



International Actuarial Association
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Risk-based Financial Management and Supervision

Proportionate Risk Assessment – the IAA Risk Tool in Action

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Risk-Based Financial Management and Supervision Seminar Mini-Series

1. ORSA

- The Core Tool of Risk Based Supervision

2. Using Actuarial Reports

- Getting the Added Value

3. Proportionate Risk Assessment

- The IAA Risk Tool in Action

Introduction



- Ability to identify key drivers of risk are the core of any risk-based approach.
- Risk assessment approach and tool developed by IAA's Microinsurance Task Force in joint project with IAIS

1. Introducing the tool
2. Two example applications
3. IRA Uganda interview



Objectives

IAA's Microinsurance Task Force published in Nov 2018:



Assessing Risk and Proportionate Actuarial Services in Inclusive Insurance Markets



Excel-based tool

Tool objectives

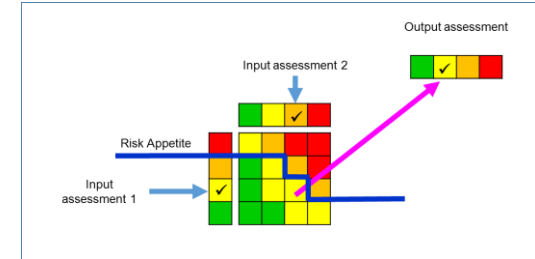
Improve understanding of key risk drivers within insurance context and the level of risk they present

Better decisions relating to risk

Better outcomes for all stakeholders

Context

- Summarise process
 - Set risk matrices, risk appetites etc for input dimensions
 - Set criteria for assessing each dimension
 - Assess each criterion to give dimension outcomes
 - Review dimension outcomes and consider actions to adjust inputs
 - Risk matrix outcome provide input and insight into broader decisions making process
- Example 1: Process for assessing Product and Provider dimensions for product approval
- Example 2: More than 2 dimensions. Apply process at an industry level. Supervisor managing prudentially consequences of a higher level decision





Example 1: Supervisory product approval

- Two dimensions – Product and Provider
- Supervisor reviews insurer assessment. Provides common 'language' for discussion.
- Requires professional judgement. Clarifies questions not give answers.
- Process accessible to wide range of people/inputs as can reflect Delphi approach – acknowledging inputs from many, both 'technical' and 'experienced'.
- Purpose is to provide input to wider decision making process that reflects other issues not specifically included
- Only part of the story – see Example 2

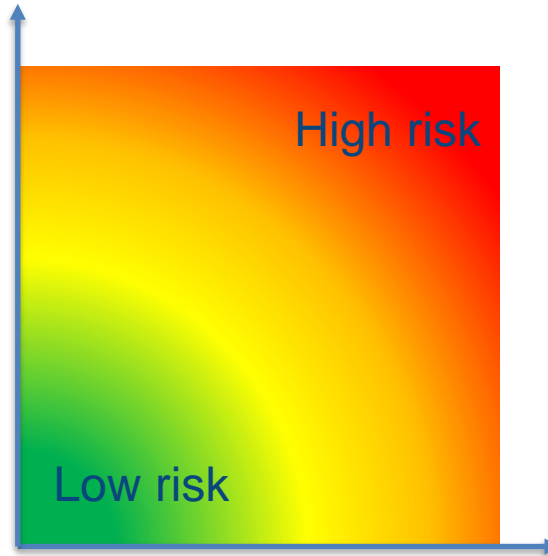


Basic framework: 2 risk dimensions

Product risks:

- inherent in the product
- typically technical
- driven by product features

Examples: lack of pricing data, excessive claim exposures



Provider risks:

- ability to develop, deliver and maintain the product
- typically operational

Examples: internal controls, available skills



Product criteria

- Client insurance awareness and product understanding
- Sum insured: amount and predictability
- Insured event: frequency and predictability
- Data: availability, quality and suitability
- Product features: coverage term, deductible, exclusions, waiting period, guarantees, etc
- Moral hazard and anti-selection
- Fraud potential
- Reserving: complexity and significance
- Very large and catastrophic risks eg systemic risk
- Other product factors: Supervisor to specify



