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Solvency II Practical Review

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Susan Yang FIA, Tesco Underwriting (Technical Provisions stream leader)
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16 October 2017

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Agenda

- Overview
- Survey results
- Capital stream
- Technical Provisions
- Conclusion & next steps

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Overview

Amrita Pattni, Guy Carpenter

16 October 2017

Solvency II – the story continues

1-Year post implementation → Brexit & Treasury Select Committee inquiry → Market Survey → Results and Working Party Paper

Issues:

- **Non-reflective required or available capital**
- **Unintended market behavior**
- **Overly onerous calculations**

Opportunity:

- **For modifications to Solvency II**
- **Recommend these changes for PRA to consider**

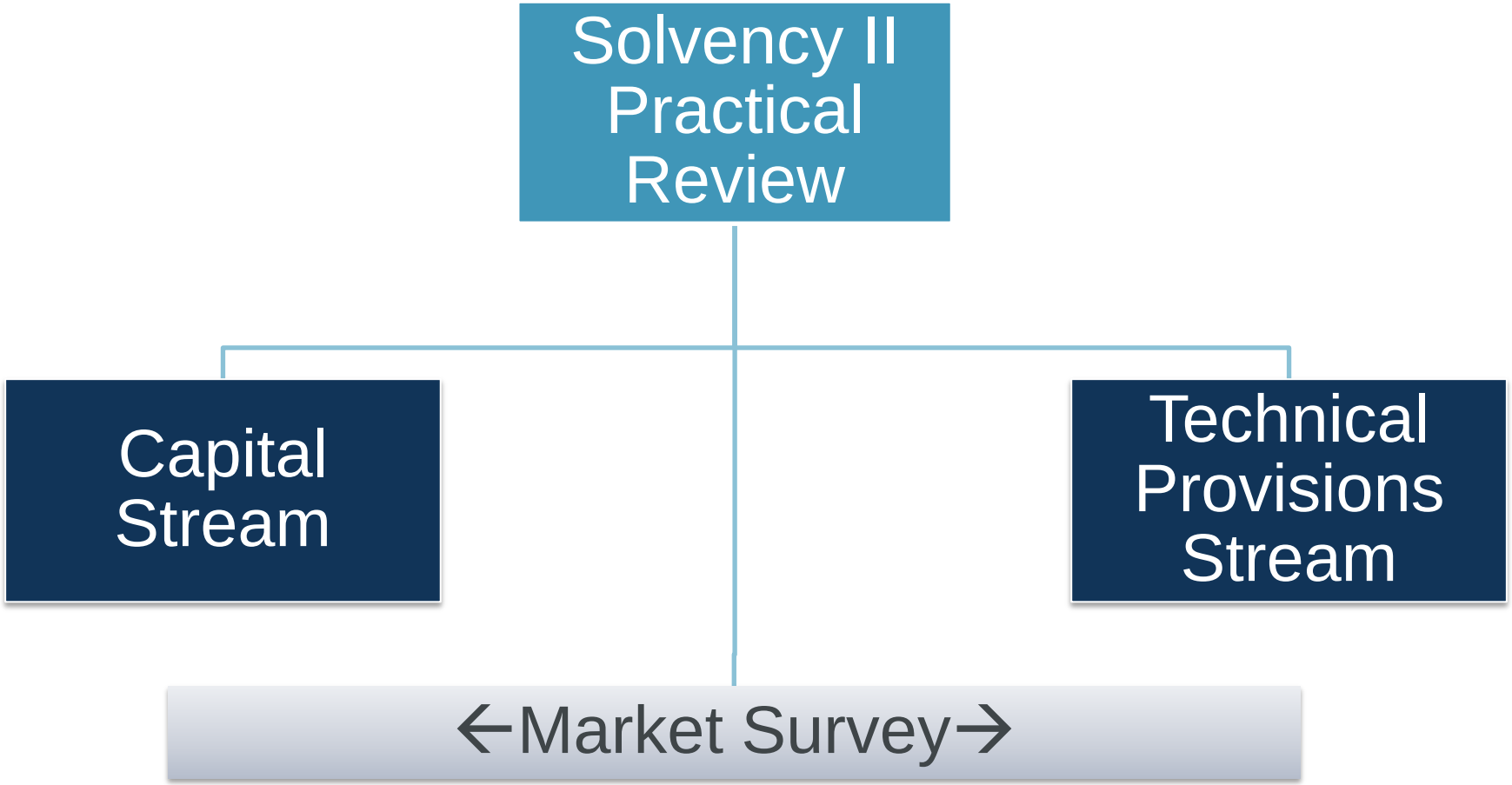
Confirm Issues:

- **Get market practitioners view on these issues**
- **Ensure scope is in line with market**

Paper outlining:

- **Top issues**
- **Descriptions of each issue**
- **Proposed solution**
- **Pros and cons of solution where possible**

Solvency II is vast. How best to approach this?



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SII Practical Review: Survey Results

