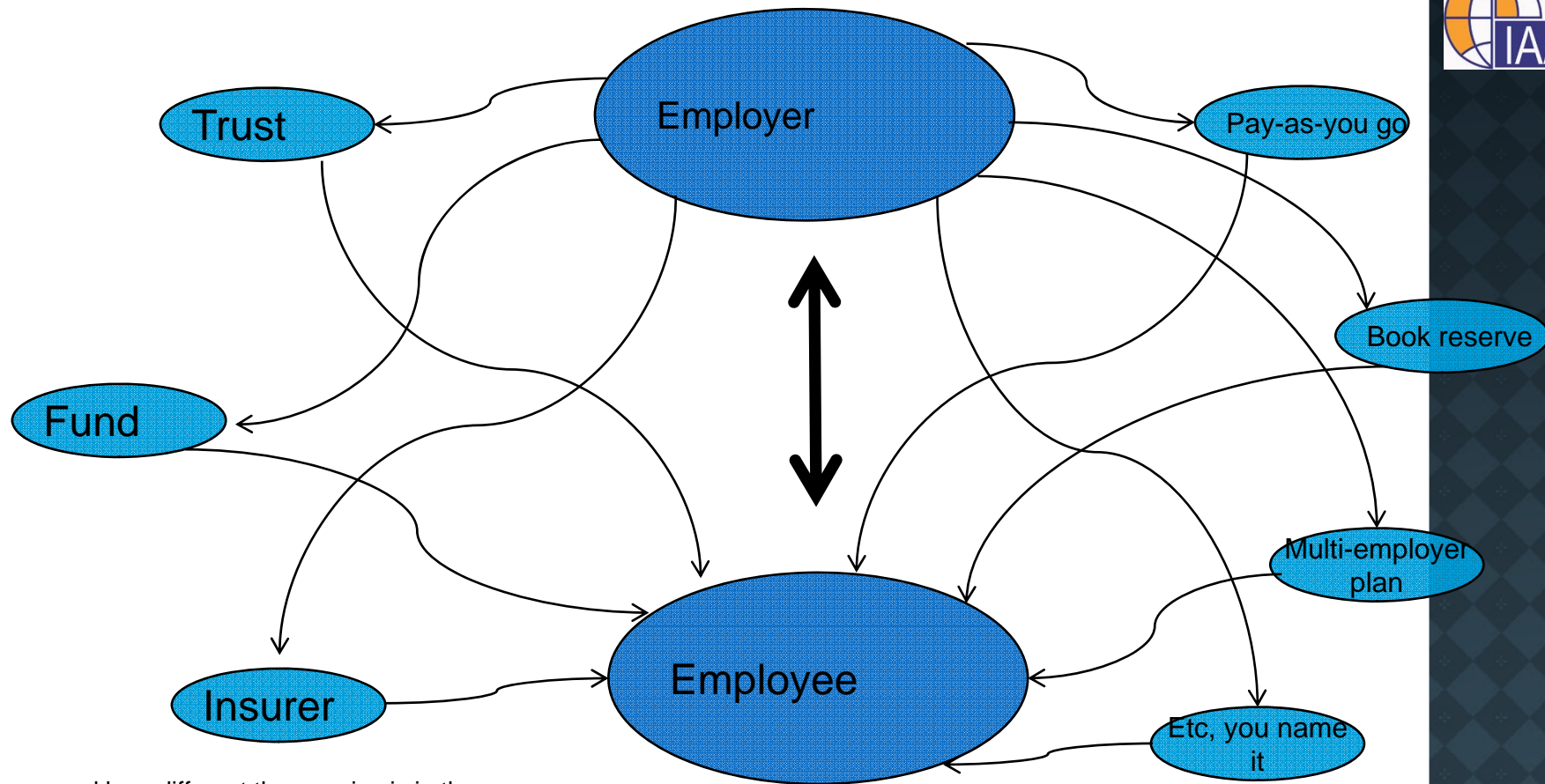
Best Effort or Firm Commitment  
Employment Legislation  
Accounting rules (IAS 19 etc.)  
Protection of the employee:  
- some preference for employees' claims



