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How ICAS will need to evolve

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11 November 2013

Agenda

1. ICA story so far
2. A company's perspective

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ICA story so far

1. Refresher on the ICAS regime

Key features

7 Maintain overall financial resources, including capital and liquidity resources, which are adequate, both as to amount and quality

6
- 99.5th over one year assessment
- The reasoning and judgements underlying the assessment, in particular, justify:
  - the assumptions used
  - the appropriateness of the methodology used
  - the results of the assessment
- Differences between the required assessment and other assessments carried out using a different confidence level

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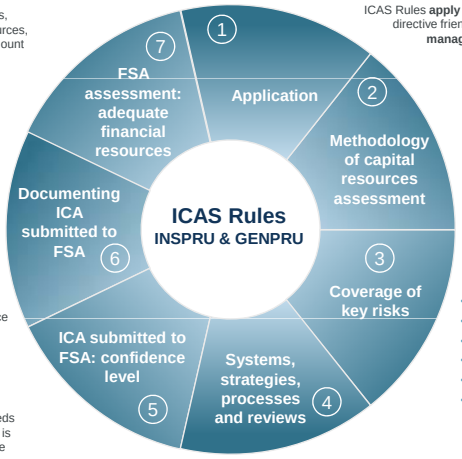
An assessment comparable to **a 99.5% confidence level over a one year timeframe** that the value of assets exceeds the value of liabilities, whether or not this is the confidence level otherwise used in the firm's own assessments



4 A firm must have in place sound, effective and complete processes, strategies and systems

1 ICAS Rules **apply to UK insurers** (except non-directive friendly society, Treaty firms etc), **managing agents and the Society**

2
- Reflects the firm's assets, liabilities, intra-group arrangements and future plans
- Consistent with the firm's management practice, systems and controls
- Considers all material risks that may have an impact on the firm's ability to meet its liabilities to policyholders
- Uses a consistent valuation basis

3

Market	Insurance
Credit	Residual
Interest rate	Operational
Securitisation	Business
Liquidity	Pension
Concentration	Group

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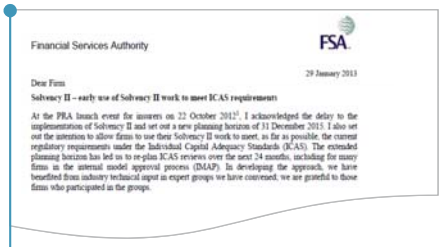
2. ICAS
Latest developments

FSA interaction on ICAS+

- November/December 2012
  - The FSA had a meeting with CEOs of major firms and the ABI to get initial feedback on their ICAS+ proposals. They held workshops with teams from large insurers and a further meeting was held with CEOs of major firms in December 2012
- January 2013
  - The FSA wrote to Internal Model firms on 29 January 2013 confirming the high-level ICAS+ approach
- June 2013
  - PRA data collection exercise
- Sept 2013
  - EIOPA final Guidelines for preparatory phase

  Oct 2013
  - PRA response to preparatory guidelines


Financial Services Authority

FSA

29 January 2013

Dear Firm

Solvency II – early use of Solvency II work to meet ICAS requirements

At the PRA launch event for insurers on 22 October 2012[1], I acknowledged the delay to the implementation of Solvency II and set out a new planning horizon of 31 December 2015. I also set out the intention to allow firms to use their Solvency II work to meet, as far as possible, the current regulatory requirements under the Individual Capital Adequacy Standards (ICAS). The extended planning horizon has led us to re-plan ICAS reviews over the next 24 months, including for many firms in the internal model approval process (IMAP). In developing the approach, we have benefited from industry technical input in expert groups we have convened; we are grateful to those firms who participated in the groups.

