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European Wave I and Wave II IMAP Submissions and Findings

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Agenda

- ▶ IMAP in the UK
 - ▶ Current status
 - ▶ Challenges
- ▶ IMAP across Europe
- ▶ What next for IMAP
 - ▶ Firms with approved models
 - ▶ Wave II firms





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IMAP in the UK



Where are we now in the UK

Introduction

- ▶ 45 pre-application processes in place during 2014
- ▶ Solvency II entered into force on 1 January 2016.
- ▶ In December 2015, the PRA announced the 19 firms in the UK with approved internal models.
- ▶ There have also been IM approvals for local entities of international groups, such as Aegon and Allianz UK entities. More applications are expected in 2016 and 2017.
- ▶ However, the journey to internal model approval was an arduous one for many firms; and it was clear that the PRA had been challenging IMAP firms robustly during the approval process.

Life & Pension	 PRUDENTIAL PHOENIX GROUP	 PENSION INSURANCE CORPORATION justretirement	 Legal & General SCOTTISH WIDOWS	 mbia PACIFIC LIFE RE	 Standard Life unum
Non Life	 Amlin	 RSA	 ASPEN INSURANCE	 QBE	 British Gas Looking after your world MARKEL
Life & Non Life	 LLOYD'S	 AVIVA	 NFU Mutual		



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Some key questions stemming from last year's IMAP... ?

- ▶ With each model approval the PRA issued private feedback to each firm of what needs to be completed:
 - ▶ The feedback varied from short to extremely extensive in some cases
 - ▶ All items need to be completed in 2016

What will IMAP
for model
change look like

Is the bar going to be
higher for IMAP Wave 2
firms?

Does the PRA's
framework push firms
into a regulatory
internal model?

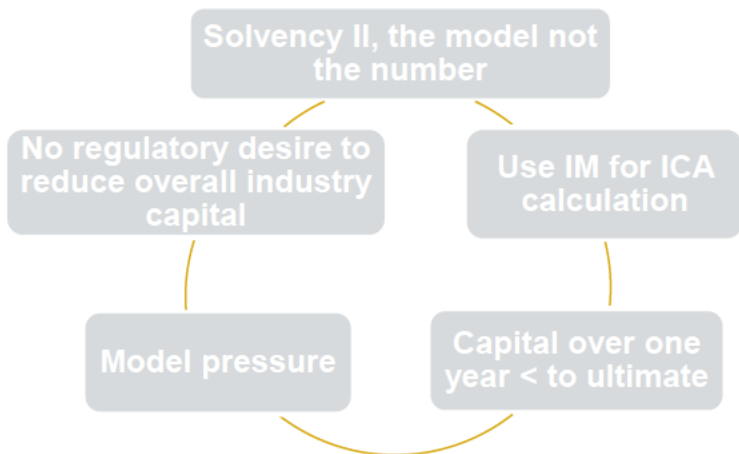
Will there be more
consistency going
forward



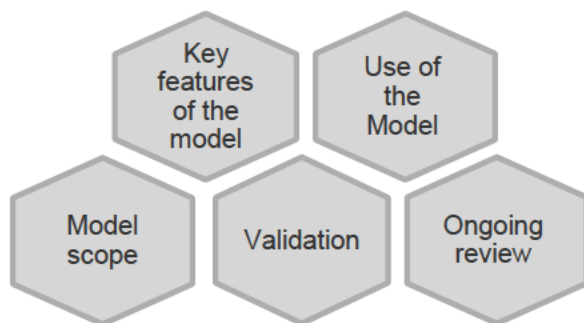
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Common challenges

Calibration



Board understanding



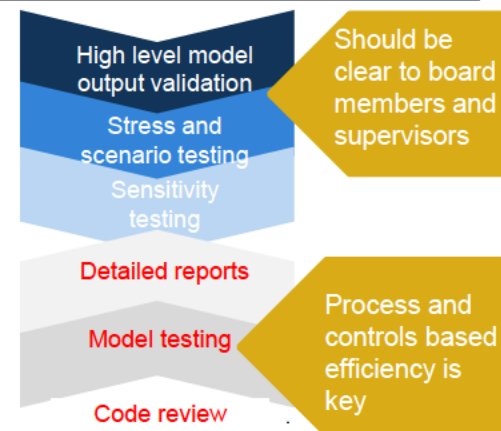
Documentation



Validation

Validation tests need to be bottom up and top down

Tests need to be complete, and detailed. PRA expect robust and challenging drill down into all areas.