## ... compared to insurance contracts



# Actually, insurance is just one possible financial vehicle



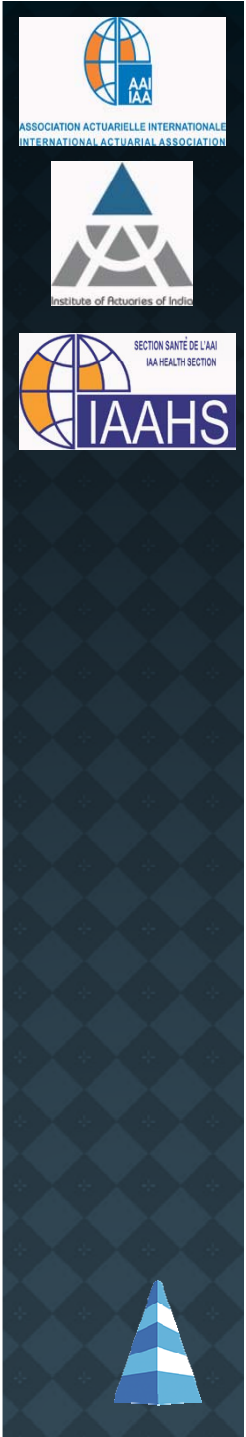
...and how different the promise is in these situations and what users, employers and employees understand of this?

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# What we try to do now in the IAA Pensions and Employee Committee

- Too much loose talk either saying pensions are similar with insurance or saying pensions are different
- -> we need good argumentation/hard facts why and when they are similar and when they differ from each other



# NOTES ON ERM FOR PENSIONS

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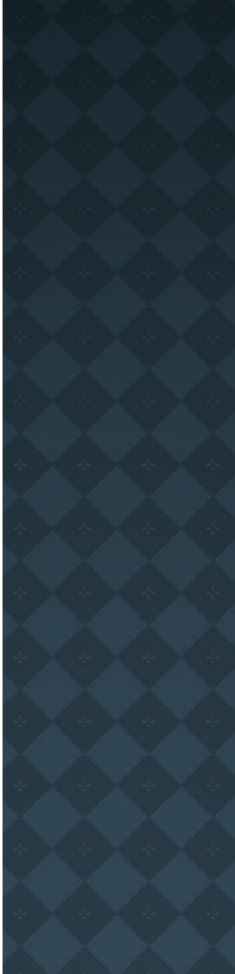
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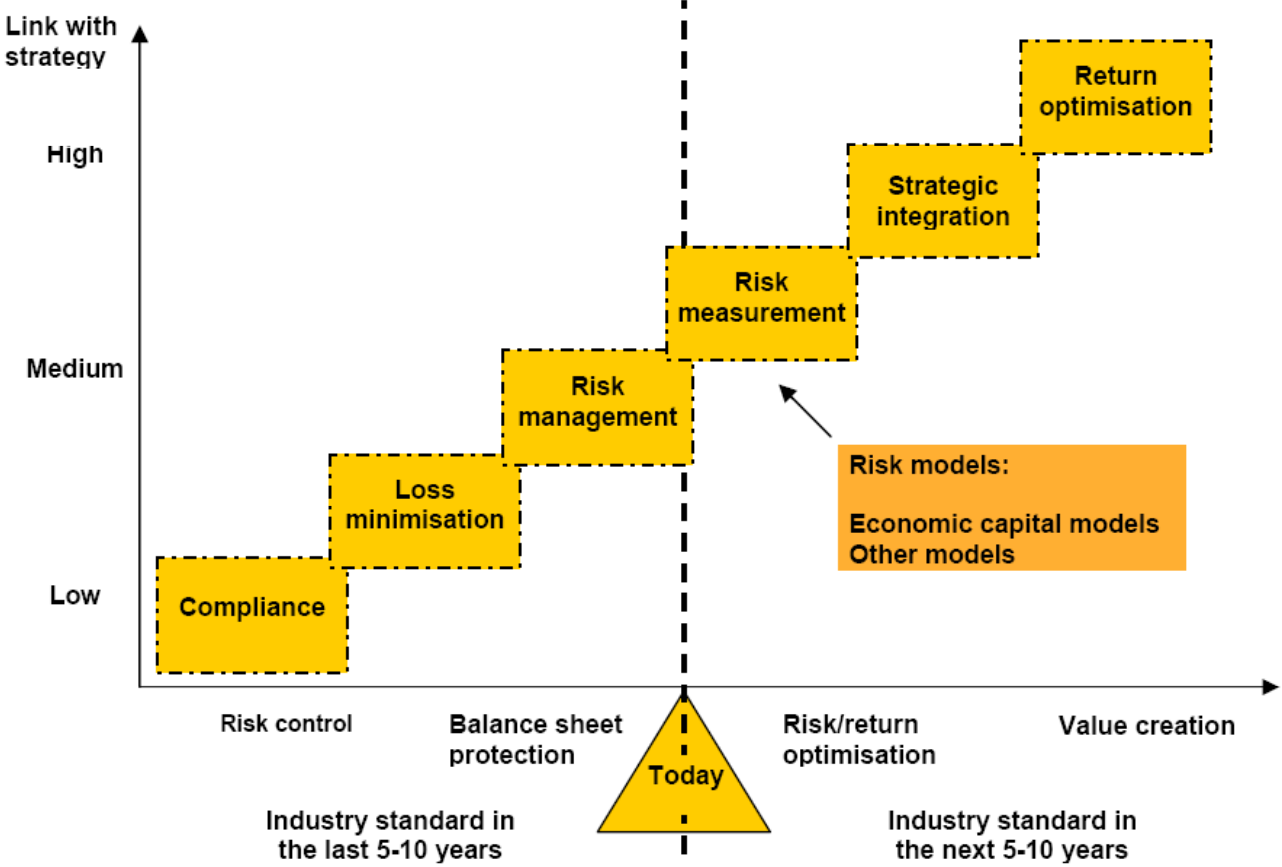
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SECTION SANTÉ DE L'AAI  
IAA HEALTH SECTION