- ✓ Current ICAS rules continue to apply and SII tests and standards do not need to be met
- ✓ Material required for ICAS+ review, including reconciliations, are bespoke to each firm
- ✓ Outcomes from the ICAS+ review will be:
  - A review of ICA and setting ICG
  - Feedback on SII model
  - Updated work plan for SII model review
- ✓ ICAS+ is optional
- ✓ Two phase approach

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2. ICAS and ICAS+
Considerations on ICAS / transitioning

ICAS+ will be optional and firms will need to consider the challenges and benefits of moving to ICAS+

Potential benefits of moving to ICAS+ regime

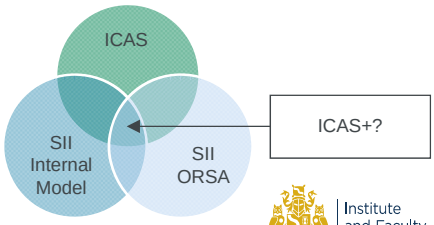
- If IM approach is well advanced, then get to take advantage of investment
- Internal Model gets early review/challenge via ICAS+ review
- Operating efficiencies from avoiding duplication between Internal Model and ICAS
- Potential increased ICAS surplus (Phase 1/Phase 2)

Potential challenges of moving to ICAS+ regime

- I evel of effort/cost for the additional requirements
- Greater supervisory scrutiny on unexplained movements between IM and ICAS
- Lack of resources and timescale to cope with any changes
- May be complicated running both ICA S+ and IMAP processes in parallel
- Potential reduced ICA S surplus (Phase 1/Phase 2)

Other considerations on moving to ICAS+ regime

- Within what timescale do firms believe Solvency II will be ultimately implemented?
- What level of "approval" / sign-off firms will receive from the PRA on their ICAS+ submissions? Would approval of an ICAS+ model provide some level of comfort that a model is likely to be approved under Solvency II?
- How would the ICAS+ approval process and the Internal Model Approval Process link together, and how could firms avoid duplication of effort?
- To what extent are ICAS and the Internal Model approach already aligned?



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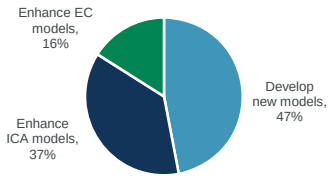
3. Other ICA developments

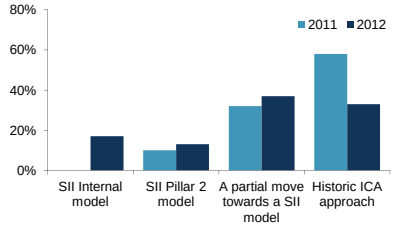
Trends around ICA modelling

Majority of companies appeared to be adopting consistent calibrations between ICA, Internal Models and ORSA

How is your company developing its Internal Model?



Basis for year-end 2011 and 2012 ICA calculation



Developing the Internal Model

Of the 19 respondents, 47% are developing new models whilst 37% are enhancing their existing ICA models

Modeling the ICA

Companies moving away from a historic ICA approach towards basing ICA on Solvency II. Also applicable for companies adopting a Standard Formula approach

Source: KPMG 2012 Technical Practices Survey

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3. Other developments around ICA

Areas of focus

ICA fast close

- Linked to SII and external disclosure there has been a significant push on ICA timelines
- The focus is not just on speed but also on cost and efficiency, controls and quality
- A good capital fast close should eliminate unnecessary calculations and audit points enabling efficiency within reporting process, optimal resources, time savings and improved forecasting capabilities

Risk calibration

- Increased focus on risk calibration
- Consideration of goodness of fit and application of expert judgement
- Acknowledging weaknesses of calibrations used

Disclosing EC results externally

- More firms are starting to provide EC disclosure to the market - ten EU insurers/reinsurers
- As economic capital becomes more integrated and relied upon in the business, firms will be expected to disclosure more information given this will be a key part their business models and strategy.
- Investors keen to understand risk exposures, capital adequacy and effectiveness of risk and capital management practice