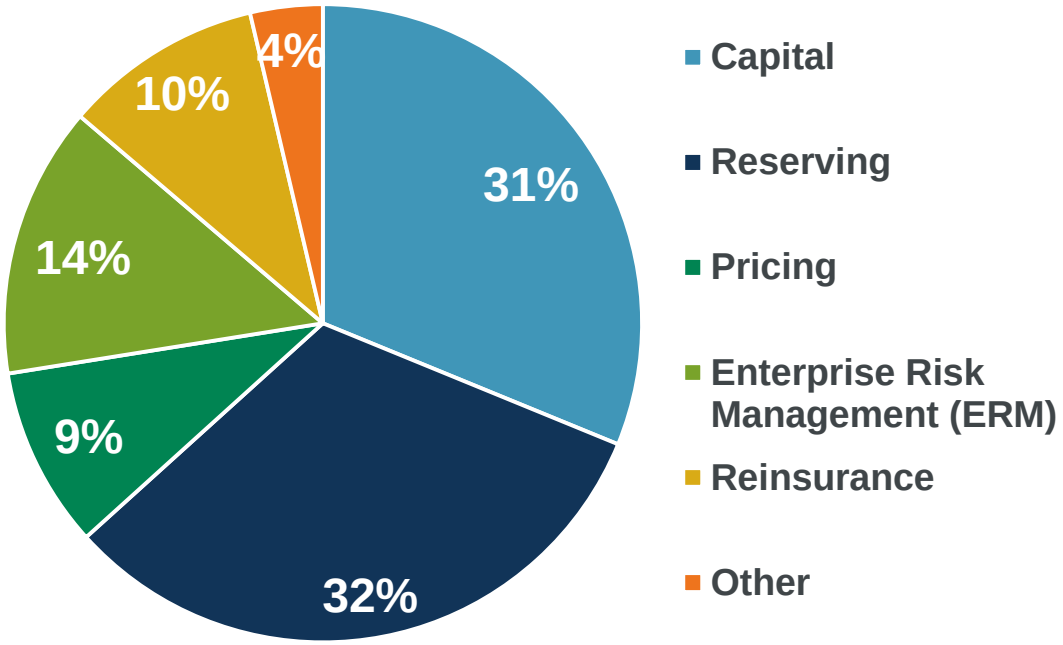
Yuming Mei, Mazars

16 October 2017

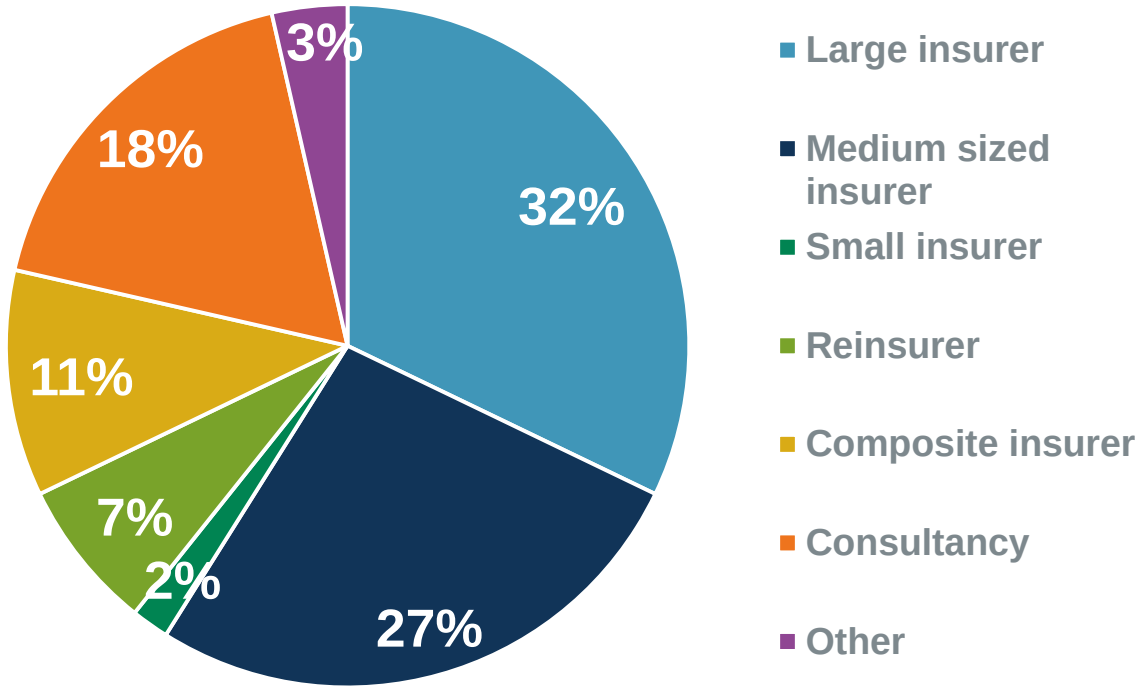
Respondents

- Over **120 responses** from a **wide cross-section** of the market.

Practice Area



Type of Firm



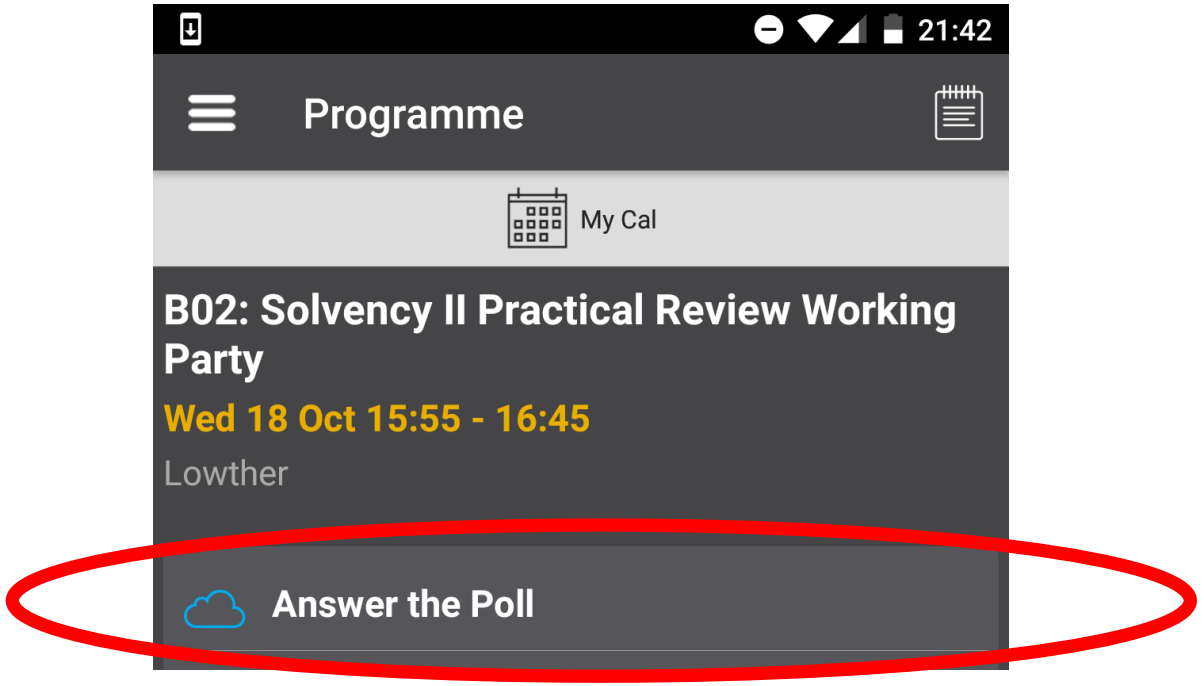
Before we begin…

What are the top practical issues that Solvency II poses for you in your role?