# Stages of ERM



Source: *The Role of ERM in Ratings*, Mark Puccia, Managing Director, Standard & Poor's (March 30, 2007)

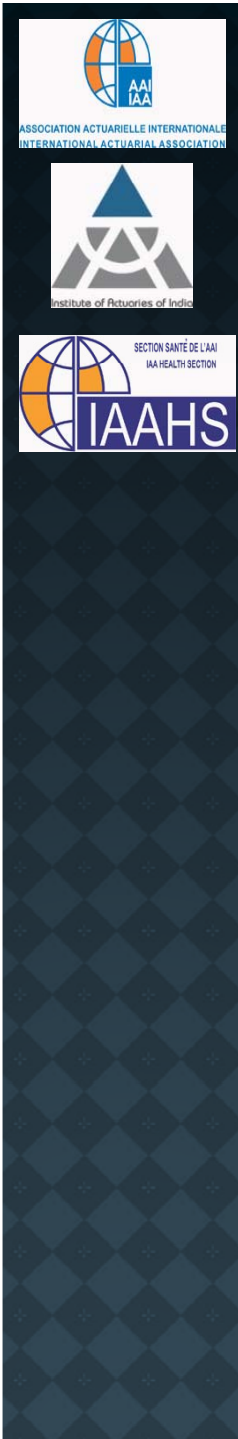
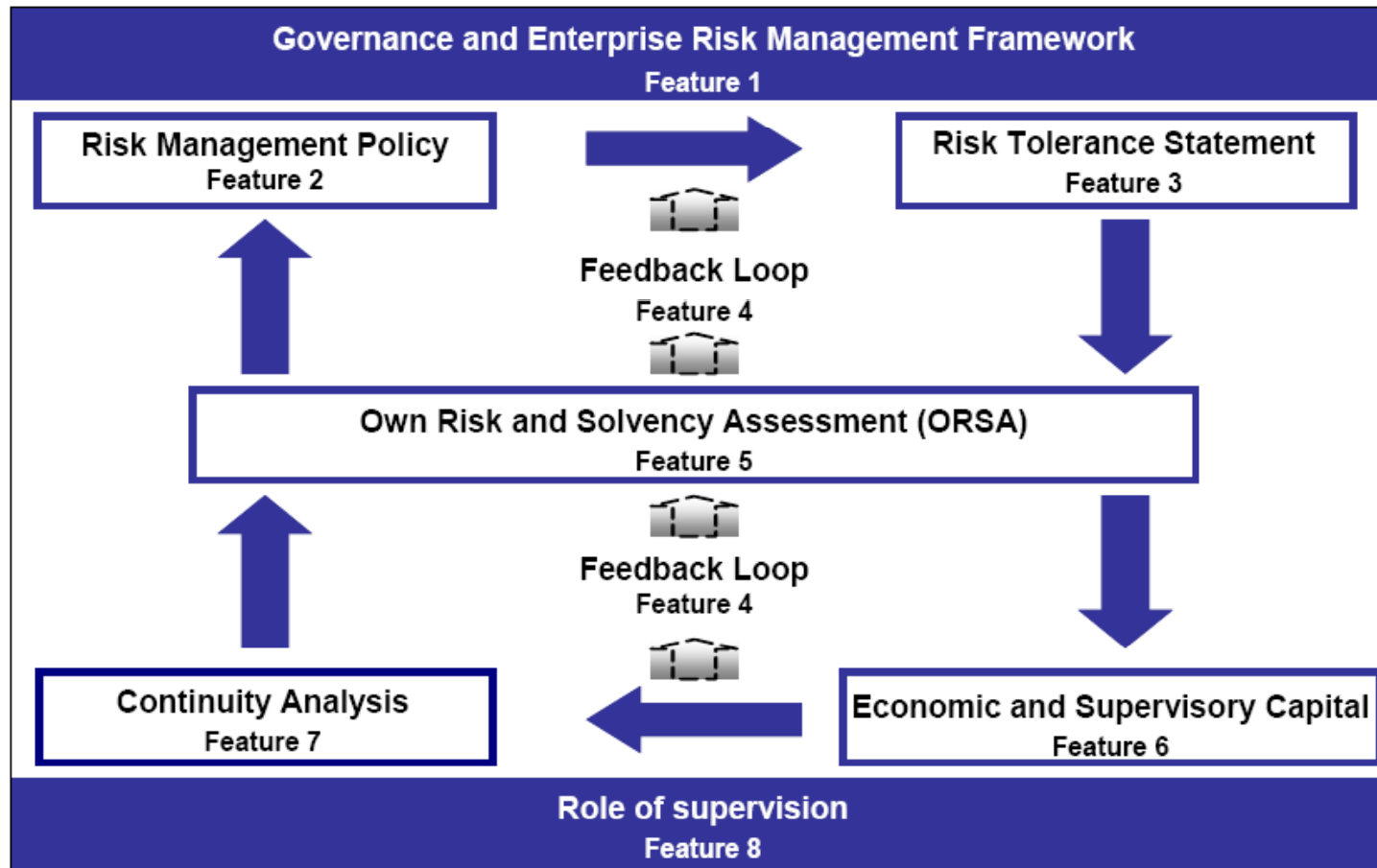


# Different aspects of pension ERM

- ◉ Employer view
- ◉ Employee/pensioner view
- ◉ Pension fund/trustee view
- ◉ Supervisor view
- ◉ Insurer view



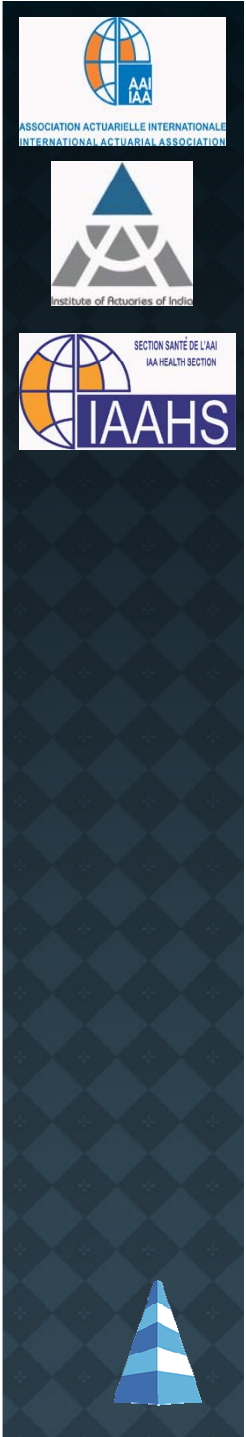
# Features of ERM





# Supervisor view?

- ◉ adopting a risk-based approach to supervision means in practice that institutions facing greater risks receive closer supervisory attention
- ◉ in order to effectively manage the supervisory process supervisors must form their own view of risks, and the effectiveness of the management of risks, for each supervised institution
- ◉ it seems therefore that applying ERM methodologies to pensions should give tools also for the supervisors to improve the procedures applied and to enhance employee and pensioner protection.



