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of Actuaries

Life Insurance Stress & Scenario Testing Survey 2013

Stress and Scenario Testing Working Party
of the Institute and Faculty of Actuaries



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Background to this Survey

- This survey was devised by the Stress and Scenario Testing Working Party of the Institute and Faculty of Actuaries
- The main deliverable of the Working Party is a SIAS paper on Stress and Scenario Testing, scheduled for release in H2 2014
- This survey was launched to gather data to support the development of this paper
- The survey results are being released as an additional deliverable of the Working Party, as it is felt that these will be useful for many insurers
- The Working Party would like to thank all participants for their contributions
- Survey contact: Jennifer Chapin, Life & Health Practices Manager (jennifer.chapin@actuaries.org.uk)
- Conducted September – October 2013

SST Working Party

- Terms of reference
 - Produce useful reference document for SST practitioners and stakeholders
 - Enhance understanding of SST, its strengths and weaknesses
 - Raise profile of SST
 - Promote more debate within the actuarial profession on SST
 - Bring insights on SST from outside the actuarial profession
 - Promote development of SST concepts and approaches
- Strategy and activity
 - Collate intelligence and data
 - Interact with other industry bodies, eg CRO Forum
 - Learn from other industries
 - Conduct more detailed work in areas of interest for paper in 2014



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SST Working Party (cont'd)

- Outputs:
 - Past: Life Conference 2013 Presentation
 - Present: These survey results
 - Future: SIAS Paper on Stress and Scenario Testing (likely H2 2014)
- Membership at 11 November 2013:

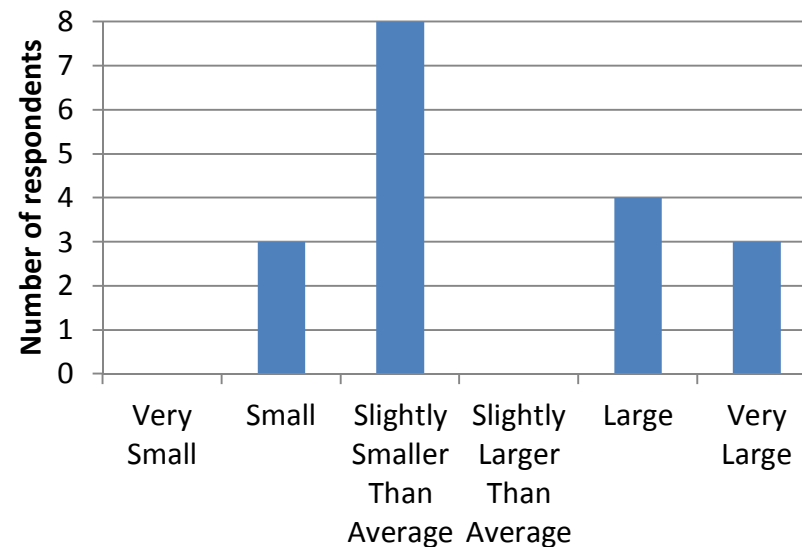
| Name | Company |
|---------------------|-------------------------|
| David Leach (Chair) | Deloitte |
| Barbara Illingworth | Legal & General (Group) |
| Jessica Sum | Aviva (Group) |
| David Harrison | Admin Re |
| Paul Hopkins | Independent Consultant |
| Dan McGouran | Aviva UK Life |
| Kin Muck | Independent Consultant |
| Anthony Plotnek | EY |
| Ed Rayfield | Friends Life |
| Masimba Zata | LV= |



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Survey Participants

- 30 UK Life Insurers invited to participate, of which 18 responded
- Q20: “In your view, which of the following categories would best describe the size of your organization relative to other life insurers in the UK market?”