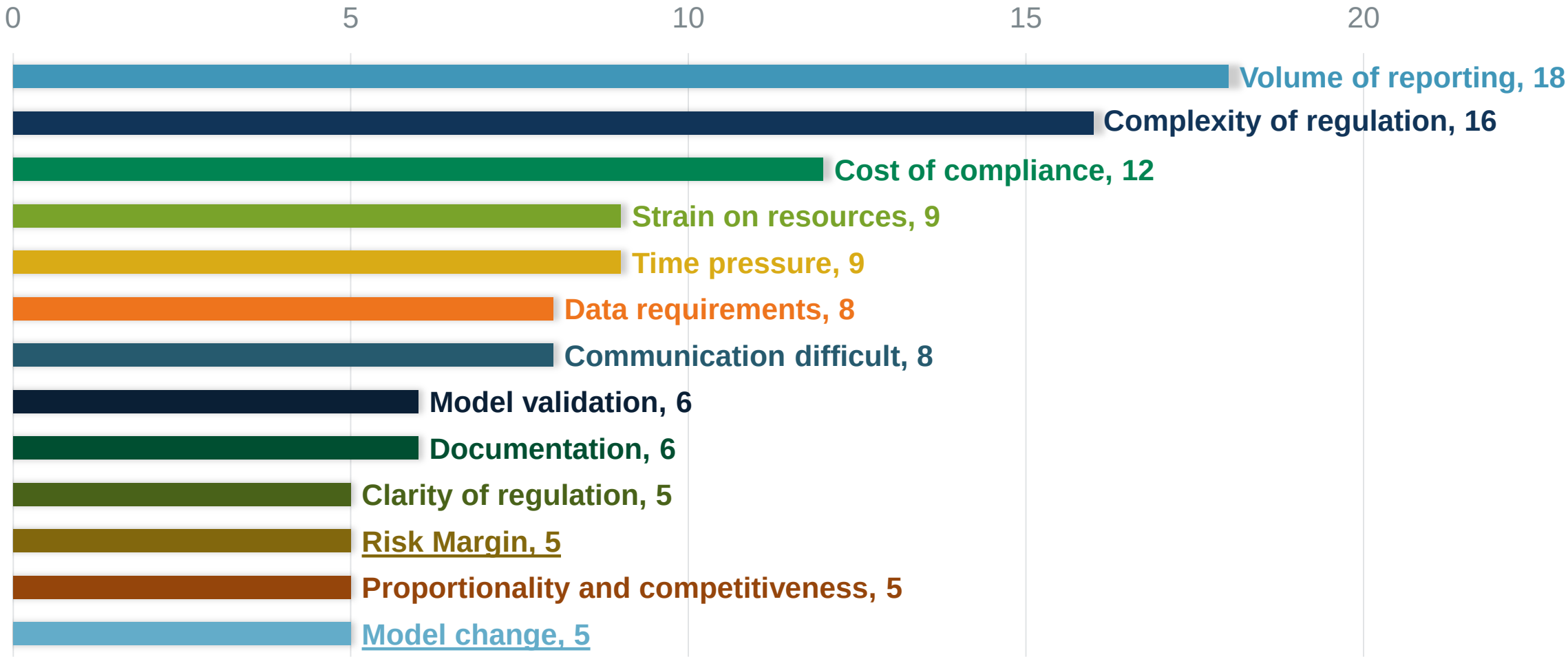
Please respond using the GIRO app.

Or, browse to sli.do and type U499.

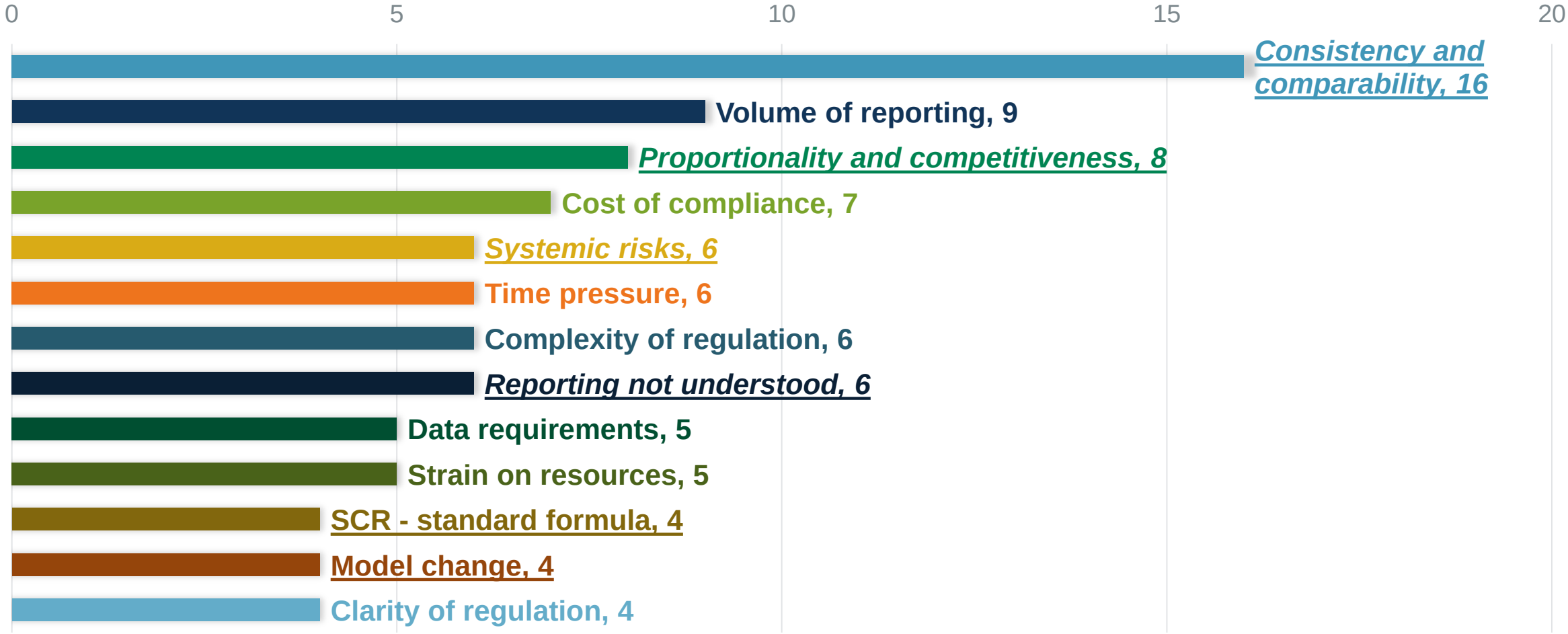
You may select **up to 3 answers**.