Provider criteria

- Product design capability
 - Market research, Prototype and product design, testing and rollout, Disclosure and documentation, Review in light of experience
- Sales, marketing and customer education
 - Sales, Underwriting, Premium collection, Customer marketing and education
- Customer administration
 - Customer queries, Claims administration and payments, Dispute resolution
- Technical insurance management
 - Reserving, Reinsurance, Investment, Capital requirements, Solvency management, Monitoring capability and reporting, Data collection
- Operations
 - Institutional assessment and internal audit, Finance and administration, Technology, Management of partnerships, Regulatory compliance
- Staff
 - Technical insurance skills, Skills dealing with customer base, Training and education
- Other provider factors (supervisor to specify)



Assess each criterion

- Risk weight – Importance of this risk in this case
 - High, Medium, Moderate, Low, Not relevant (4 / 3 / 2 / 1 / 0)
- Risk score – How well is this risk managed in this case
 - High risk, Medium risk, Moderate risk, Low risk, No risk (4 / 3 / 2 / 1 / 0)
- Risk weights converted to Risk weight % (Risk weight / Sum (Risk weights))
 - Sum of Risk weight %s = 100%
- Document rationale for choices for future reference.
 - This makes the choices explicit and reviewable based on specified choices



Assessing Product and Provider Risk

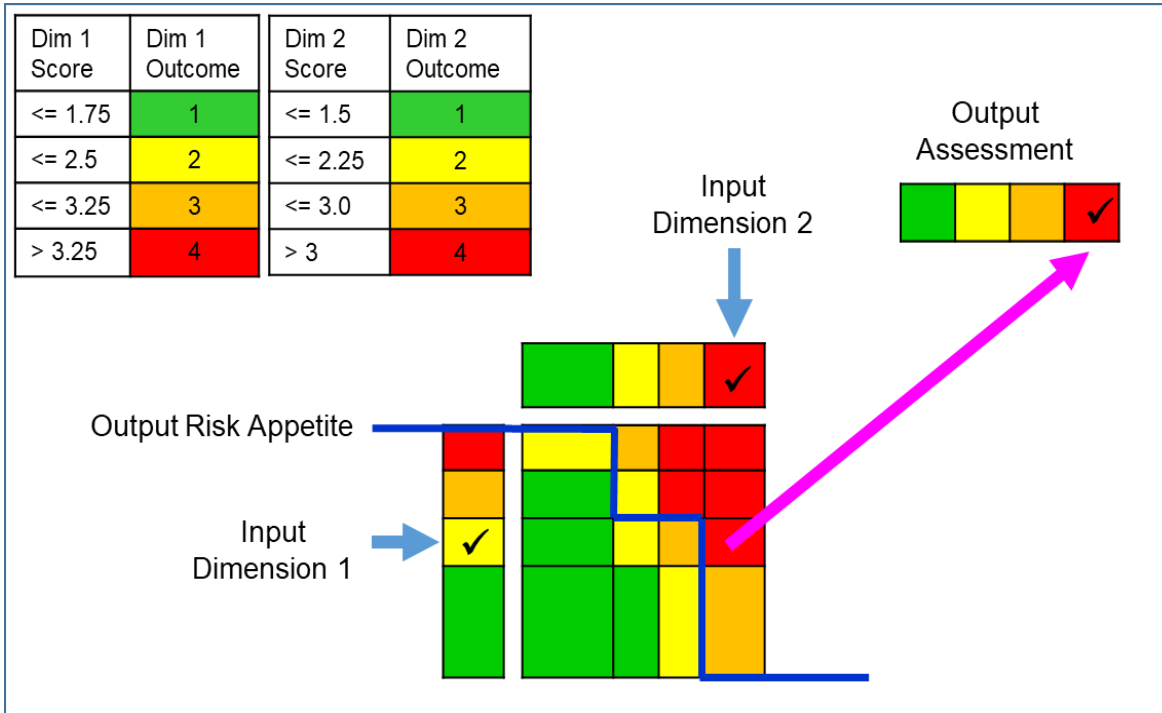
Risk category	Risk weight	Value	Weight	Risk score	Weighted risk score
Sum insured	High	4	40%	3	1.2
Data	Moderate	2	20%	2	0.4
Fraud potential	High	4	40%	4	1.6
Product risk assessment		10	100%	Sum =	3.2 / 4