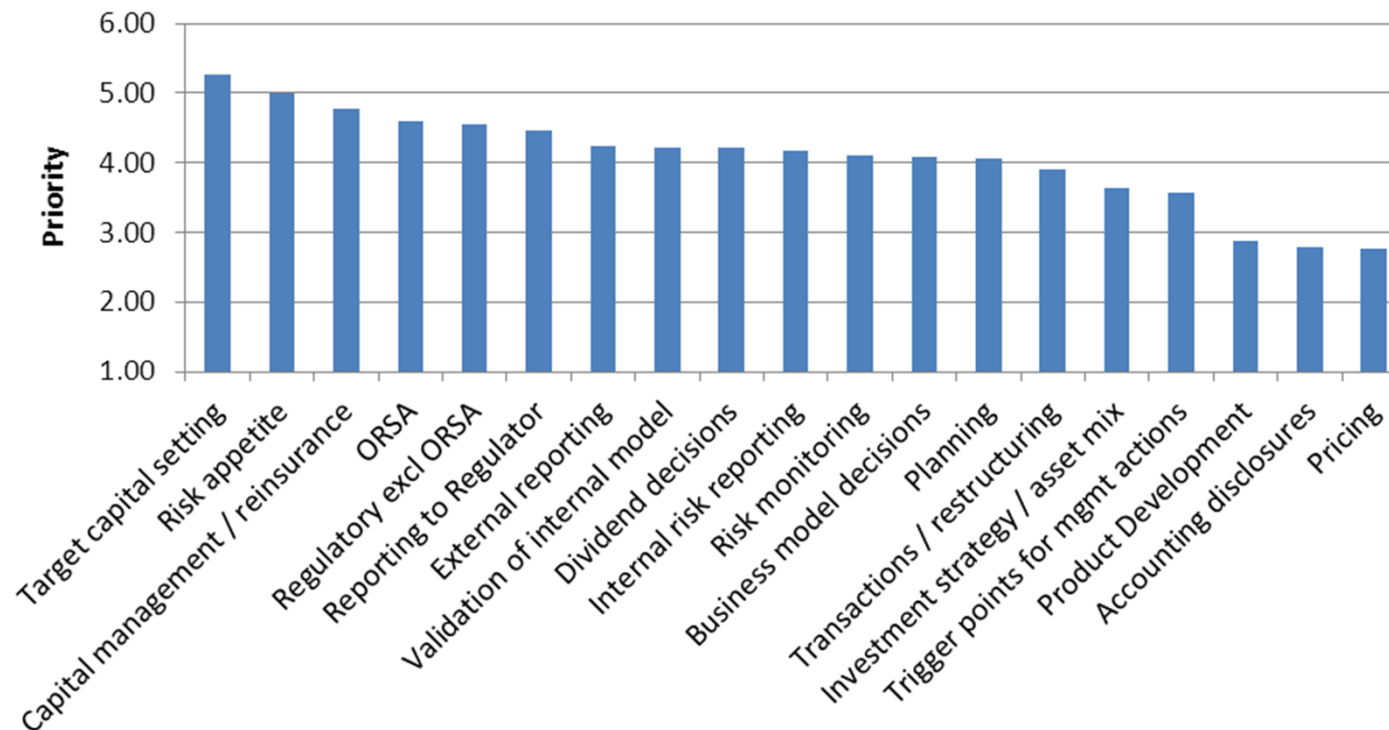


- In the following slides, insurers labelled A-R, responses have been randomised, so Firm A is not the same firm throughout
- Blanks in tables mean that no response was provided



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1. “What is stress and scenario testing used for in your organisation?”