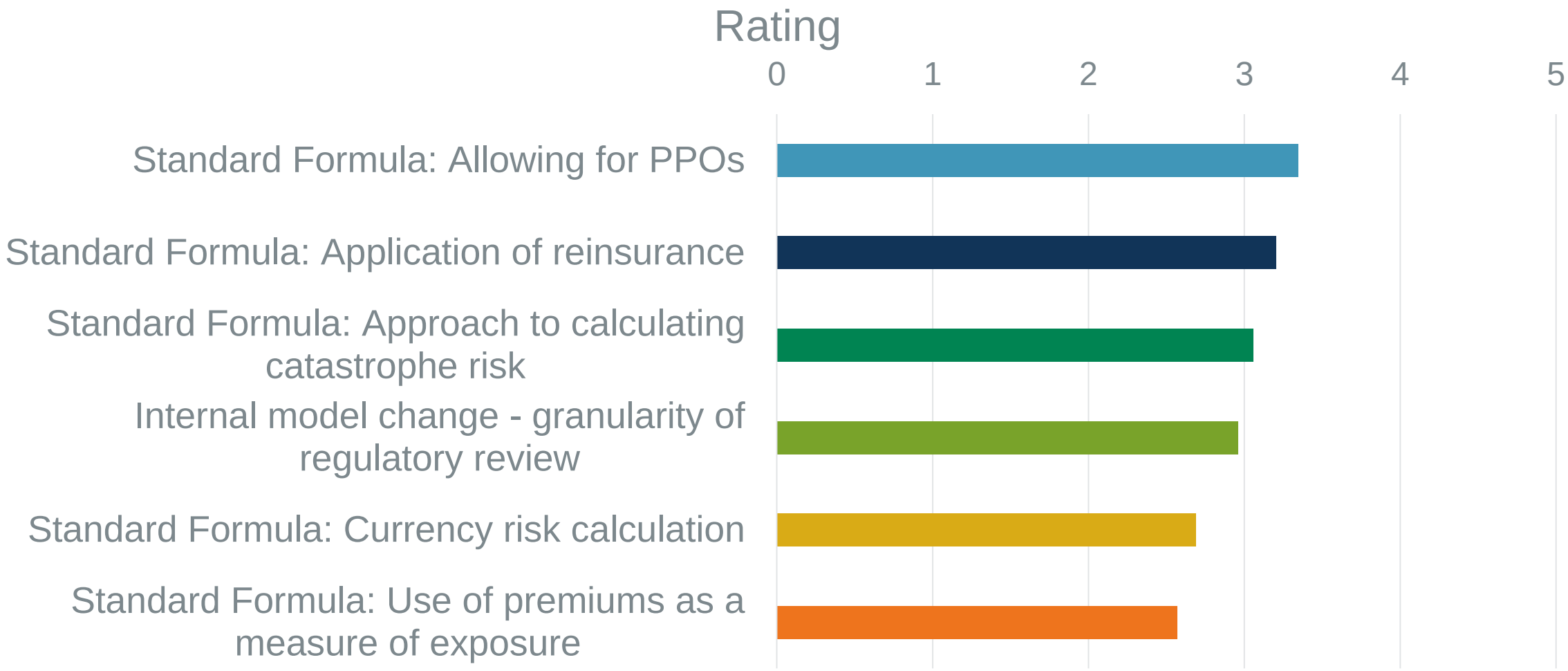
The issues in the market – “*you in your role*”



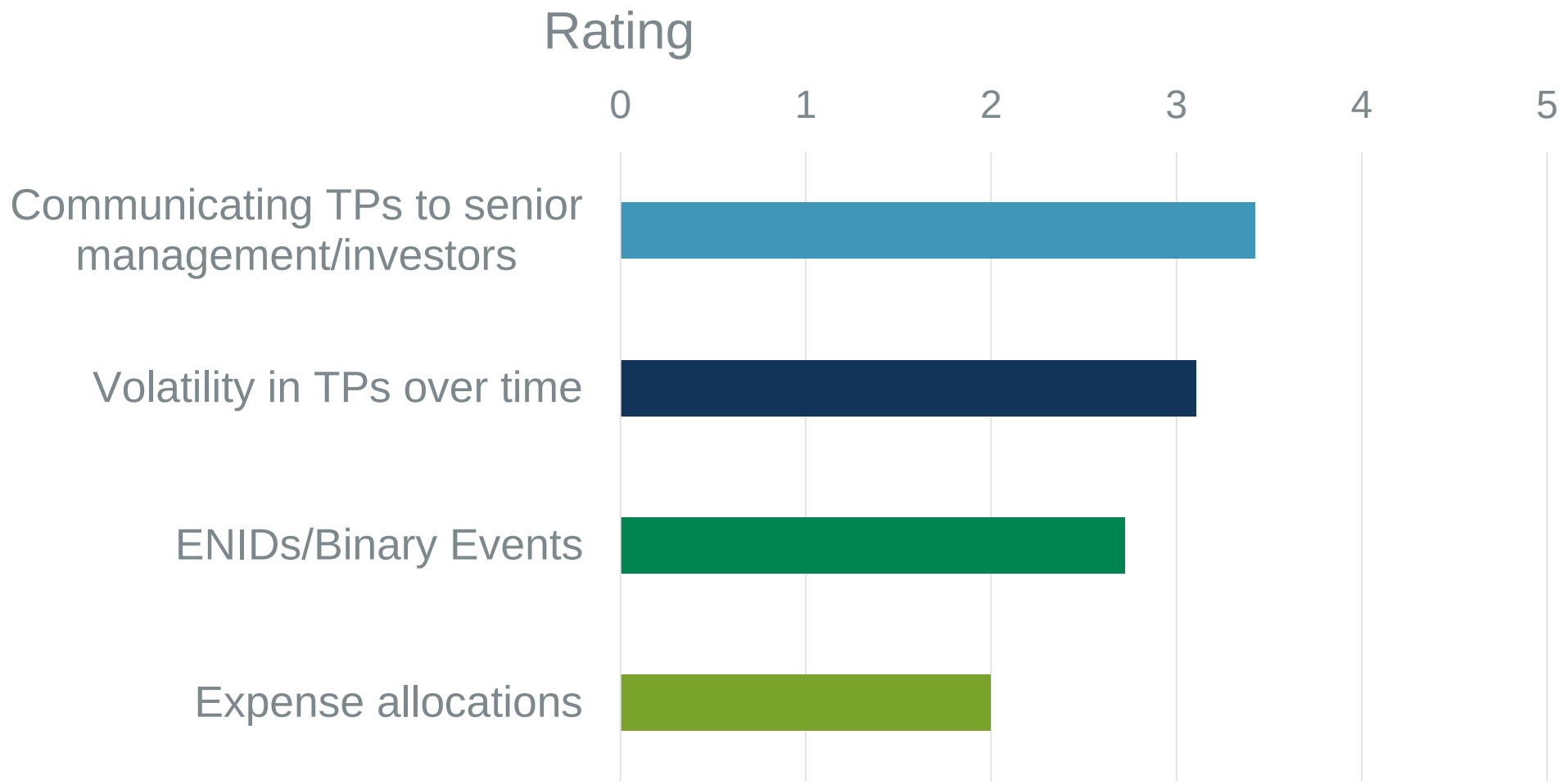
The issues in the market – "*the market as a whole*"