Obtain dimension outcome

- Dimension score = Sum (Risk weight% * Risk score)
 - Results between 1 and 4
- Dimension outcome given by a pre-set table (for the dimension)
 - This dimension outcome is input to the Risk matrix
 - Example:

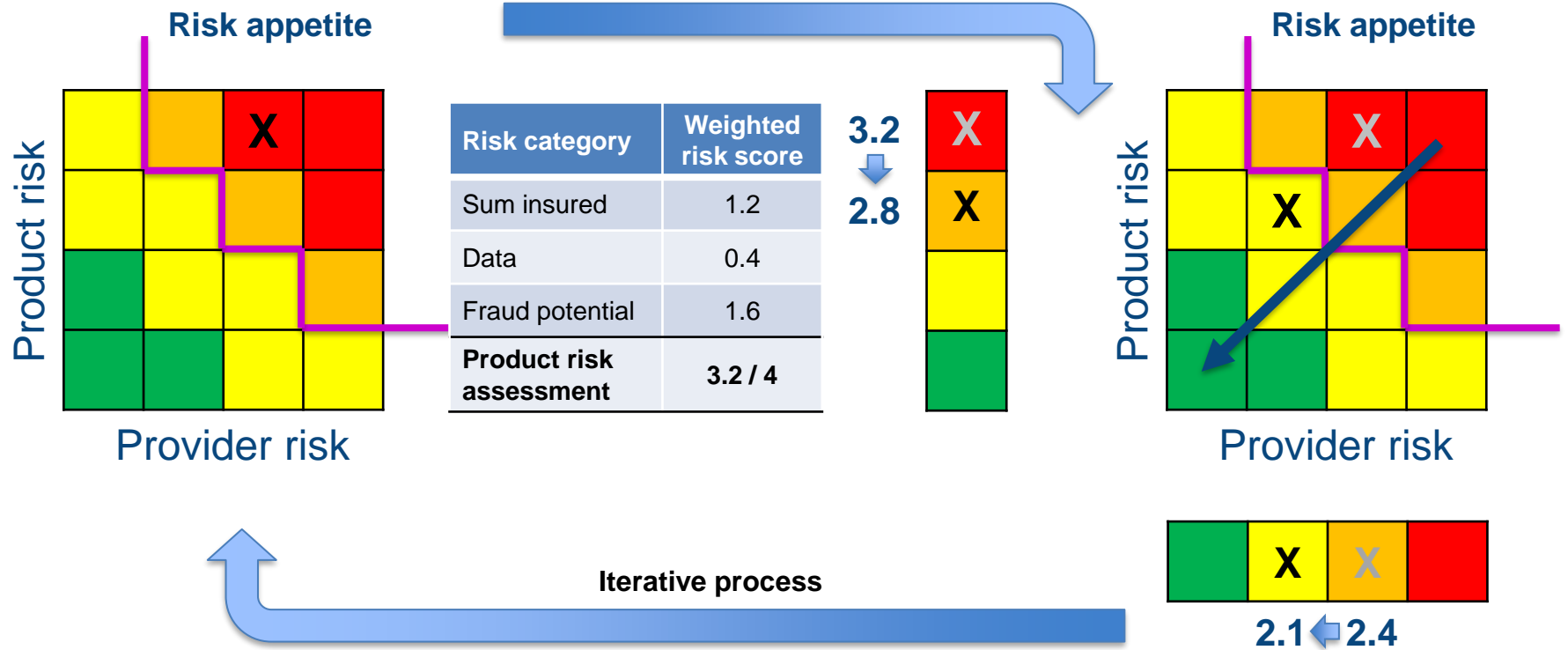
Dimension Score	Dimension Outcome
≤ 1.5	1
≤ 2.25	2
≤ 3.0	3
> 3.0	4