Key technical challenges from the PRA during IMAP

Life companies

Credit risk

- ▶ This was one of the strongest areas of challenge from the PRA during IMAP
- ▶ The key areas of focus is the strength of the credit widening stress

Longevity

- ▶ Significantly stronger than the Standard Formula
- ▶ Regulator seems to have unofficial minimum level

General Insurance

Reserve risk

- ▶ Focus on firms articulating and validating the choice of modelling and parameterisation techniques
- ▶ One-year emergence

Catastrophe risk

- ▶ Independent validation of Catastrophe Risk has been cited as an area of potential weakness for the industry as a whole

Dependencies

- ▶ Evidence of the Board's understanding, engagement in setting correlations for both Life and GI firms

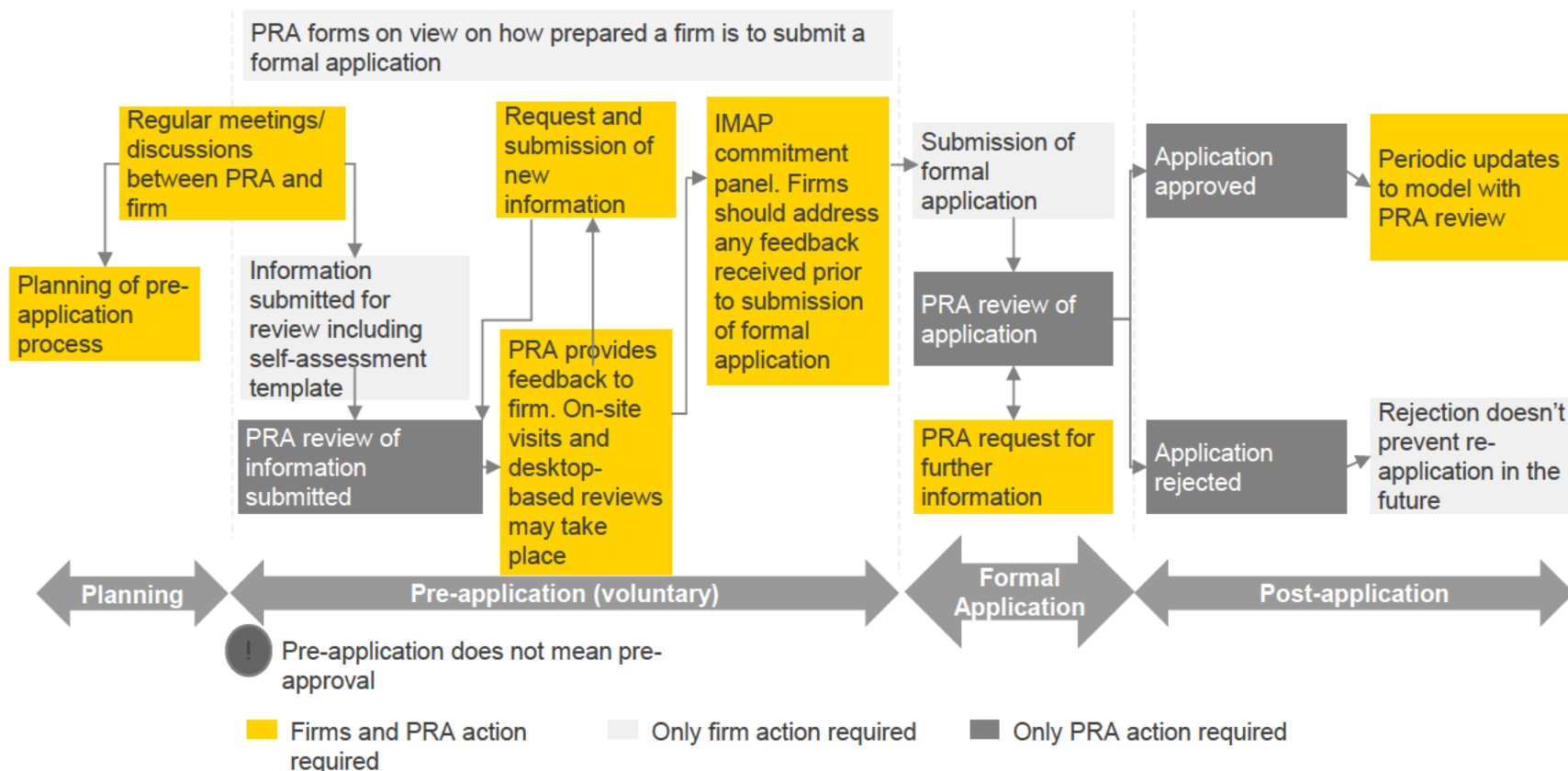
Wider areas

- ▶ Model governance, P&L attribution and validation all challenged



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IMAP timeline in the UK

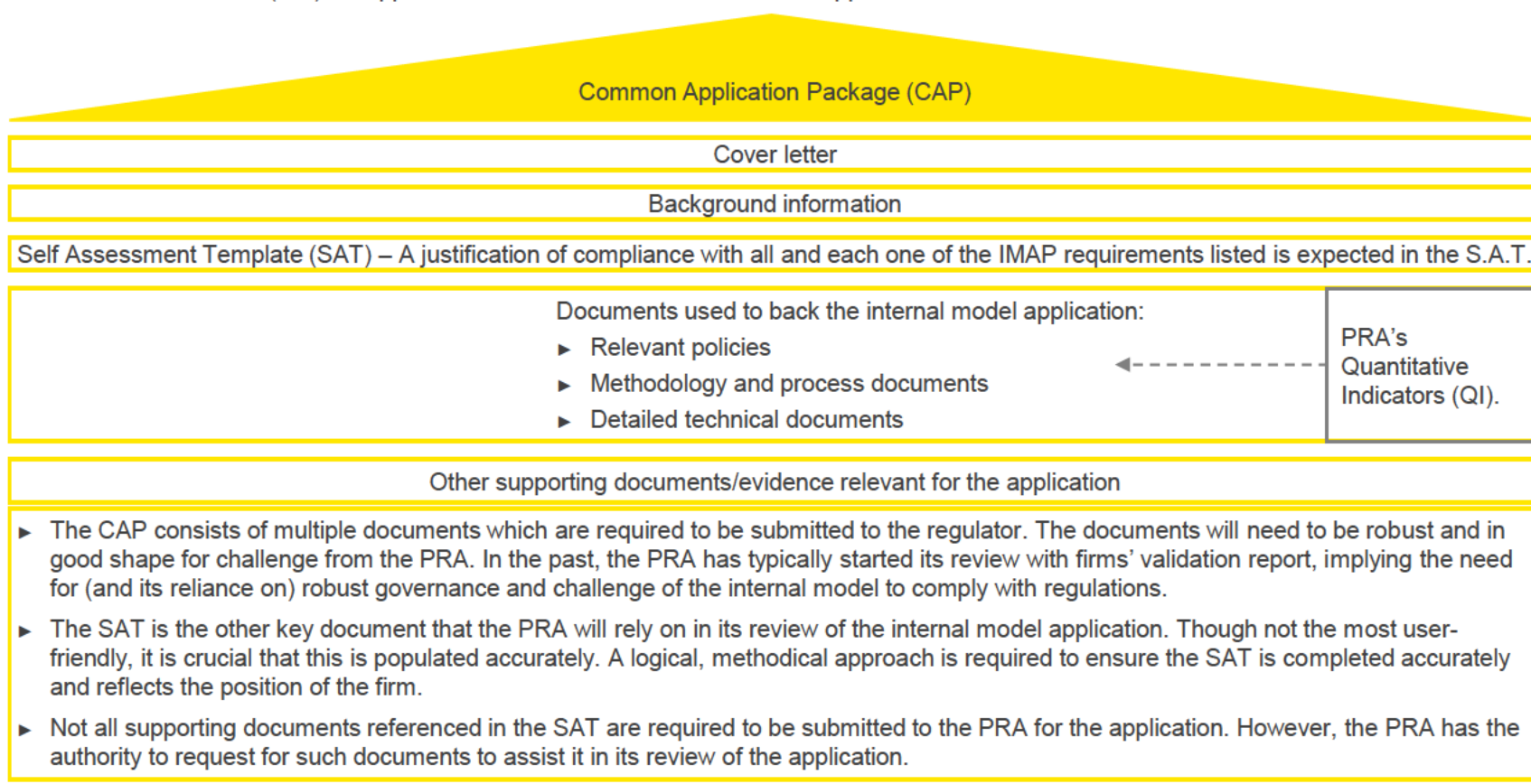


- ▶ The IMAP can be a long and onerous process, requiring input and coordination from multiple functions (from actuarial to legal) across the firm.
- ▶ As such, careful and detailed planning around IMAP (and demonstrating this to the PRA!) along with early interaction with the PRA is crucial in aiding a smoother IMAP.
- ▶ Upon formal submission, the PRA has 30 days to confirm that the application is complete (or request further information) and six months to come to a decision on the application.