# DRAFT OECD/ IOPS GOOD PRACTICES FOR PENSION FUNDS' RISK MANAGEMENT SYSTEMS

- ◉ Appropriate Mechanisms
- ◉ Management Oversight and Culture
- ◉ Investment Risk Control
- ◉ Funding and Solvency Risk Control
- ◉ Operational and Outsourcing Risk Control
- ◉ Control and Monitoring Mechanisms
- ◉ Information, Reporting and Communication
- ◉ Supervisory Oversight of Pension Funds' Risk Management Systems



# Key feature 1: Governance and ERM Framework

As part of its overall governance structure, an insurer should establish, and operate within, a sound ERM framework which is appropriate to the nature, scale and complexity of its business and risks. The ERM framework should be integrated with the insurer's business operations, reflecting desired business culture and behavioral expectations and addressing all reasonably foreseeable and relevant material risks faced by the insurer in accordance with a properly constructed risk management policy. The establishment and operation of the ERM framework should be led and overseen by the insurer's board and senior management.

For it to be adequate for capital management and solvency purposes, the framework should include provision for the quantification of risk for a sufficiently wide range of outcomes using appropriate techniques

- ◉ Employer: integrate into your overall ERM as much as possible
- ◉ Fund: Apply ERM obeying proportionality



# Key feature 2: Risk Management Policy

An insurer should have a risk management policy which outlines the way in which the insurer manages each relevant and material category of risk, both strategically and operationally. The policy should describe the linkage with the insurer's tolerance limits, supervisory capital requirements, economic capital and the processes and methods for monitoring risk.

- ◉ Employer: clearly applicable and, when well communicated, creates trust among employees/pensionaries
- ◉ Fund: necessary and also needs to be compared with that of the sponsoring employer



# Key feature 3: Risk Tolerance Statement

An insurer should establish and maintain a risk tolerance statement which sets out its overall quantitative and qualitative tolerance levels and defines tolerance limits for each relevant and material category of risk, taking into account the relationships between these risk categories.

The risk forbearance levels should be based on the insurer's strategy and be actively applied within its ERM framework and risk management policy. The defined risk tolerance limits should be embedded in the insurer's ongoing operations via its risk management policies and procedures.

- Employer: An employer should also set quantitative and qualitative tolerance levels and tolerance limits for pension risks. This should then result in an evaluation of whether value is created or destroyed through the pension arrangements.
- Fund: It is quite straightforward to apply this principle to a pension fund. However, when setting the tolerance levels it is clear that the aspirations of both the sponsoring employer and the employees/beneficiaries need to be taken into account.

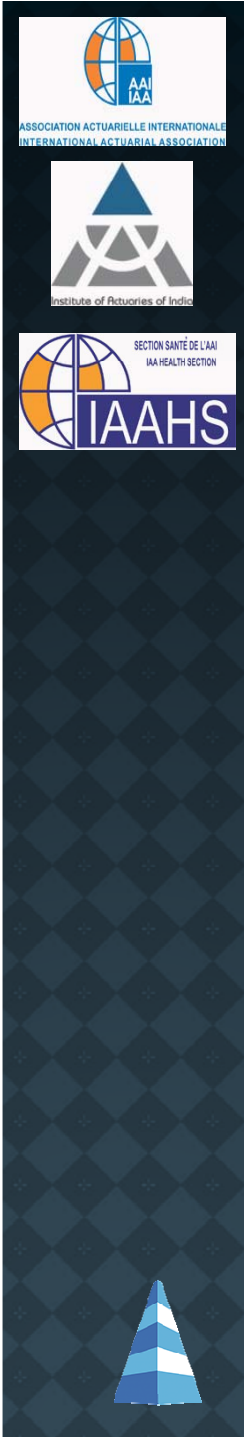


# Key feature 4: Feedback Loop

The insurer's ERM framework should be responsive to change.

The ERM framework should incorporate a feedback loop, based on appropriate and good quality information, management processes and objective assessment, which enables the insurer to take the necessary action in a timely manner in response to changes in its risk profile.

- ◉ Employer: This feature is clearly applicable to pension risks also.
- ◉ Fund: The feedback loop here would include the evaluation by the sponsoring employer, its employees/beneficiaries and the supervisor. The ERM should then change based on the results of this evaluation.