Parameter choices

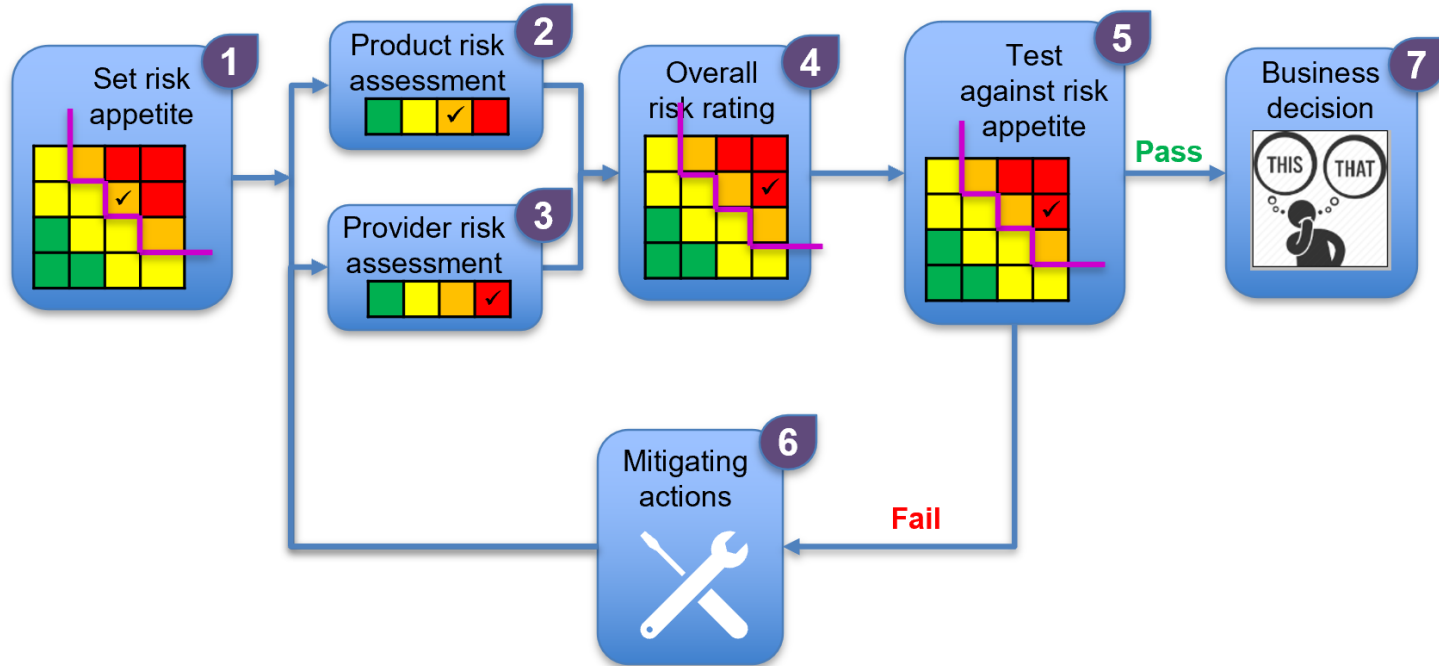


- Dimension outcomes
 - Differ
- Risk matrix
 - Asymmetric
 - Unequal risk ‘strengths’
- Risk appetite
 - Asymmetric
 - Unequal output risk profile
- All parameters should reflect the specific situation