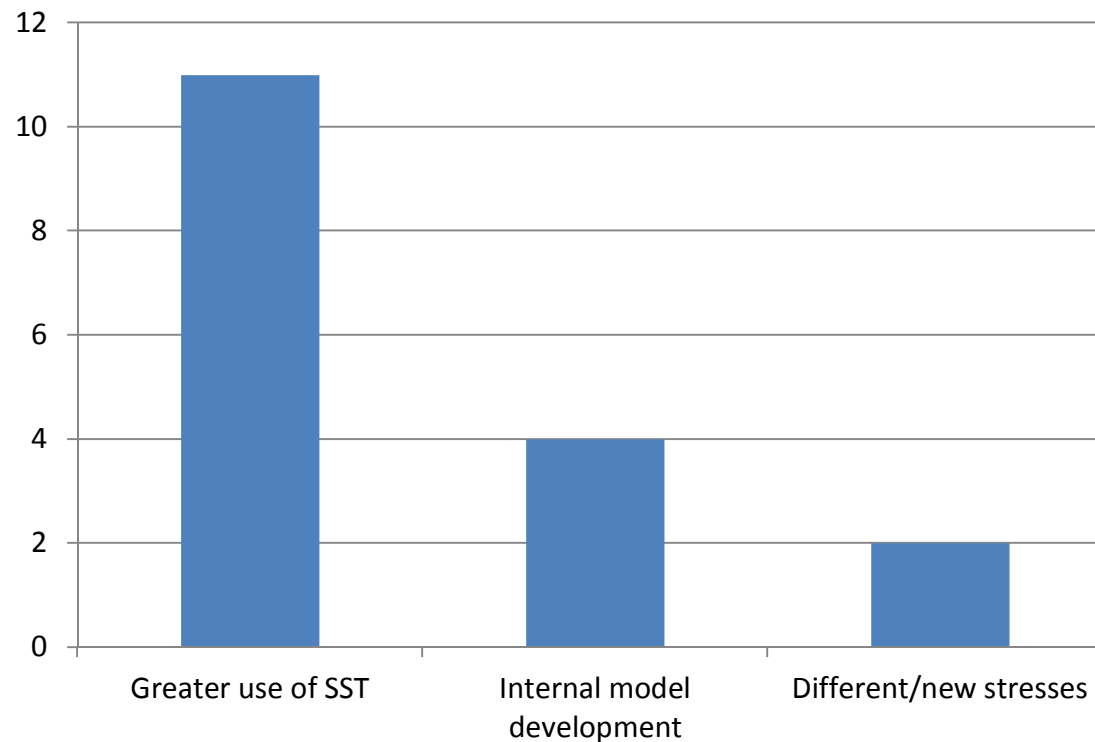


- A score of 6 means high priority, a score of 1 means low priority.
- Priority results shown above are the mean across respondents that provided a priority for that category.



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2. “What are the main changes you expect to see over the next 2 years?”



Number of firms responding: 17



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3. “Please rate the extent of involvement of the following groups at each stage of SST”

| Average of All Responses | Risk identification | Setting stresses / scenarios | Defining mitigating actions | Quantitative assessment | Qualitative assessment | Review/ presentation / reporting of results |
|---|---------------------|------------------------------|-----------------------------|-------------------------|------------------------|---|
| Board | 3.1 | 4.2 | 3.6 | 2.0 | 2.0 | 5.0 |
| Risk committee (or similar) | 4.2 | 4.1 | 4.2 | 3.1 | 3.8 | 5.1 |
| Risk (including actuarial function) | 5.6 | 5.5 | 5.4 | 5.6 | 5.4 | 5.7 |
| Risk (separate from the actuarial function) | 5.2 | 4.4 | 4.8 | 4.2 | 5.1 | 5.2 |
| Investment committee (or similar) | 3.5 | 3.0 | 3.8 | 3.6 | 3.7 | 3.8 |
| Investment / asset management | 3.5 | 3.0 | 3.5 | 3.8 | 3.3 | 4.0 |
| Capital management | 4.7 | 4.6 | 5.0 | 5.1 | 4.6 | 4.9 |
| Specific stress & scenario testing committee / team | 4.3 | 5.0 | 5.3 | 4.7 | 5.0 | 6.0 |
| Pricing | 3.1 | 2.9 | 2.8 | 3.7 | 3.2 | 3.7 |
| Product development / marketing | 3.1 | 3.3 | 3.3 | 3.2 | 3.3 | 3.3 |
| Claims / underwriting | 1.8 | 1.5 | 1.5 | 1.0 | 1.5 | 1.0 |

Mean scores across all respondents, where a score of 6 means very involved and a score of 1 means limited involvement



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3 – “Please rate the extent of involvement of the following groups at each stage of SST” (breakdown for smaller insurers)

| Smaller Than Average Insurers | Risk identification | Setting stresses / scenarios | Defining mitigating actions | Quantitative assessment | Qualitative assessment | Review/ presentation/ reporting of results |
|---|---------------------|------------------------------|-----------------------------|-------------------------|------------------------|--|
| Board | 3.4 | 4.5 | 4.5 | 2.0 | 1.7 | 5.1 |
| Risk committee (or similar) | 4.3 | 4.3 | 4.4 | 3.3 | 3.9 | 4.9 |
| Risk (including actuarial function) | 5.9 | 5.7 | 5.5 | 5.9 | 5.8 | 5.9 |
| Risk (separate from the actuarial function) | 5.9 | 4.4 | 4.9 | 4.0 | 5.3 | 5.1 |
| Investment committee (or similar) | 3.3 | 2.6 | 3.3 | 3.3 | 3.0 | 3.2 |
| Investment / asset management | 3.3 | 2.8 | 3.5 | 3.8 | 3.5 | 4.7 |
| Capital management | 4.4 | 4.1 | 4.6 | 4.3 | 4.0 | 4.5 |
| Specific stress & scenario testing committee / team | 5.0 | 6.0 | 5.0 | 2.0 | 5.0 | 6.0 |
| Pricing | 3.2 | 2.8 | 2.6 | 4.3 | 3.3 | 4.7 |
| Product development / marketing | 3.0 | 3.3 | 3.3 | 3.0 | 3.3 | 4.0 |
| Claims / underwriting | 2.0 | 2.0 | 2.0 | | 2.0 | |

Mean scores across respondents self-identified as smaller than average.
A score of 6 means very involved and a score of 1 means limited involvement