Ensuring our scope is in line with the market - Capital

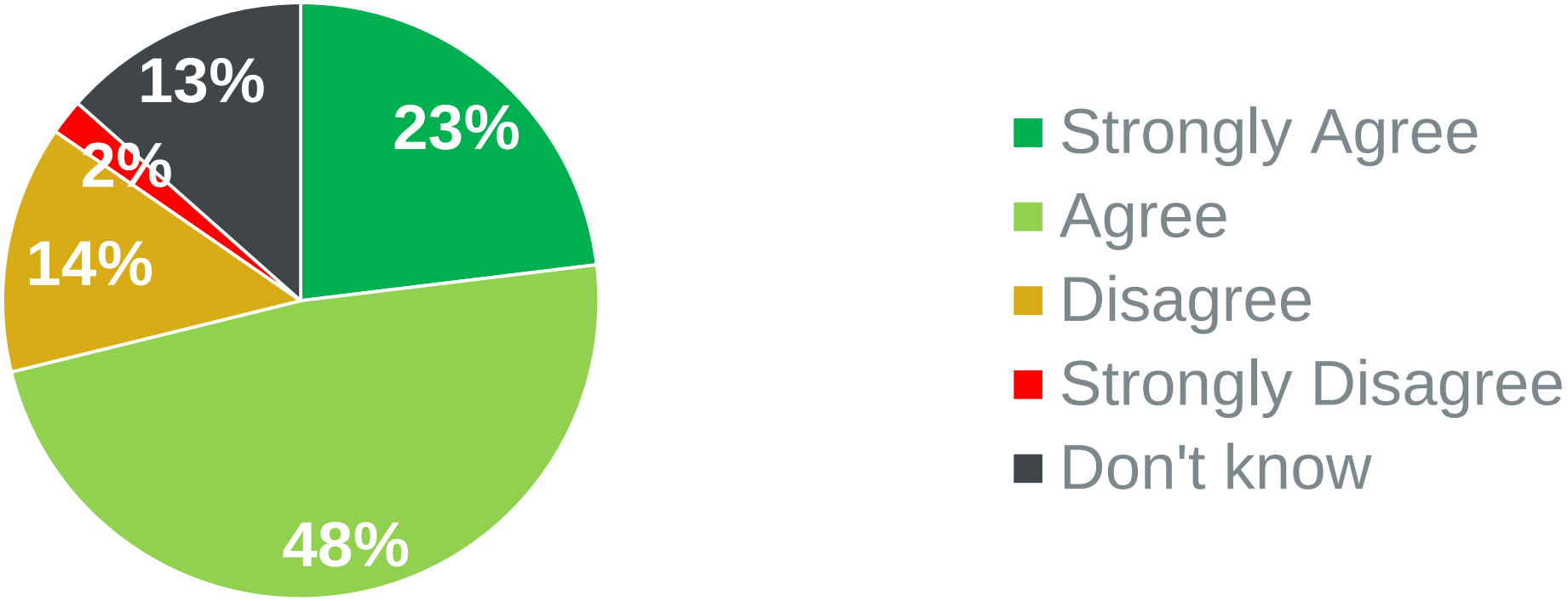


Ensuring our scope is in line with the market - TPs



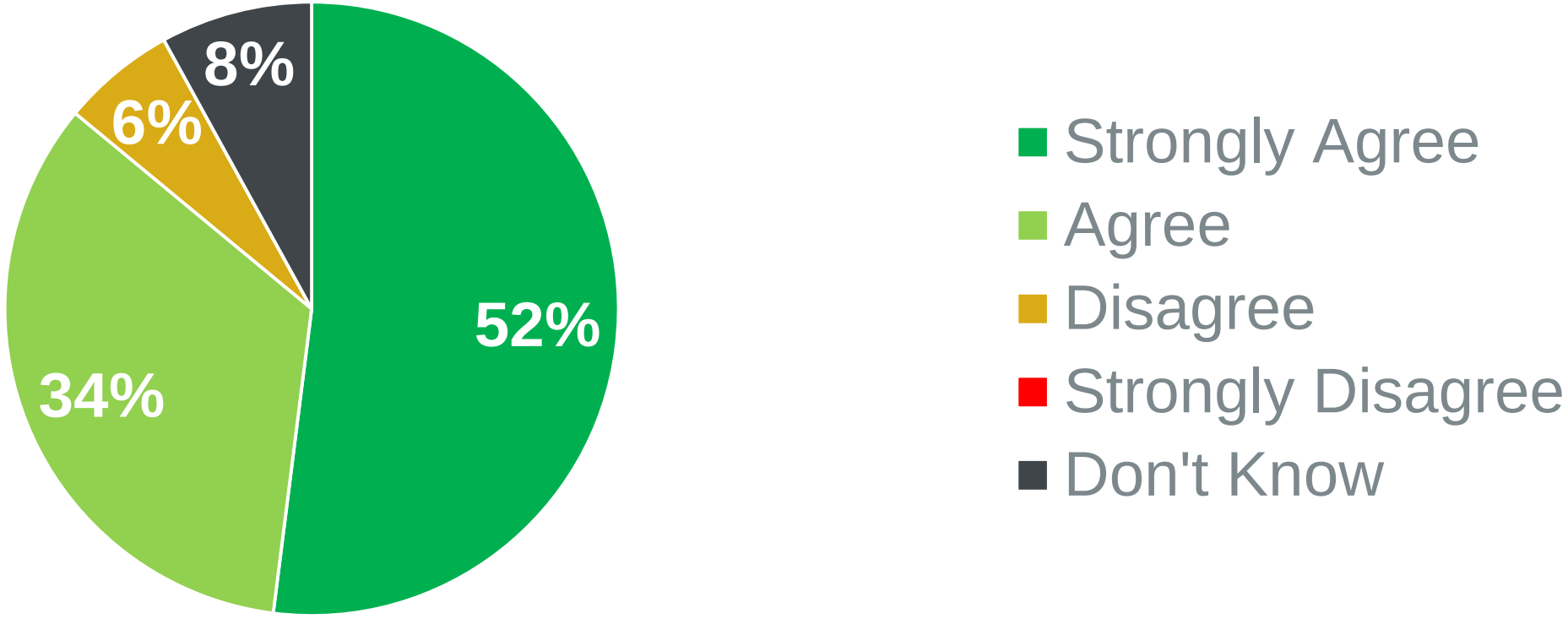
Risk Margin

"The UK should explore alternative methods to replace the Risk Margin calculation post Brexit"