What is included in IMAP in the UK

Common Application Package (CAP)

- ▶ As part of the IMAP application, firms will have to complete a CAP which sets out c. 300 requirements that need to be met for the application process.
- ▶ This was published by EIOPA and contains additional requirements to be met, in particular requirements as set out in the Implementing Technical Standards (ITS) for Application for Full/Partial Internal Models. Appendix A sets out further details on the ITS.



Brexit – Impact on SII

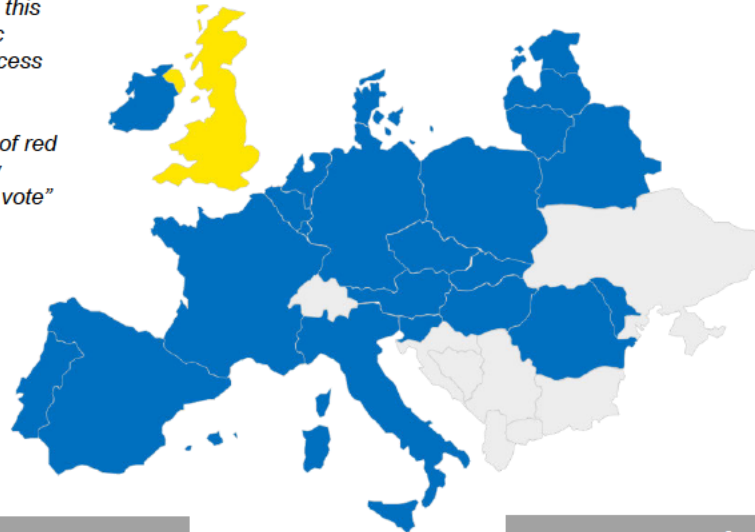


BoE 24/06/16 - "There will be a period of uncertainty and adjustment following this result.... Some market and economic volatility can be expected as this process unfolds."

"There would in no way be a bonfire of red tape or a more permissive regulatory environment in the event of a 'leave' vote"



FCA 24/06/16 - "Firms must continue to abide by their obligations under UK law, including those derived from EU law and continue with implementation plans for legislation that is still to come into effect."

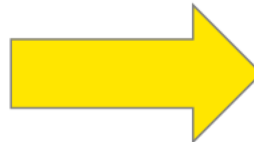


James Dalton, ABI 29/06/2016 - "There is no doubt that the process of delivering Brexit will be highly complicated, involve significant practical and legal uncertainties and difficult political judgments."

"But Britain's insurance and long-term savings industry is well capitalised, has adapted to changing circumstances for centuries and will be here for the long-term to help and support our customers."

Today's Landscape

- ❖ The Leave result from the referendum has created a situation characterised by uncertainty and speculation
- ❖ Statements issued by the FCA and government indicate that a business as usual approach should be taken with no immediate changes expected.
- ❖ The Treasury Select Committee of the UK Parliament issued the terms of reference for an inquiry into Solvency II, and what changes could be made post Brexit



Leading towards a Brexit

- ❖ The impact of Brexit is likely to create resource challenges for firms and regulators alike – leading up to a full Brexit.
 - ❖ The PRA and FCA are likely to continue to use their full regulatory powers, such as through Skilled Persons reviews (Section 166)
 - ❖ Firms are likely to face increased pressures on resource as Brexit strategy dominates their agenda. Other ongoing projects may have to be delayed to make way for Brexit impact and analysis.
- ❖ Significant structural & strategic challenges will be faced by firms which will have an inevitable reliance on Regulatory & Legal expertise - such as deciphering the challenge of maintaining (or not) relevant passporting regimes



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IMAP in Europe



Approvals by regulators across Europe

IMAP approval

- ▶ Over 100 Insurance Groups were involved in the IMAP application process in 2014
- ▶ Approximately half with an approved Internal Model (IM) or Partial Internal Model (PIM)
- ▶ Some countries had particular significant reductions e.g. Sweden

Other approvals allowed for by Solvency II impact the size of the liabilities, capital requirements and available capital of insurers as well: transitional measures on technical provisions, transitional measures on risk free rates, Undertaking Specific Parameters (USPs) for the Standard Formula, Matching Adjustment (MA) and Volatility Adjustment (VA).