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3 – “Please rate the extent of involvement of the following groups at each stage of SST” (breakdown for larger insurers)

| Larger Than Average Insurers | Risk identification | Setting stresses / scenarios | Defining mitigating actions | Quantitative assessment | Qualitative assessment | Review/ presentation/ reporting of results |
|---|---------------------|------------------------------|-----------------------------|-------------------------|------------------------|--|
| Board | 2.3 | 3.8 | 2.2 | 2.0 | 2.3 | 4.9 |
| Risk committee (or similar) | 4.0 | 3.9 | 4.0 | 3.0 | 3.8 | 5.3 |
| Risk (including actuarial function) | 5.0 | 5.3 | 5.1 | 5.1 | 4.9 | 5.4 |
| Risk (separate from the actuarial function) | 4.3 | 4.3 | 4.6 | 4.4 | 5.0 | 5.2 |
| Investment committee (or similar) | 4.0 | 3.7 | 4.5 | 3.8 | 4.3 | 4.5 |
| Investment / asset management | 4.0 | 3.3 | 3.5 | 3.8 | 3.0 | 3.5 |
| Capital management | 5.2 | 5.2 | 5.5 | 6.0 | 5.3 | 5.3 |
| Specific stress & scenario testing committee / team | 4.0 | 4.5 | 5.5 | 6.0 | 5.0 | 6.0 |
| Pricing | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.7 |
| Product development / marketing | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 2.5 |
| Claims / underwriting | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |

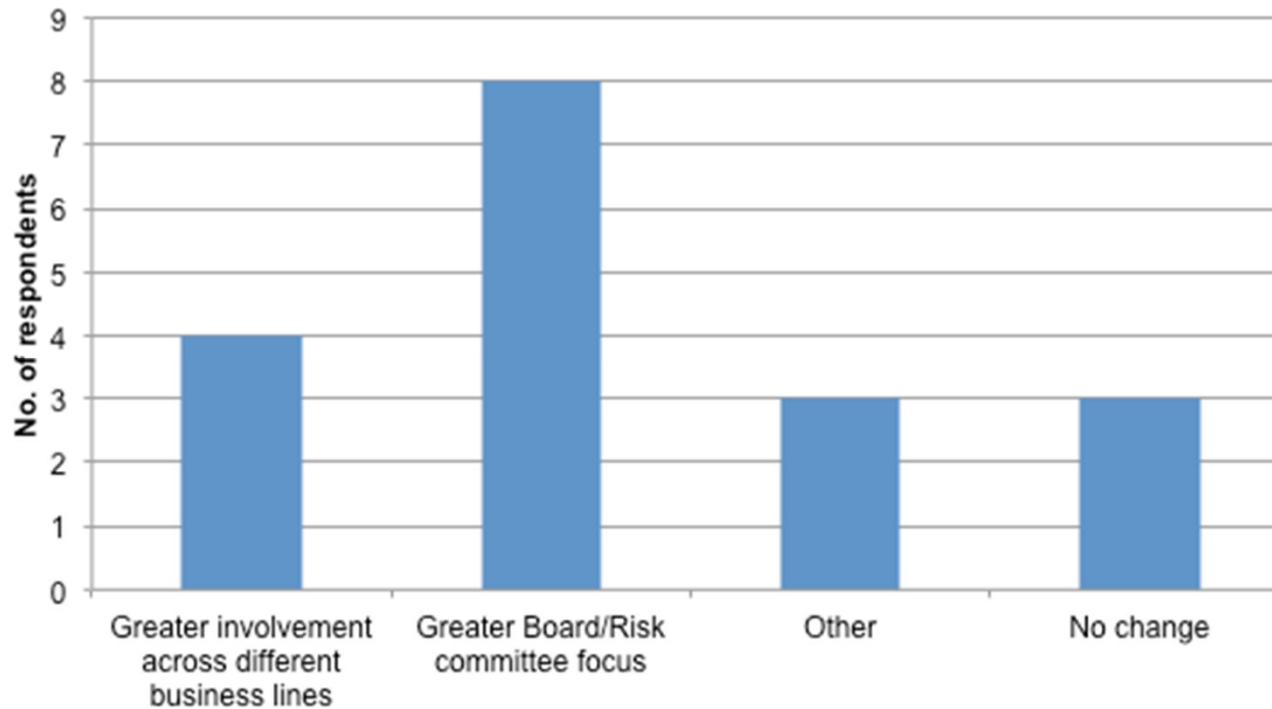
Mean scores across respondents self-identified as larger than average.

A score of 6 means very involved and a score of 1 means limited involvement



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4. “What are the main changes you expect to see over the next 2 years and what are the key drivers of change?”