Identifying risk drivers and reducing risk



End-to-end Process

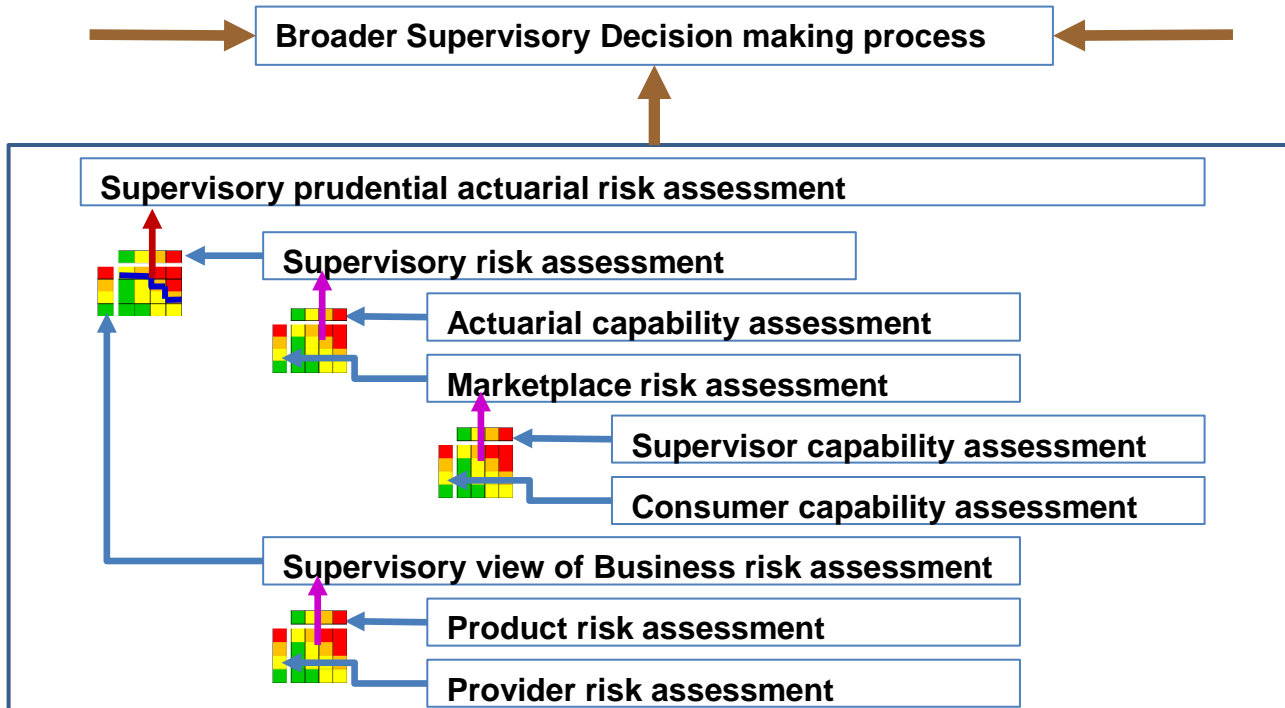




Example 2: Privatisise third party motor insurance

- MTPL = Motor Third Party Liability insurance
- Political decision to have compulsory coverage
 - Supervisory issue more management than approval
- Supervisor and industry not fully prepared
 - Match actions with time available to implement
- Need sustainable market
- Apply proportionality as appropriate