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Validation for ICAS

It is no surprise that firms starting to subject their ICA processes and results to a greater level of scrutiny than before and we expect this trend to continue

The better prepared firms have started to use the model validation framework developed for Solvency II for their ICA and ICAS+

Past practice

- ICA typically not subject to the same level of review as other reported metrics
- Validation largely performed by just the team responsible for producing the ICA results within the 1st Line of Defence
- Limited peer review performed by external providers although this is typically restricted to challenging the level of stresses used
- Limited or no additional independent validation and challenge has been performed by the Risk Function within the 2nd Line of Defence

Emerging practice

- Enhancing the existing suite of ICA documentation, including validation evidence to a level broadly in line with that required for Solvency II
- Preparing model validation work plans to cover the production of the ICA and ICAS+ results
- Obtaining independent review of the ICA processes and controls
- Use of 2nd Line of Defence and external providers to provide independent review and challenge

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Early Warning Indicators
Overview

Overview

- Early Warning Indicators (EWIs) were first mentioned by the FSA in June 2012. The intention of these was to act as a tool for ensuring the on-going appropriateness of firms' Internal Models. The FSA said they were developing a number of EWI tools but the main tool discussed was the ratio between the pre-corridor MCR (pMCR) and the Internal Model SCR (with set tolerance levels)
- At the end of May the PRA sent a letter to firms outlining the implementation plan for their EWIs for Internal Model firms. From September firms are expected to be able to discuss their performance against these indicators with the PRA. There will be different indicators used for life (excluding with-profits), with-profits and general insurance firms

Internal Model floor based on multiple of pre-corridor MCR

- The main EWI ratio that firms' Internal Model will be assessed against is a floor to the Internal Model capital number based on a multiple of the pMCR. The ratio has been calibrated differently for different types of business (Life, With-Profits, Non-Life) and has changed from that given when the ratio was originally discussed
- Internal Model firms will be required to monitor against the EWIs and notify the regulator in the event they have or are likely to breach the pre-determined ranges. Actions the regulator may take when breaches occur include seeking a revision of firms Internal Model parameters and/or capital add-ons

European perspective

- It has been acknowledged that there could be challenges for the PRA to introduce EWIs if they are not applied elsewhere across Europe. Recently EIOPA has indicated that it is looking at similar measures but it is not clear it is intending to go as far down this route as the PRA has or to what timelines it is working towards

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Early Warning Indicators
Concerns and areas of uncertainty

Concerns
- Will the EWIs discourage firms from investing in and developing their ICAs / Internal Models if there is a known capital floor?
- The MCR/SCR relationship is unlikely to be stable in stressed scenarios
- A single factor ratio for blocks of business is simplistic and might not be representative of the heterogeneity within risks or companies
- The threshold will already be biting for some firms
- There is the risk that focus of management turns to EWIs and away from the more important aspects of the Internal Model
- Will this ratio be undermining some of the reasons of moving to Solvency II i.e. more risk-sensitive Capital Requirements and management incentives?
- There is concern that a breach will result in an automatic capital add-on rather than a discussion as to why a breach has occurred

Areas of uncertainty
- How frequently will firms be required to monitor against the EWIs and should EWIs be projected?
- What will be the PRA's most likely action be when a firm breaches the threshold?
- At what granularity will the EWI need to be calculated, will firms consider checking whether it is biting at a product level?
- How do EWIs apply for Partial Internal Model firms?
- Will the MCR calibration change further and what impact will this have on EWIs?
- Will EWIs start to be used for Standard Formula firms given PRA has already raised concerns around the Standard Formula calibration in certain areas?
- What other EWIs, alongside multiple of pMCR, is the PRA considering?
- To what extent will EIOPA adopt a similar approach or is there a risk for European Groups that different EWIs tools are used by different national regulators?