Number of firms responding: 18



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5. “What metrics are stressed currently?”

| Firm | Solvency I capital | Solvency II capital | PRA's early warning indicator factor | Economic capital | Rating / respectability capital | IFRS profits | Embedded value | Liquidity | Debt repayment | Other |
|---------------|--------------------|---------------------|--------------------------------------|------------------|---------------------------------|--------------|----------------|-----------|----------------|-------|
| A | 6 | 1 | 1 | 6 | | 6 | 5 | 4 | 1 | |
| B | 4 | 3 | 2 | 3 | | 5 | 4 | 4 | | |
| C | 6 | 5 | | 6 | | | | | | |
| D | 6 | 3 | 2 | 2 | 1 | 4 | 6 | 2 | 6 | |
| E | 6 | 6 | 2 | 6 | 2 | 2 | 3 | 4 | | |
| F | 5 | | | 6 | | 3 | | | | 2 |
| G | 2 | 5 | 1 | 5 | 2 | 2 | 3 | 1 | 1 | |
| H | 6 | 4 | | 6 | | | | | | |
| I | 6 | 4 | 1 | 4 | | 4 | | 4 | 3 | |
| J | 4 | 2 | 2 | 6 | 4 | 3 | 3 | 5 | 5 | |
| K | 6 | 3 | 1 | 5 | 2 | 4 | 4 | 4 | 4 | |
| L | 6 | 2 | 4 | 4 | 4 | | 4 | 6 | 4 | |
| M | 6 | 2 | 2 | 6 | 4 | 3 | 1 | 2 | 4 | |
| N | 6 | | | 2 | 4 | | | 4 | 3 | |
| O | 6 | 1 | | | | 2 | 4 | | 6 | |
| P | 6 | 6 | | 6 | | | | 4 | 6 | |
| Q | 6 | | | 5 | 2 | | 3 | 3 | | |
| R | 4 | 1 | 1 | 6 | | | | | | |
| Smaller Firms | 5.6 | 3.2 | 1.6 | 5.2 | 3.0 | 3.6 | 3.3 | 3.6 | 4.0 | |
| Larger Firms | 5.0 | 3.2 | 1.8 | 4.6 | 2.6 | 3.3 | 4.0 | 3.7 | 3.8 | 2.0 |
| Overall | 5.4 | 3.2 | 1.7 | 4.9 | 2.8 | 3.5 | 3.6 | 3.6 | 3.9 | 2.0 |

A score of 6 means high priority, a score of 1 means low priority
The respondent citing 'other' indicated this to be capacity to pay dividend



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5. (cont'd) “How do you expect this to differ in 2 years time?”

| Firm | Solvency I capital | Solvency II capital | PRA's early warning indicator factor | Economic capital | Rating / respectability capital | IFRS profits | Embedded value | Liquidity | Debt repayment | Other |
|---------------|--------------------|---------------------|--------------------------------------|------------------|---------------------------------|--------------|----------------|-----------|----------------|-------|
| A | | 6 | 6 | 4 | 6 | | 4 | 6 | 4 | |
| B | 6 | 4 | 4 | 4 | 1 | 4 | 6 | 3 | 6 | |
| C | 4 | 6 | | 6 | | | | | | |
| D | 6 | 6 | 5 | 6 | 4 | 6 | 5 | 5 | | |
| E | 6 | 3 | 5 | 6 | | 6 | 5 | 4 | 4 | |
| F | 6 | 5 | 1 | 5 | 2 | 4 | 4 | 4 | 4 | |
| G | 2 | 5 | 4 | 5 | | 5 | 3 | 5 | | |
| H | 1 | 4 | 4 | 6 | | | | | | |
| I | | 6 | 6 | 5 | | 4 | | 4 | 5 | |
| J | 6 | 6 | | 6 | 4 | 2 | 4 | | 6 | |
| K | 5 | 4 | 5 | 5 | 5 | | 5 | 5 | | |
| L | 6 | 6 | | 6 | | | | 4 | 6 | |
| M | 2 | 5 | | 6 | | | | | | |
| N | 4 | 4 | 3 | 5 | 2 | 2 | 3 | 1 | 1 | |
| O | 6 | 5 | | | 4 | | | 4 | 3 | |
| P | 2 | 6 | 4 | 6 | | 5 | | | 3 | 2 |
| Q | 6 | 3 | 6 | 6 | 4 | 2 | 4 | 4 | 4 | |
| R | 2 | 6 | 3 | 6 | 5 | 3 | 3 | 6 | | |
| Smaller Firms | 4.5 | 4.8 | 4.8 | 5.8 | 4.2 | 4.2 | 4.3 | 4.4 | 4.6 | |
| Larger Firms | 4.0 | 5.3 | 3.9 | 5.0 | 3.2 | 3.7 | 4.0 | 4.0 | 3.8 | 2.0 |
| Overall | 4.4 | 5.0 | 4.3 | 5.5 | 3.7 | 3.9 | 4.2 | 4.2 | 4.2 | 2.0 |