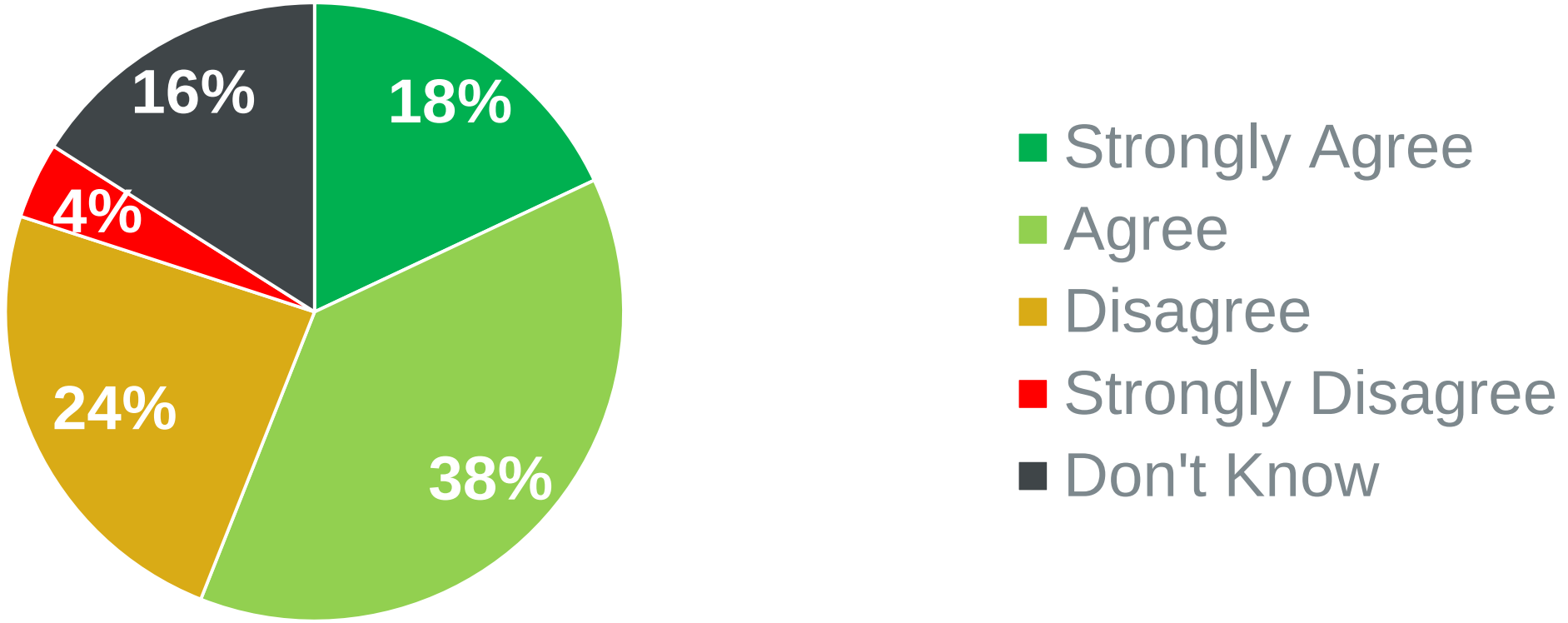
Wider issues – TSC response – Solvency II Reporting

"Financial reporting under Solvency II is unreasonably onerous and should be simplified."



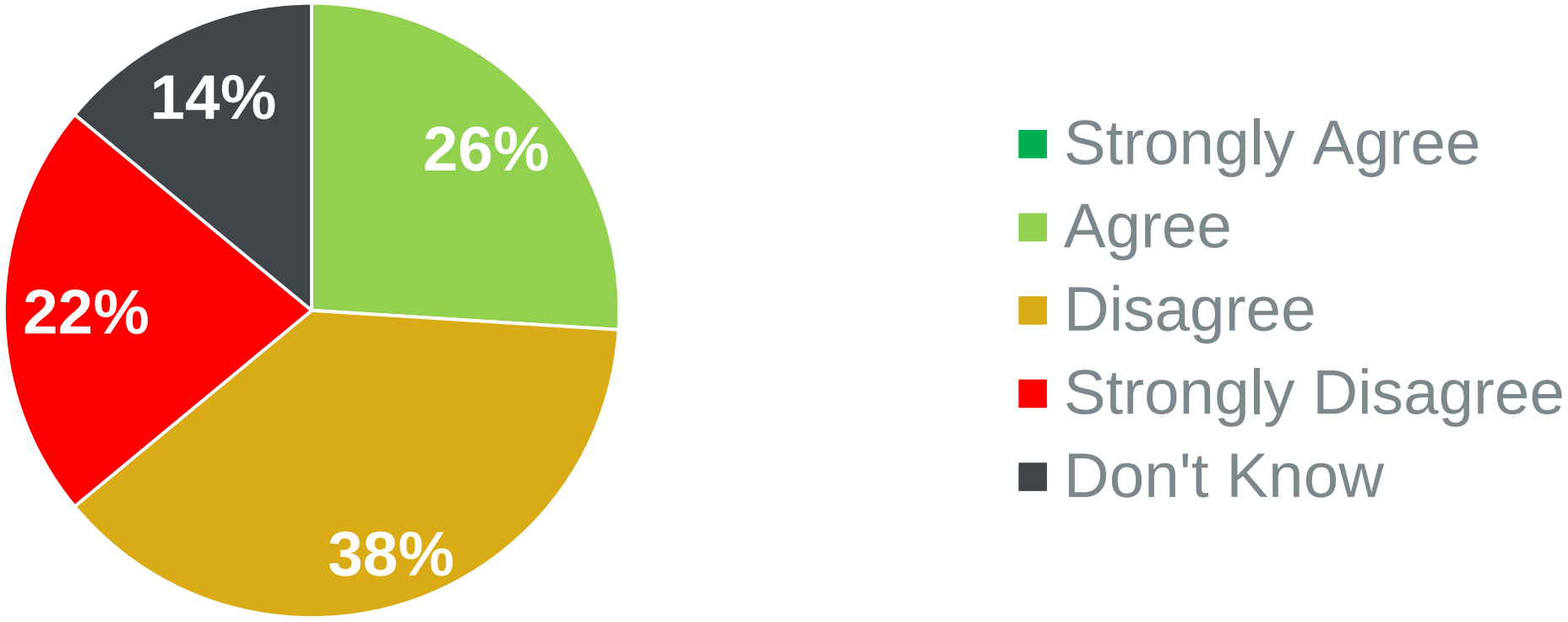
Wider issues – TSC response – Competition

"Solvency II has created a competitive disadvantage for UK general insurance firms in relation to firms from outside the UK..."