There is significant impetus to align regulatory approaches between regulators although this has not always been the case.

The following slides present approvals granted by regulators across Europe (either published by regulators or insurers themselves).



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Approvals by regulators across Europe

	France Regulator: ACPR 	Netherlands Regulator: DNB 
Summary	▶ 2 companies achieved full IM approval and 3 achieved PIM approval under the French regulator, with more applications expected in 2016 and 2017. There are also a number of local entities for wider European groups that have received approvals or are still going through the approval process. ▶ MA is not used by French firms, but VA applications were prevalent, including a dynamic VA approval for an IM firm. ▶ None of these firms are making use of TP transitionals.	▶ 3 composite firms received PIM approval. ▶ Standard VA is being used across the market, with no approval being required from the regulator. Full dynamic VA is not allowed by the regulator; however, we have seen one approval of an approach allowing some benefit under stress but (unlike dynamic VA) based on the firm's own reference portfolio and keeping the VA on the liability side constant. ▶ MA is not currently used by Dutch firms, mainly due to a lack of eligibility of products. The feasibility of MA is being investigated by some firms, e.g. including restructuring of certain products or reinsurance solutions. ▶ TP transitionals are not used.
Companies	    	  

*All firms listed as having IM or PIM approval (by way of logo) are under the group supervision of that country's regulatory body. There may be other entities with approval in those markets, e.g. local entities of wider European groups.



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Approvals by regulators across Europe

	Germany Regulator: BAFIN 	Luxembourg Regulator: CAA 	Belgium Regulator: NBB 
Summary	▶ 5 German companies received IM approval. IM approvals in the German market consist mainly of large composites but Arag focuses on non-life insurance only. ▶ Most of the approvals are for group models, with Allianz Life in Germany being the exception. There may be further approvals for other entities in the coming years with a number of applications expected. ▶ Many German life insurers have applied for and are using VA. This includes VA approvals for 3 of the IM firms. MA is not used in the German market. ▶ Most life firms have applied for and are using TP transitionals, including approvals for 3 of the IM firms.	▶ Swiss Re's internal model serves both Swiss local regulation ('Swiss Solvency Test') and Solvency II and has been approved in both cases. Swiss Re Europe SA is headquartered in Luxembourg and therefore the Solvency II approval sat with the Luxembourgish regulator.	▶ 2 companies received PIM approvals, one of which was the local entity of AXA. Other approvals are ongoing, with at least one approval expected in 2016. ▶ MA is not currently used in Belgium but nearly all companies use VA. There have also been discussions with the regulator on dynamic VA, with firms interested in applying this, but nothing official has come out of these discussions as yet. ▶ TP transitionals are not currently used.
Companies	    		 

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Approvals by regulators across Europe

	Czech Republic Regulator: CNB 	Italy Regulator: IVASS 	Ireland Regulator: CBI 
Summary	▶ Approvals are yet to be granted as certain Solvency II amendments to Czech legislation are still to be finalised. Approvals are expected to be finalised in 2016. ▶ One company has applied for full IM approval, including VA, and another has applied for a PIM. ▶ Standard VA is regularly used and dynamic VA applied for by at least one IM firm. ▶ Neither of the two firms applying (P)IMs has applied for MA or TP transitionals.	▶ Two Italian companies have been approved to use a partial internal model, the approvals were made during 2016 but back-dated to 1 January 2016. ▶ MA is not expected to be used within the Italian market. VA is expected to be widely used (firms do not need regulatory approval to apply a standard VA) and one company going for IM approval is known to be applying for use of dynamic VA. ▶ The use of TP transitionals is not expected to be widespread.	▶ Approximately 7 companies (primarily local entities of European groups) have had approval to use an IM although this has not been publicly announced by the regulator. There are a number of further companies who have identified that they will pursue model approval with the regulator in 2016. ▶ VA, MA and TP transitionals are unlikely to be used widely in the Irish market.
Companies		 	 

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Approvals by regulators across Europe