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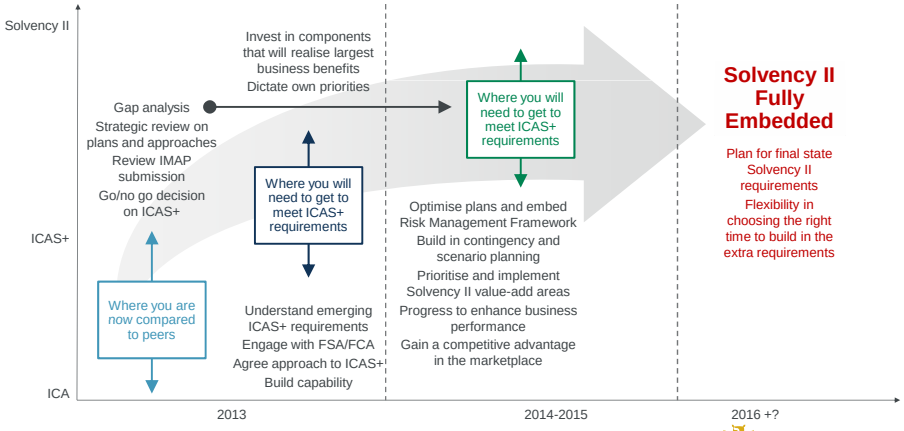
What firms need to do/migration of ICA



Firms who do choose the ICAS+ route need to carry out Phase 1 during 2013

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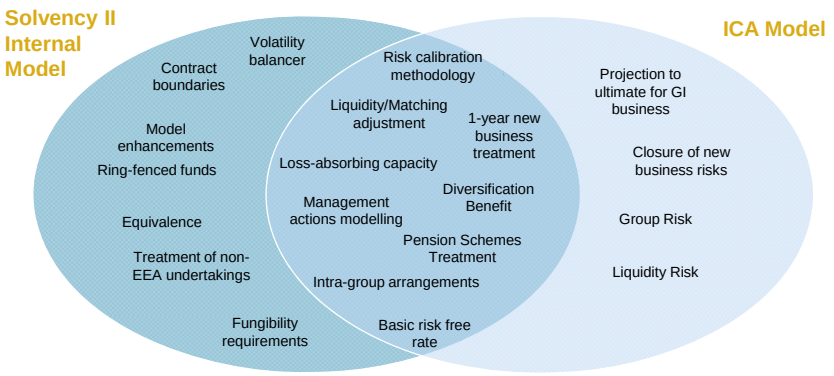
A company's perspective

ICA+ Considerations

Implications for Pillar 1



- No technical difference between an ICAS and an ICAS+ model
- For an ICAS+ model, there should be a proportionate amount of effort on validation and calibration relative to Solvency II, although specific and observable benchmarks needed
- ICAS+ may also allow an increased proportion of validation and calibration process to be internal

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How ICAs need to evolve - The Journey So Far

Significant investment of time and resource to develop use of Economic Capital.

2002	2003	2004	2005	2006	2007 / 8
Simple RBC model implemented for GI Businesses	Project initiated for group-wide RBC modelling (run-off basis)	First group ICA results produced 1-in-200 stresses aggregated using nested matrices	First group-wide RBC results	ICA aggregation adopts mega-matrix approach (still Stress and Scenario Var-Covar)	Further embedding but approach largely unchanged
Initial views of Solvency II requirements		EEV Implemented	ICA goes live and bau QIS1	Industry adopting 1 yr VaR measures so RBC project closed QIS2	Solvency II development work alongside bau QIS3 QIS4

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How ICAs need to evolve - The Journey So Far

Significant investment of time and resource to develop use of Economic Capital.