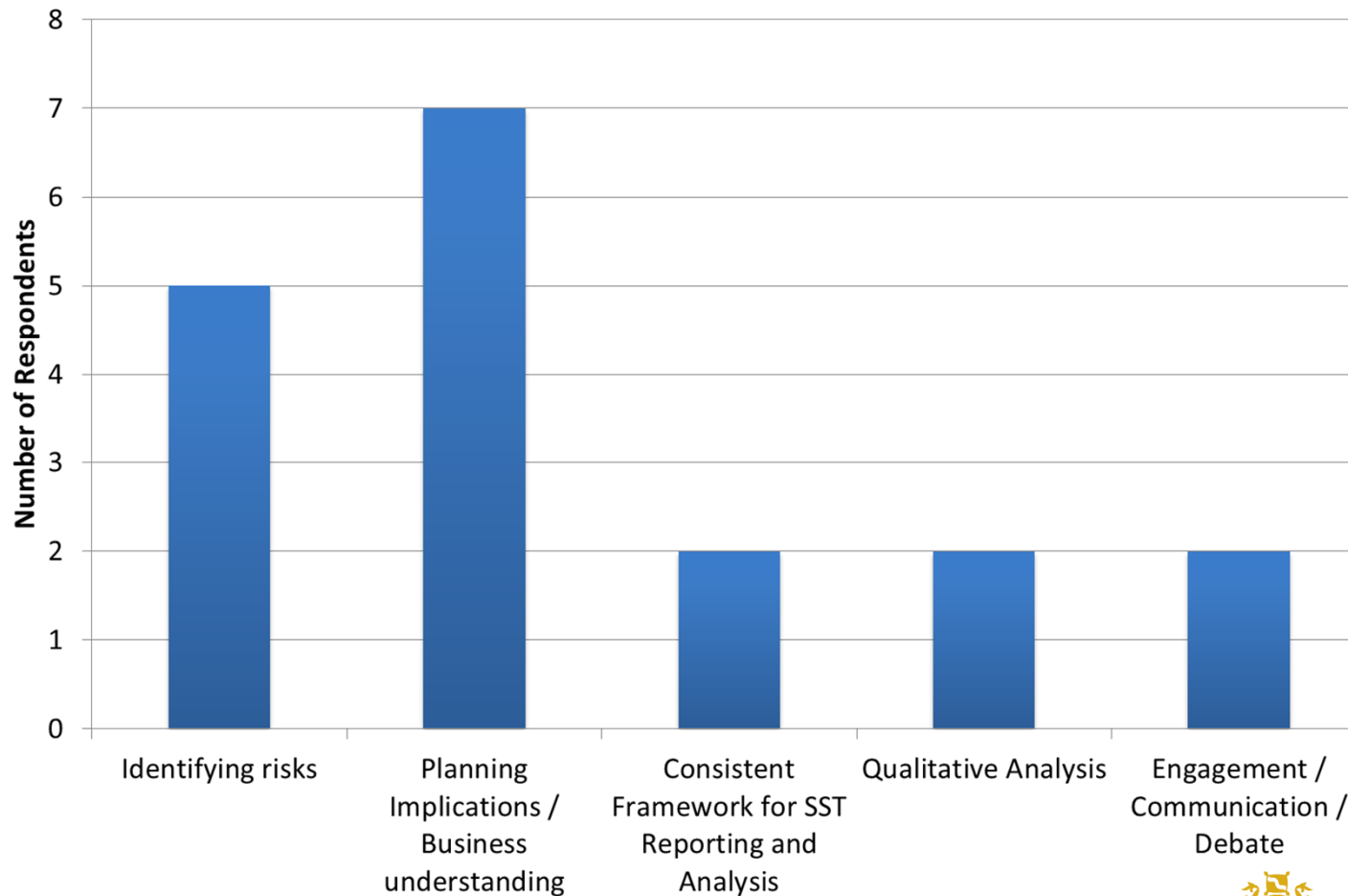
A score of 6 means high priority, a score of 1 means low priority

The respondent citing 'other' indicated this to be capacity to pay dividend



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6a. “What do users find most useful from the SST processes?”