	Poland Regulator: KNF 	Nordics Regulators: Local FSAs for each country    	Austria Regulator: FMA 
Summary	▶ There have been no IM approvals in Poland to date, with all firms' applications initially rejected. ▶ Approximately 10 companies are still in the process of seeking IM approval in 2016/2017, most of which are local subsidiaries of wider European groups. In some cases, this might include switching from full IM to PIM applications. ▶ There is no use of MA in the Polish market. Some firms, particularly local entities of European groups, are using VA. ▶ There is some use of TP transitionals but this is not widespread.	▶ 3 Danish companies have had internal models approved. There is also some use of VA in Denmark. ▶ One Swedish companies has received IM approval and at least a further one is known to be applying. ▶ At least three Norwegian companies are in the process of applying to use an internal model although approvals are not expected until end-2016/2017. Pension products in Norway contain profit sharing features which make MA less applicable and, as such, MA is not permitted by the regulator in Norway. Most companies are expected to use VA and TP transitionals. ▶ No Finnish companies gained approval to use an internal model. A number of companies are using VA and TP transitionals.	▶ 2 Austrian companies applied for and were granted PIM approval.
Companies		   	 

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Approvals by regulators across Europe

	Spain Regulator: DGSFP 	Portugal Regulator: ASF 	Greece Regulator: ΤτΕ 
Summary	▶ 2 companies have received formal approval for their internal models and 1 is awaiting. ▶ A number of Spanish firms have also applied for both MA and TP transitionals. The regulator is currently reviewing 17 MA applications. ▶ No formal approval is required for use of VA and there is some use of VA in the market.	▶ There have been no IM or PIM applications in Portugal to date. ▶ There is currently no use of MA. ▶ Several companies have requested approval for VA. ▶ TP transitionals are very prevalent in the Portuguese market, across both life and non-life companies, and applications can still be made.	▶ Two local entities of international groups have been granted approval on their PIMs. ▶ Use of VA is prevalent in the Greek market with the majority of companies making use of it. No formal approval is required for this. There is, however, no use of dynamic VA. ▶ MA is not used in Greece. ▶ Approval is required for use of transitionals (TP and risk free rate) in Greece. Use of these appears limited although we are aware of at least one firm using TP transitionals.
Companies	 		

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What next for those looking at IMAP



What next for those looking at IMAF?

Approved
Internal
model

- ▶ Operational efficiency
- ▶ Addressing weaknesses
- ▶ Performing model changes, including going through the approval process for major changes
- ▶ Refreshing calibrations, expert judgements, etc

Ongoing
internal
model
approval
process

- ▶ Some markets had no day-one approvals
- ▶ Fewer wave 2 firms than expected

Std.
formula

- ▶ SF appropriateness
- ▶ SF audit
- ▶ USPs
- ▶ PIM

Next
steps
for all
firms

- ▶ Still a lot to do.
- ▶ Governance and reporting
- ▶ Capital optimisation is becoming a high priority for many insurers as the regulations stabilise.
- ▶ Investor communication
- ▶ Consistency between markets and regulators

What next for firms with approved models?

- ▶ The review process during IMAP has led to many compromises on model calibration – what changes do firms want to make in 2016?
 - ▶ Firms need to live with the model change policy – major model changes are expected during 2016, many have planned changes.
 - ▶ Need to define what ‘validating model changes’ really means in a BAU world.
 - ▶ Addressing model weaknesses and IMAP feedback from the regulator.
 - ▶ Challenge to stay ‘on top’ of documentation and model governance (and evidencing this to the regulator).
 - ▶ Demonstrate value and relevance internally.
 - ▶ Move to BAU model runs and updates.
- ▶ Will the PRA start using s166 investigations into core processes they have concerns over?
 - ▶ The model change process also allows the PRA to look into areas they have concern over.



Tips for IMAP Wave 2 firms

- ▶ Clear planning and scoping from the outset is important, **this planning and scoping does not need to be done by technical experts**
- ▶ Actively manage the process with the regulator – engage with the regulator early and regularly
- ▶ Start validation **early**
- ▶ Work with your supervisor to help them best present your model to the panel, **make sure you understand their concerns/point of view**
- ▶ Use CAP/SAT to actively manage the specific deliverables needed
- ▶ Be clear on your motivation for using an internal model – if this is solely for the purpose of capital management there may be less onerous alternatives
- ▶ Model change policy – understand what this means for your organisation, and your model
- ▶ Remember that the goal is to receive model approval from the regulator – **not prove you have the best model / most intelligent actuaries**



Latest Papers

Model change (SS12/16)

Model change process follows format of model approval process

Clear identification of changes required

Process and mechanics are challenging

Consider your model change policy very carefully

Work with PRA

Market Turning Event (CP 32/16)

PRA reminds firms to think about this in relation to model change



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Questions

Comments

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