2009	2010	2011	2012	2013	2014?
Annual ICA process calculated using full stochastic models	Improvements to business unit modelling	Introduction of 'reporting' style controls 1st external disclosure	Calibration justifications to S2 standard Model change log implemented Data Governance Standards implemented ICA model moved to Algo platform	Enhanced model governance ICA + reporting adopted for selected businesses (with associated standards, frameworks and guidance)	Model enhancements (e.g. Increased granularity) Bedding in ICA+ Preparation for Solvency 2 (IMAP)
Solvency II Directive passed Aviva Solvency II programme starts	Introduction of monthly reporting QIS5	Increased reporting of ICA: Annual plan, CLR, and weekly reporting Draft L2 text available (IMAP)	IMAP discussions shelved Dry run Model Validation	LTGA initiated ('Quick fix') Directive to amend date of transposition EIOPA Interim Measures	EIOPA Interim Measures effective Omnibus II plenary vote **2015**: IMAP **2016**: SII Live

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Results focused reporting

Timely reporting to senior Aviva management committees alongside other financial metrics

Cycle	Description	Basis of Preparation
Weekly & Monthly MI	Estimated results by business (monthly), with comparison to risk appetite	Reflects market movements, with BU input on material items for monthly
Quarterly MI	ICA (roll-forward REC) results, with comparison to risk appetite	Direct balance sheet with REC rolled forward from previous YE using carriers
Quarterly Forecast	Business unit forecast of full year ICA & expectations	Balance sheet projections – REC projected according to carriers
Annual Three Year Plan	Business unit submission of ICA three year plan, including strategic update	Balance sheet projections – REC projected according to carriers
Adhoc	MI as required to support a range of M&A activity, or in response to market movements	Use of model in various ways depending on requirement and time available
Full Year ICA	Annual full year ICA exercise submitted privately to FSA	Hard close balance sheet and full recalibration of risk factors, dependencies and loss functions.

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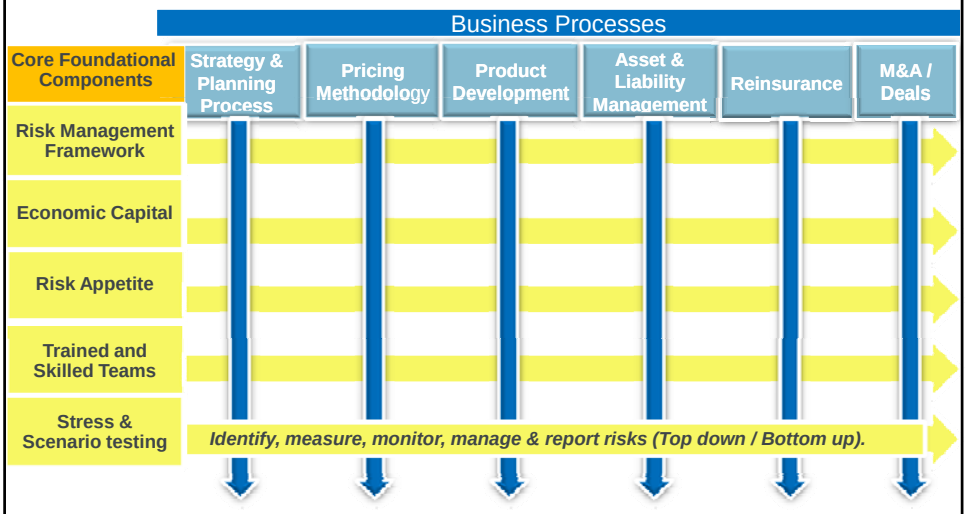
How do we demonstrate Use?