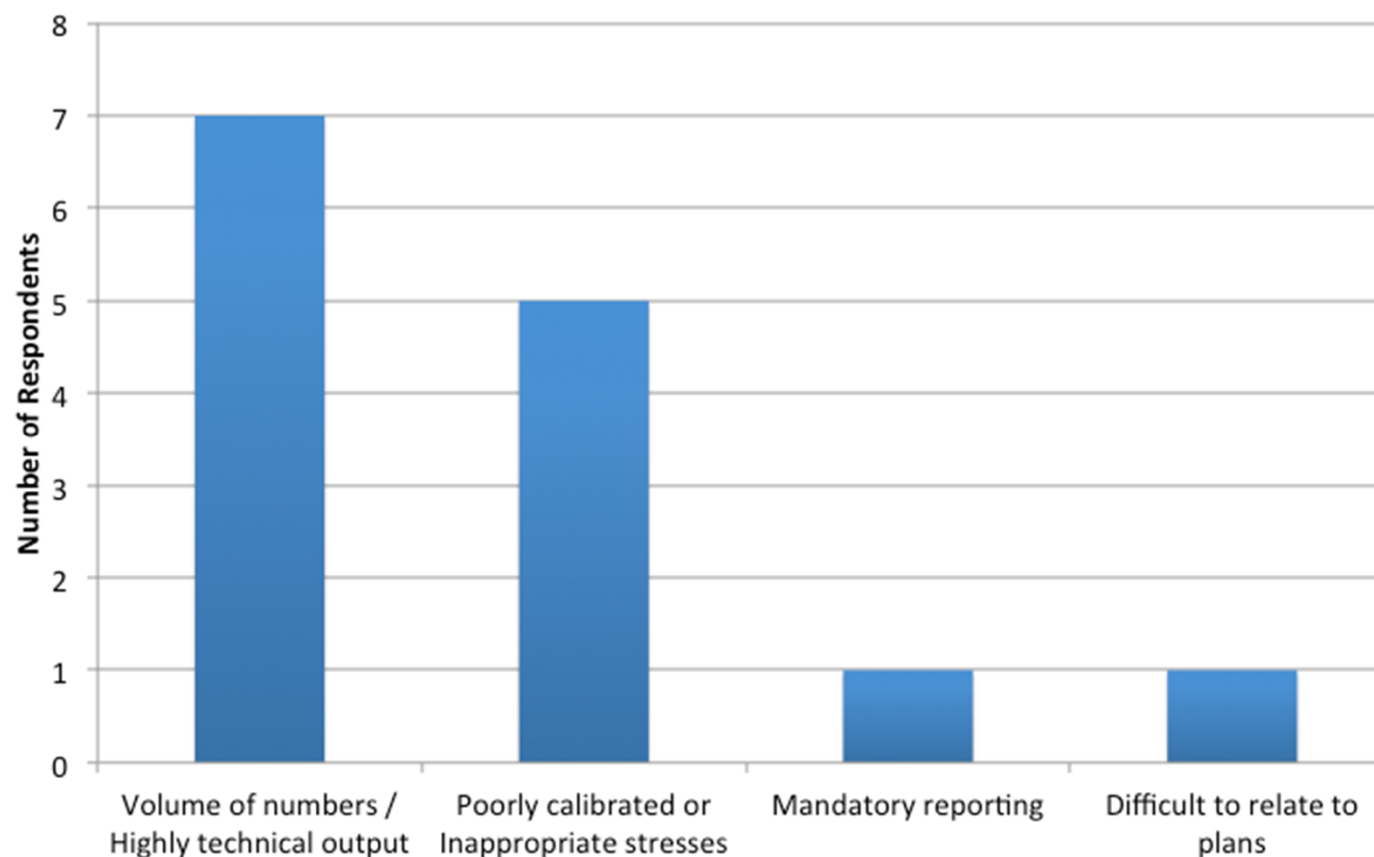


Number of firms responding: 18



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6b. “What do users find least useful from the SST processes?”



Number of firms responding: 14



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6c. “What do users want more of?”