Wider issues – TSC response – Proportionality

"The implementation of Solvency II allowed sufficiently for different sizes and types of firm."



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Solvency II key issues: capital

Cat Drummond, LCP
Jamie Grant, Lancashire Group

16 October 2017

Summary of capital issues

Issue	Mis-states capital?	Risk management issues?
Internal model change	✓	✓
Currency risk	✓	✓
Premiums as a risk measure	✓	
Catastrophe risk	✓	✓
Allowance for reinsurance	✓	✓
PPOs	✓	
Operational risk	✓	✓

Internal model change

Background

- One of the top 3 practical issues identified
- Major change in particular
- Clarity and guidance lacking
- Major change process onerous

! Issues

! Discouraging model development / use
! Regulatory expectations on frequency of change
! Data changes?
! Minor change aggregation?
! Major change requirements?

✓ Proposed solution

✓ Need to work as an industry (including regulators) to develop thinking on this
✓ Best practice / market guidance:
- Minor changes on per risk category basis, overarching assumptions reported separately
- Agree triggers
- Simplified major change process

Currency risk

Background

- Calculation: 25% x $|(Assets_{curr} – Liabs_{curr})|$
- Summed across all currencies

! Issues

! Assumes worst outcome for each currency is 100% correlated
! Discourages holding buffers in currencies
! Discourages good risk management
! CEA (Insurance Europe) raised this in 2012

✓ Proposed solution

✓ 1: apply uplift to liabilities to allow for some buffer
✓ 2: apply only where liabilities > assets
✓ 3: allow currencies to offset by considering shock aggregated across all non-reporting currencies
✓ **4: compare actual allocation to "optimal" portfolio (eg % assets splits vs % liability splits)**
✓ 5: Assume correlation matrix between currencies (in combination with other options)

Premiums as a risk measure

Background

- Premium risk calculation (simplified):
  →Premiums x factor x sigma
- Catastrophe risk calculation (simplified):
  → Loss ratio x premiums

! Issues

! Multi-year policies
! Ignores policy limits / terms
! Soft market conditions

✓ Proposed solution

Multi-year:

✓ Allow for diversification between years
✓ Limit volumes to over next year only

Policy limits:

✓ Scenario based approach (as for other catastrophe risk calculations)
✓ Allow firms to take account of policy limits

Catastrophe risk – natural catastrophes

Background

- EEA nat cat risk
  →1 in 200 CRESTA zone damage ratio x TSI
- EEA windstorm, flood and hail losses assumes >1 event for each peril when calculating capital
- For non EEA regions, loss ratio x premium approach currently required

✓ Proposed solution

- ✓ Damage ratio USPs
- ✓ Top 2 events per year
- ✓ Damage ratios for Non-EEA regions

! Issues

- ! 1 in 200 zone damage ratio calibrated assuming diversification within local CRESTA zones
- ! Risk can materially differ compared with detailed modelling (eg Flood) +/- 400%
- ! Firm exposed to windstorm, flood and earthquakes would assume 2 windstorms, 2 floods and 1 earthquake in 1 year – overstated?
- ! Results in over-purchase of reinsurance / unconventional risk management
- ! Issues around premiums as a risk measure already discussed

Allowance for reinsurance: cat risk

Background

- Method 0:
  - Apply reinsurance to peril losses
  - Combine perils through correlation matrix
- Method 1:
  - Combine perils through correlation matrix
  - Allocate resulting aggregated SCR back to perils
  - Apply reinsurance
  - Add net losses to get total SCR

! Issues

! Method 1 highlighted in guidance for applying outwards reinsurance under standard formula

! Method 1 shown to be encouraged by auditors

! Results in unconventional risk management by buying more horizontal cover instead of vertical cover

✓ Proposed solution

✓ Move to Method 0 (where total recoveries does not exceed maximum recoverable)

✓ Guidance to highlight implications of Method 1

Allowance for reinsurance: premium and reserve risk

Background

- Non-proportional reinsurance can be allowed for within Standard Formula reserve and premium risk capital
- Allowed for via reduction to standard deviation factors

! Issues

! Can only be allowed for within 3 lines of business:
  - Motor vehicle liability
  - Fire and other property damage
  - Third party liability

! Reduction is 20% regardless of actual cover

! May lead to unconventional risk management / reinsurance purchase

✓ Proposed solution

✓ Adjust the standard deviation factor by considering the % TSI that is reinsured

Allowance for PPOs

Background

- Periodical Payment Orders largely a UK / Irish issue
- Standard formula allows for longevity risk (life underwriting risk) and interest rate risk (market risk) which are relevant for PPO exposures

! Issues

- ! PRA noted concern at inadequacy of standard formula for PPOs
- ! Longevity risk likely to be greater than that allowed for within life underwriting
- ! Does not allow for inflation risk
- ! Limited risk management incentive

✓ Proposed solution

- ✓ Introduce an impaired life module
- ✓ Introduce inflation risk stress

Operational risk

Background

- Operational risk capital calculation a simple calculation:

  $25\% \times \text{Expenses}_{\text{unit-linked}}$

  $+ \min (30\% \times \text{BSCR}, \max(\text{Op}_{\text{prem}}, \text{Op}_{\text{res}}))$

! Issues

- ! Linear relationship assumed (generally)
- ! Indicates size not risk
- ! Doesn't allow for differences in risk management systems
- ! Doesn't promote good operational risk management

✓ Proposed solution

- ✓ Option 1: Scenario based approach
- ✓ Option 2: Scorecard approach

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Technical Provision Key Issues

Susan Yang, Tesco Underwriting

16 October 2017

Summary of technical provisions issues

Issue	Mis-states capital?	Risk management issues?
Risk margin	✓	✓
Expected future profit	✓	
Validation	✓	
ENIDs	✓	
Expenses	✓	

Risk Margin

Background

- Current Risk Margin method and calibration may lead to inappropriate TP and unintended behaviours.
- The working party Market Survey shows more than 70% of respondents either strongly agree or agree to review the current method.