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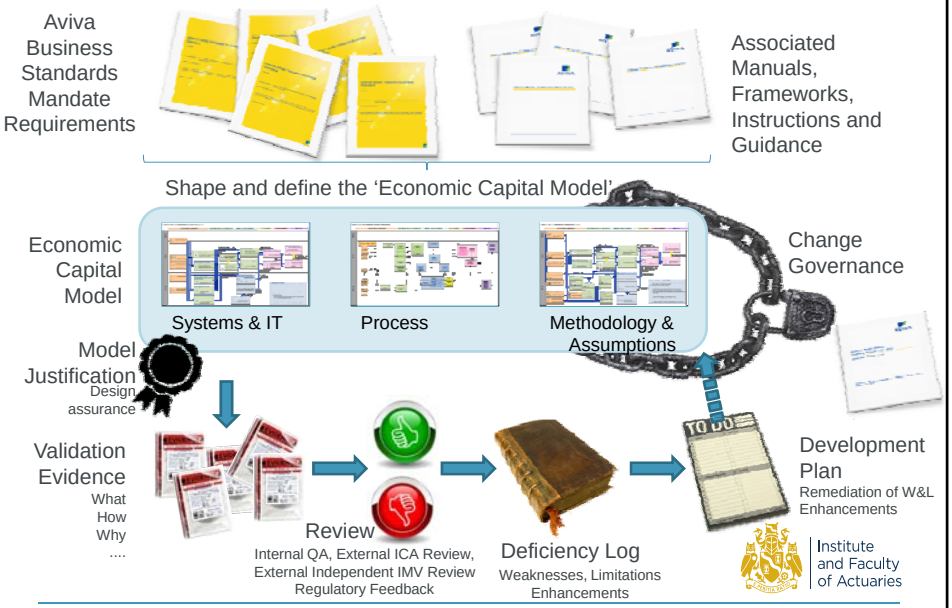
Model Framework and Governance



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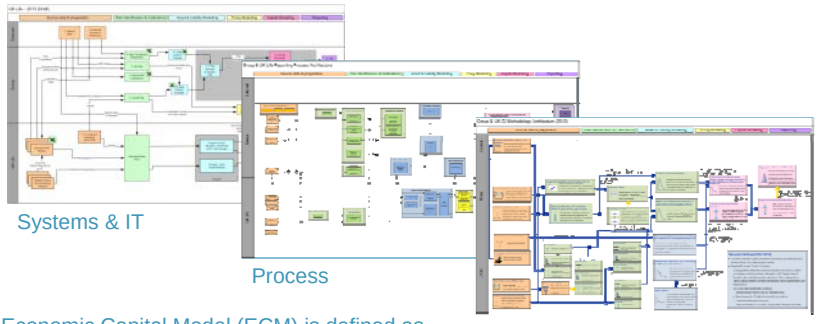
Economic Capital Model Definition



- The Economic Capital Model (ECM) is defined as

  "The methodology, systems, processes and governance for calculating the Economic Capital balance Sheet for EC+ reporting entities. This includes the data and processes to identify and quantify risk, valuing assets and liabilities both to estimate the base balance sheet and under stress and also aggregating and consolidating results."

- The scope of Model Governance covers the model from end to end.

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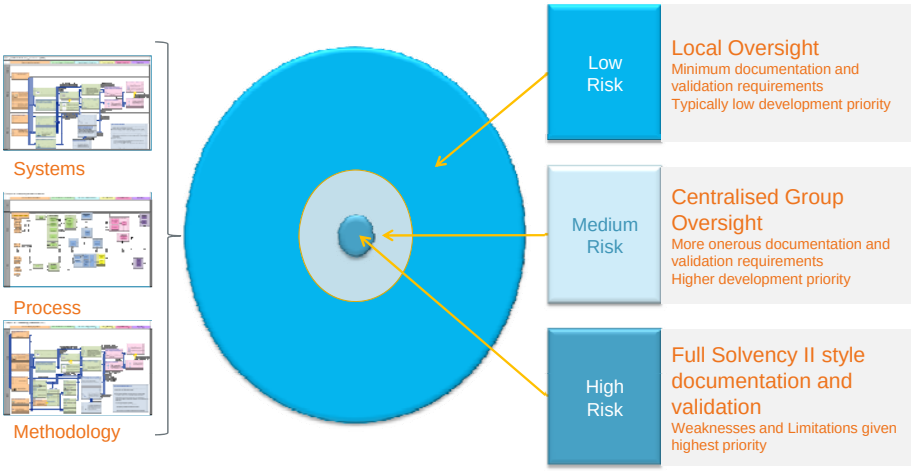
Risk Classification for EC Model elements