Multiple dimensions – upward cascade

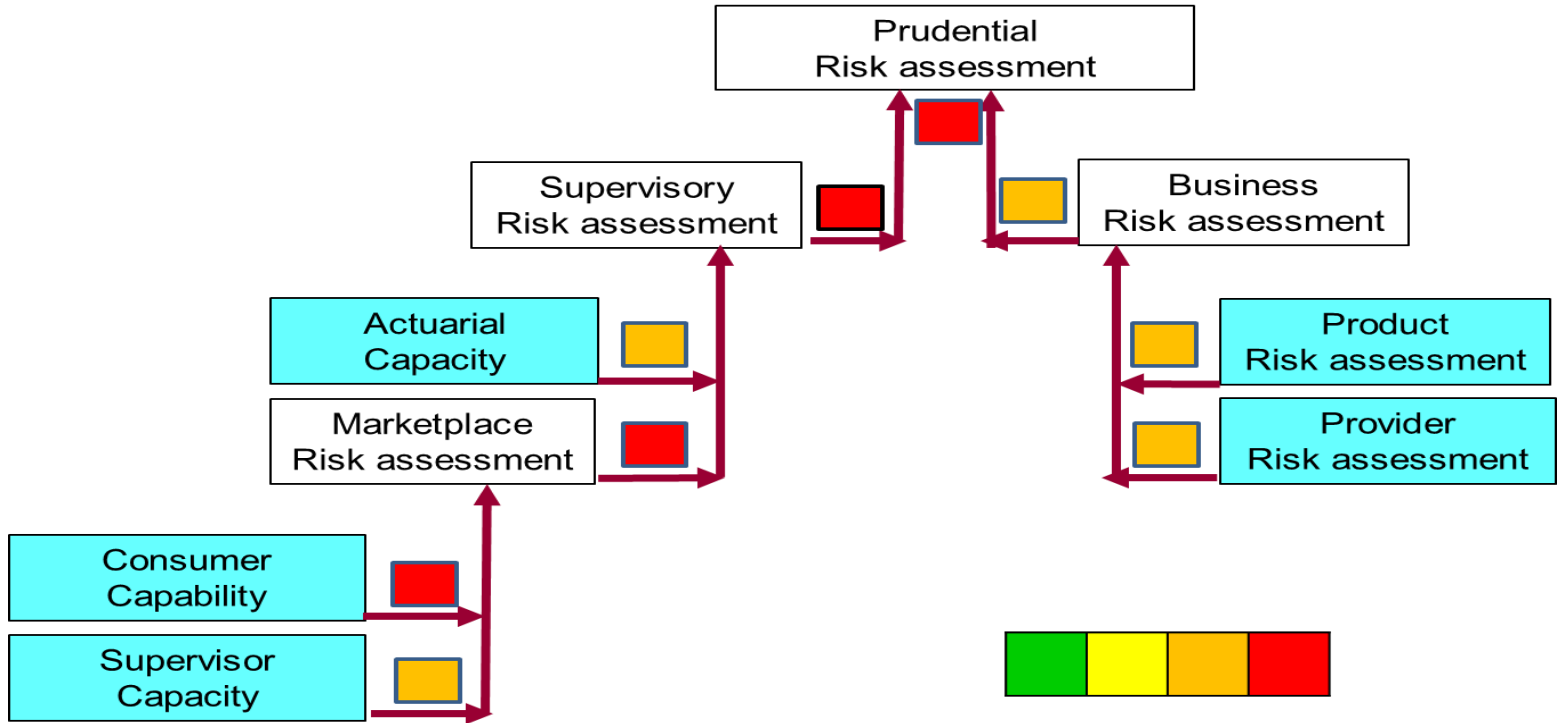




Assess prudential risk

- Marketplace is slow to change
 - Mandatory Cover
 - Limited supervisory capacity
 - Consumers indifferent to the “quality” of the insurer
- Supervisory Risk
 - Limited actuarial capacity
 - Impact of premium, commission, expense etc limits
- Business Risk
 - Product highly regulated
 - Quality of provider delivery limited