# Key feature 5: Own Risk and Solvency Assessment

An insurer should regularly perform its own risk and solvency assessment (ORSA) to provide the board and senior management with an assessment of the adequacy of its risk management and current, and likely future, solvency position. The ORSA should encompass all reasonably foreseeable and relevant material risks including, as a minimum, underwriting, credit, market, operational and liquidity risks. The assessment should identify the relationship between risk management and the level and quality of financial resources needed and available.

- ◉ Employer: This is applicable to the pension risks of an employer in a straightforward manner.
- ◉ Fund: Also a pension fund and its trustees would benefit from a well designed ORSA which would also produce valuable information to the sponsoring employer and to the employees/beneficiaries.



# Key feature 6: Economic and Supervisory Capital

As part of its ORSA an insurer should determine the overall financial resources it needs to manage its business given its own risk tolerance and business plans, and to demonstrate that supervisory requirements are met. The insurer's risk management actions should be based on consideration of its economic capital, supervisory capital requirements and financial resources.

- ◉ Employer: This feature addresses more the risks of a prudentially supervised employer. Generally the sponsoring employer does not belong to this category. Therefore this feature is only to a limited extent applicable to pensions. In cases where the sponsoring employer is a bank or an insurer this feature should be applied consistently to its pension commitments but recognising the difference between the seniority of the claims.
- ◉ Fund: Even in jurisdictions where there are no statutory solvency requirements it would be advisable that a pension fund should estimate its capital requirements. This would create more transparent information for the sponsoring employer and also communicate pension security more easily to other stakeholders.





# Key feature 7: Continuity Analysis

As part of its ORSA, an insurer should analyze its ability to continue in business, and the risk management and financial resources required to do so over a longer time horizon than typically used to determine regulatory capital requirements.

Such continuity analysis should address a combination of quantitative and qualitative elements in the medium and longer term business strategy of the insurer and include projections of the insurer's future financial position and modelling of the ability to meet future regulatory capital requirements.

- ◉ Employer: This is an essential part of the ERM of any employer. As regards pension risks the continuity analysis should in particular address the issue of whether the pension risks are in balance with the general evolution of the employer. Especially a situation where the pensions are not fully funded but the age structure is biased towards pensioners could threaten the sponsoring employer.
- ◉ Fund: The continuity analysis of a pension fund should concentrate on analyzing whether the pension fund is enough in balance with the evolution of the sponsoring employer.



# Key feature 8: Role of Supervision

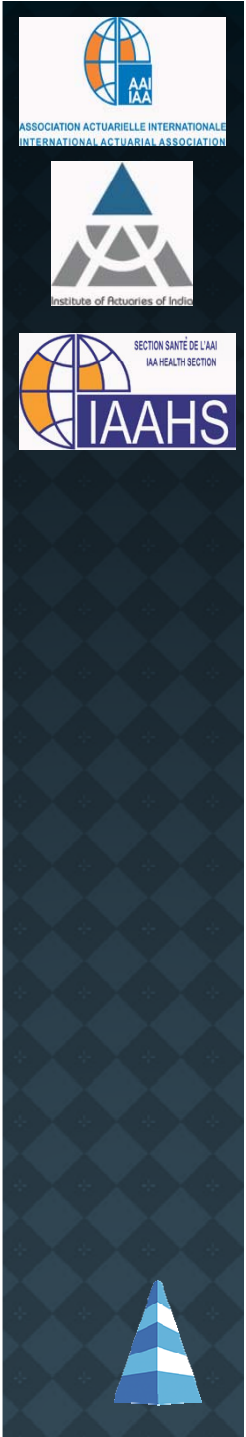
The supervisor should undertake reviews of an insurer's risk management processes and its financial condition. The supervisor should use its powers to require strengthening of the insurer's risk management, including solvency assessment and capital management processes where necessary.

- ◉ Employer: This applies only in the situation where the sponsoring employer is a prudentially supervised entity (bank or insurer).
- ◉ Fund: Clearly the supervisor should analyze the risk management process and utilize generally the results of the ERM of the fund. Prudential supervision is more and more emphasizing so-called risk-based supervision which could greatly benefit from a broader application of ERM in pension funds (and also among sponsoring employers).



# Contact Details

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THANK YOU!