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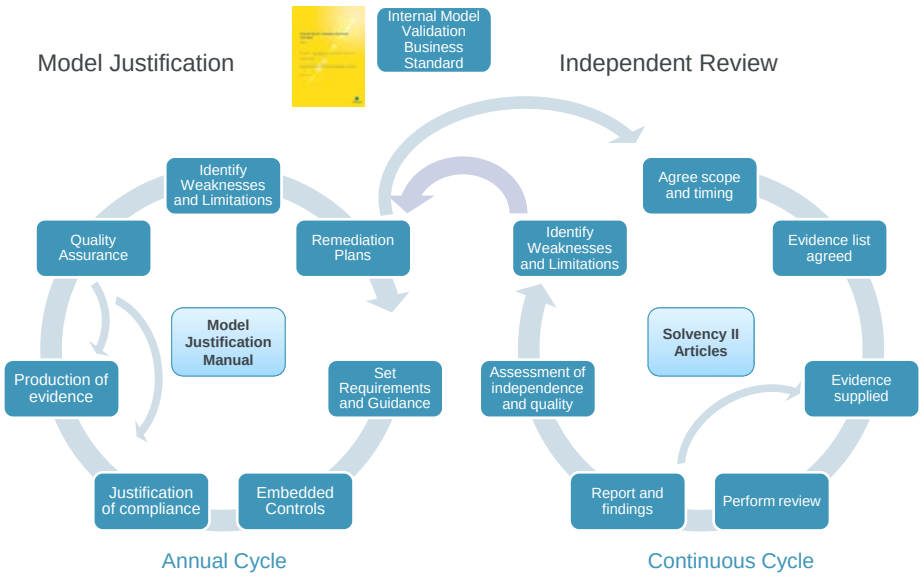
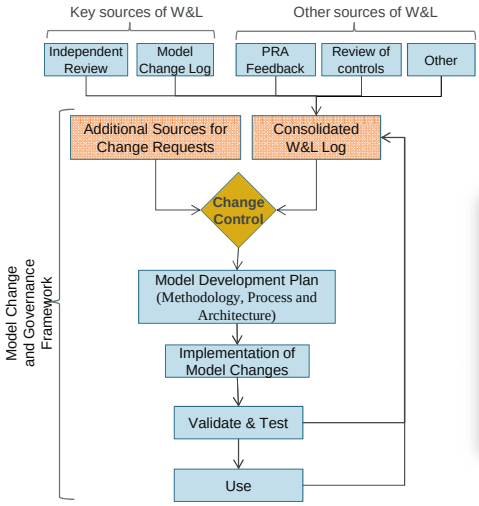
Internal Model Validation Framework

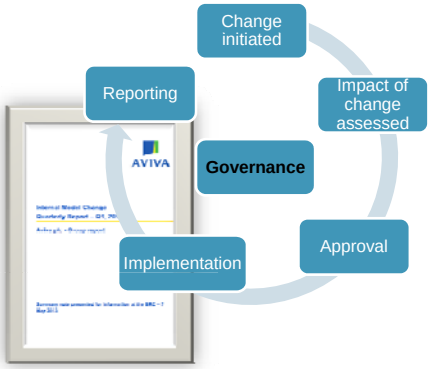


Weaknesses and Limitations (W&L)

W&L Management drives Model Development….



…. and feeds into the Model Change Process



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Aviva's Expert Judgement Framework

Overview of Framework

General Principles					
P0. Granularity	P1. Materiality	P2. Governance	P3. Communication Uncertainty	P4. Documentation	P5. Validation

Process	
	Identify and Exercise Judgement
	Validation/ Challenge
	Approval
	Independent Review
	Monitoring
	Inclusion on EJ log

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Conclusion and Questions

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