Initial assessment

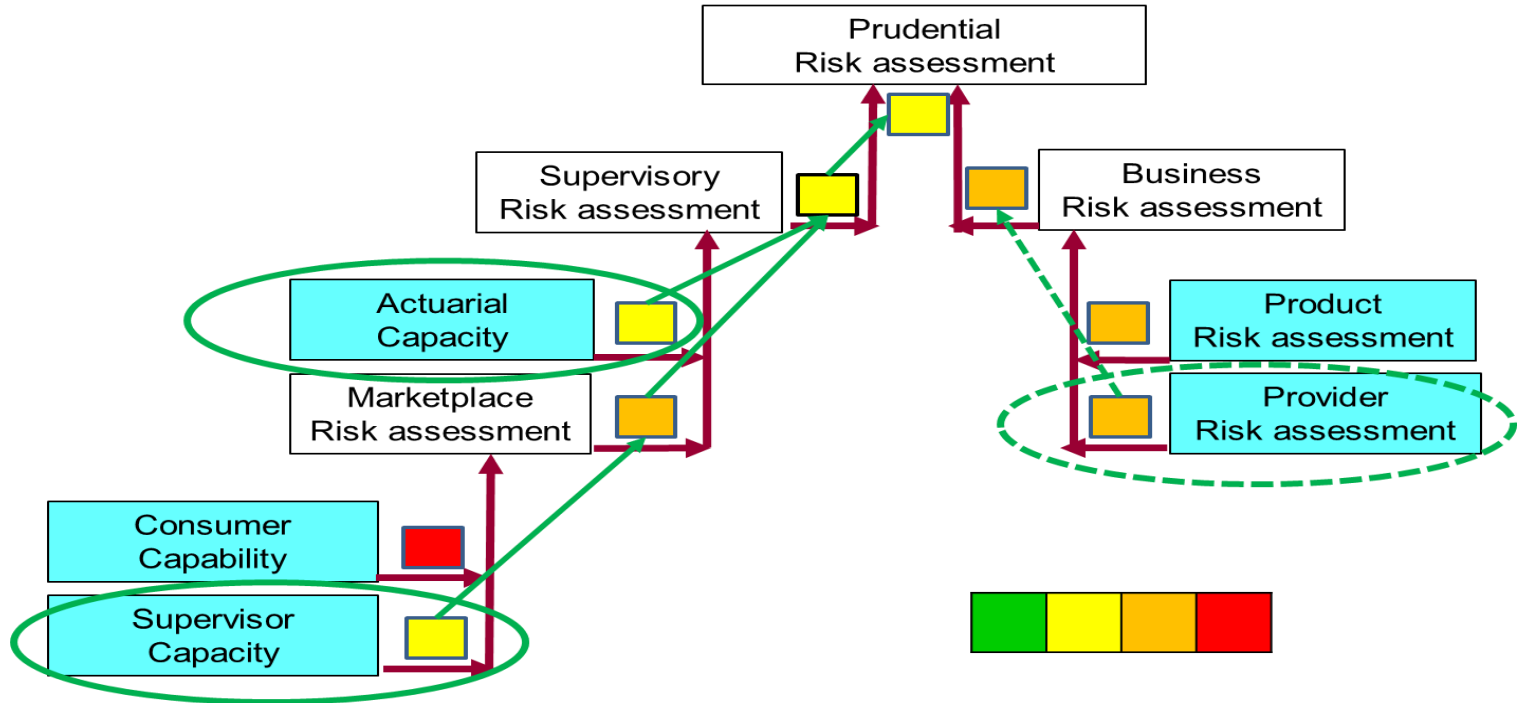




Possible actions

- Need reduce assessed prudential risk
- Liberalisation Process
 - Improve Expertise/Resources
 - Outsourcing
 - Get proper data
 - Audit data acquisition & processing systems
 - Deregulate commissions
 - Improve reporting & monitoring
 - Audit Reserving and Capital adequacy levels
 - Check financial strength of qualified shareholders
 - Increase depth & frequency of regular reporting

Assessment after actions





Take-aways

- The risk tool can have more than two dimensions
- The risk tool can be applied in many situations
- The risk tool provides a structured, documented and open process for risk assessment and review
- Outcomes from the risk tool are inputs to broader decision making processes



Accessing the Paper and Tool

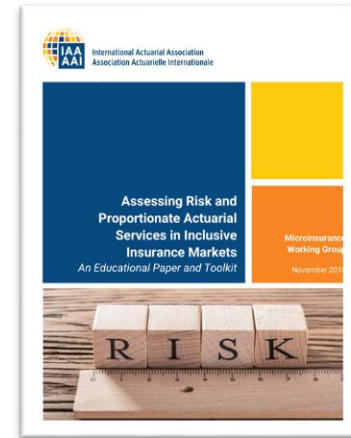
IAA's website: www.actuaries.org

Publications → Papers

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Insurance Regulatory Authority of Uganda Interview

Q&A

Thank you



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