✓ Proposed solution

- ✓ Consider alternative methods
- ✓ Benchmarking other regulations and countries, e.g. IFRS17

! Issues

- ! Risk Margin is volatile over time and is difficult to hedge
- ! CoC% calibration maybe too prudent?
- ! Risk Margin is sensitive to interest rate movements
- ! Risk Margin incentives poor ALM
- ! There is macro-prudential implications
- ! Risk Margin could encourage pro-cyclicality
- ! No diversification allowed at Group level

Expected Future Profit

Background

- The Delegated Acts suggest that the EPIFP should be calculated as the impact on technical provisions if future premiums are not received.
- Guideline 77 then expands the above and stated it should be assumed that policies continue to be in force and no other reduction should be made to the technical provisions.

! Issues

! Conflicting and counterintuitive requirements

! Guideline 77 does not seem appropriate given the premium is not received, and would result in the EPIFP being equal to the future premium only.

✓ Proposed solution

✓ WP asked PRA for clarification on this issue

✓ **PRA confirmed** it is reasonable to assume no further claim will be paid from a GI contract if no future premium is received.

Validation

Background

- Validation was a central topic in the original IFoA GIRO paper on SII Technical Provisions.
- Our focus is on the practical implementation of validation, more specifically the non-uniformity of validation that is observed across firms and how this may be addressed pragmatically.

! Issues

! Non-uniformity in validation approach observed in the market

! The approach for validation is company-specific leading to disparity in approach and the level of standards.

✓ Proposed solution

✓ A structured checklist based on Regulatory guidance

✓ The outlined proposal should provide a framework for firms to address validation of the SII valuation consistently

ENIDs

Background

- Estimation of ENIDs rely on a high level of judgement, with little or no supporting data.
- Therefore, validation of ENIDs is problematic.

✓ Proposed solution

- ✓ Challenge to judgements for ENIDs should happen more frequently and widely; and evidenced within insurance companies.
- ✓ Consider exposures and policy limits, and articulate judgements through scenarios.

! Issues

- ! How does one validate that all possible outcomes have been considered?
- ! How have judgements been made and challenged?
- ! How does one prove that an allowance for ENID is overstated?
- ! Are both ends of the distribution being considered?
- ! Truncated distribution mean
- ! Transparency

Expenses

Background

- Inconsistency of interpretation across the market in expenses calculation may lead to inappropriate technical provision.

! Issues

! Expense calculation is more complicated under SII compares to IFRS

! Providers of different expense components may not fully understand the SII requirements

! Inconsistent interpretation across the market

✓ Proposed solution

✓ More guidance on best practice

✓ Improve consistency across the market

✓ WP paper provides guiding principle on different expense elements to consider for claims provision and premium provision.

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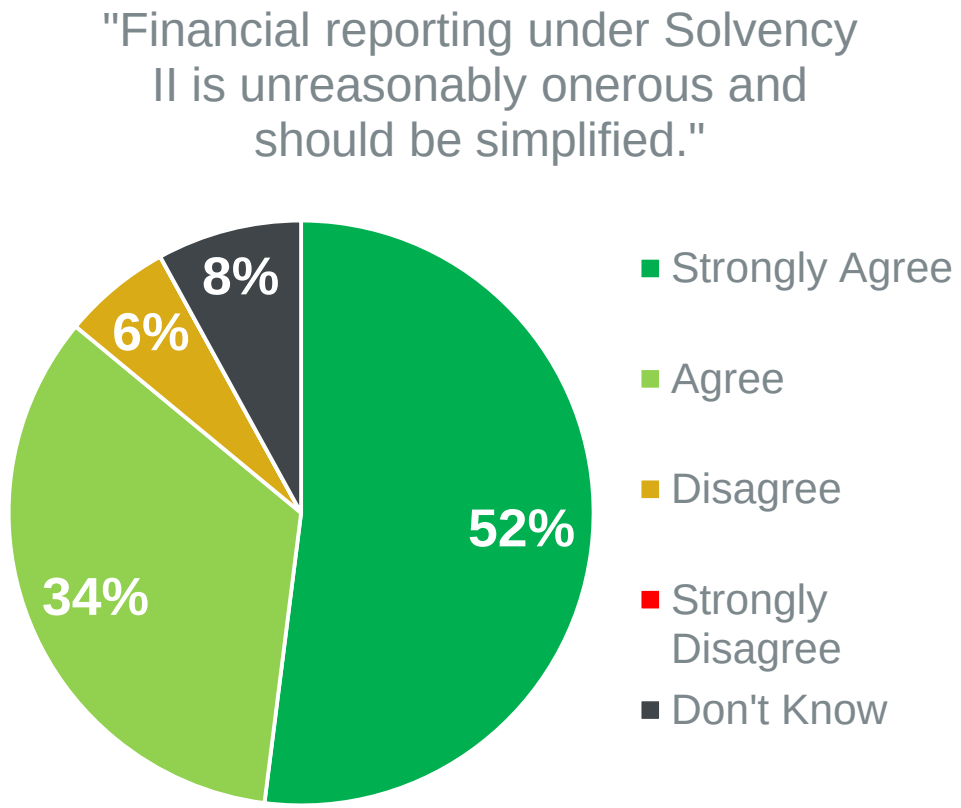
Conclusion

Amrita Pattni, Guy Carpenter

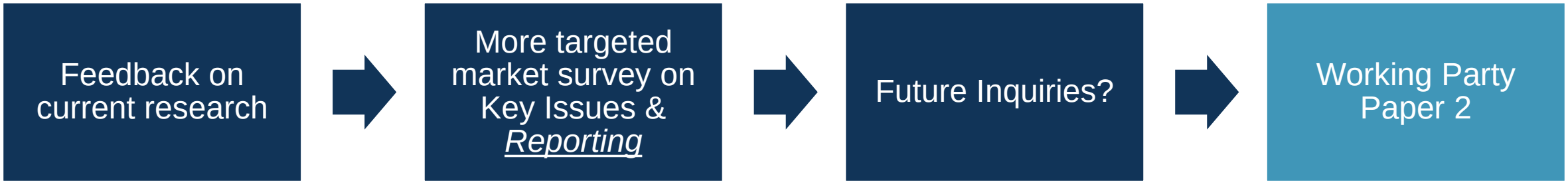
Summary

Capital Issues	Technical Provisions Issues
Internal model change	Expenses
Currency risk	*Risk Margin*
Premiums as a risk measure	Expected Future Profit
Catastrophe risk	Validation
Allowance for reinsurance	ENID
PPOs	
Operational risk	

Not tackled in paper 1



Next steps…



- **Was this useful?**
- **PRA feedback**

- **Streamline issue list**
- **Reporting highlighted as a top issue – Identify where and how this can be tackled**

- **Possible TSC inquiries going forward**
- **Contribute to these**

- **Update on future TSC inquiries**
- **Survey results**
- **Focused research on streamlined issues and reporting**

Questions

Comments

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