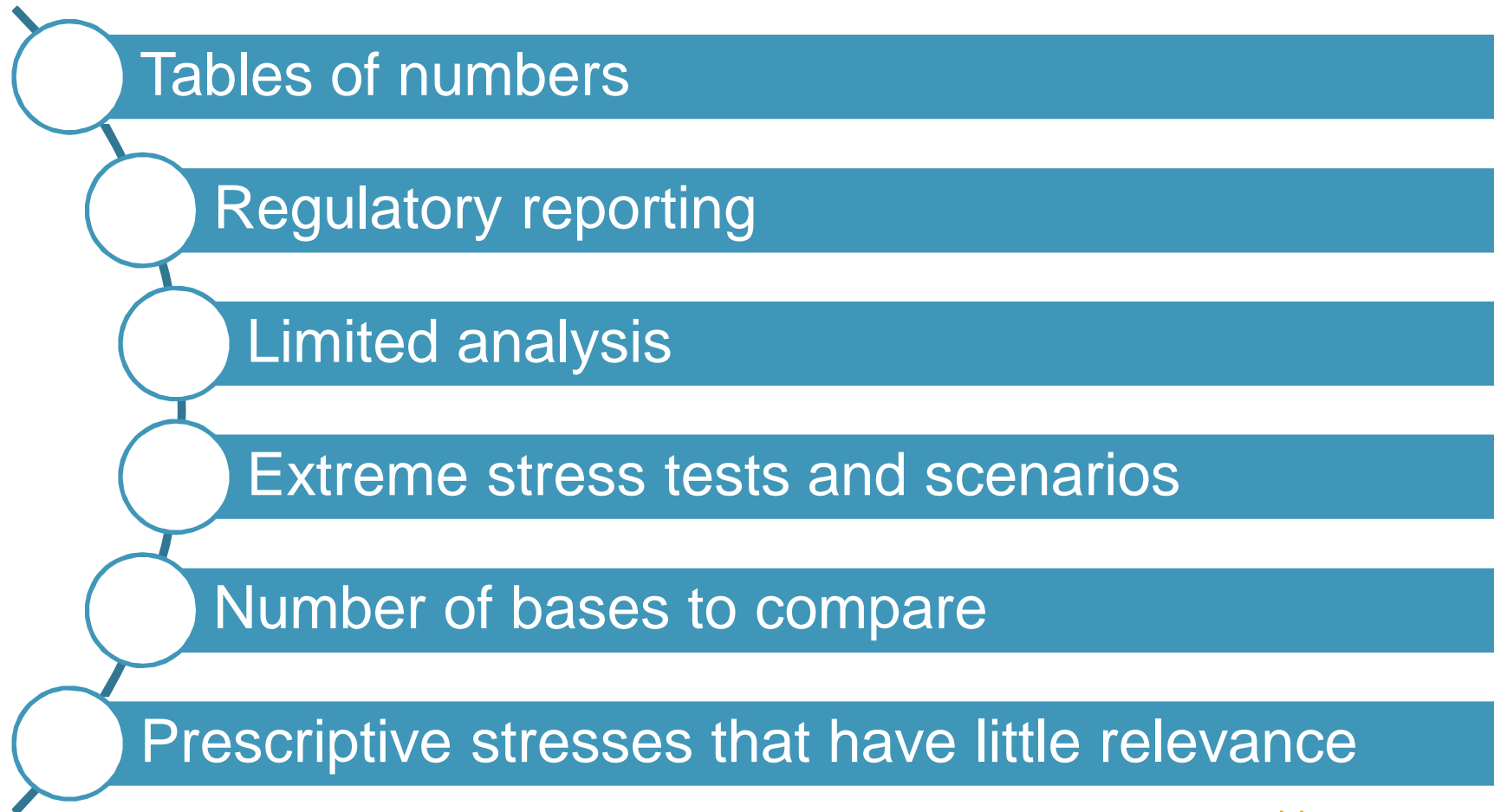


Number of firms responding: 16



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6d. “What do users want less of?”



Number of firms responding: 13



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7. “To what extent have emerging regulatory requirements for SST”:

| Firm | Influenced what stress and scenario testing is performed | Limited the stress and scenario testing you would like to perform | Improved your understanding and management of the business? |
|----------------------|--|---|---|
| A | 3 | 2 | 2 |
| B | 5 | 4 | 2 |
| C | 4 | 3 | 3 |
| D | 5 | 1 | 6 |
| E | 4 | 2 | 2 |
| F | 3 | 1 | 3 |
| G | 2 | 1 | 1 |
| H | 4 | 3 | 4 |
| I | 4 | 2 | 4 |
| J | 6 | 1 | 4 |
| K | 6 | 1 | 6 |
| L | 4 | 1 | 4 |
| M | 5 | 5 | 4 |
| N | 5 | 1 | 3 |
| O | 3 | 1 | 2 |
| P | 4 | 1 | 2 |
| Q | 4 | 3 | 4 |
| R | 4 | 1 | 2 |
| Smaller Firms | 4.0 | 1.5 | 3.0 |
| Larger Firms | 4.4 | 2.4 | 3.6 |
| Overall | 4.2 | 1.9 | 3.2 |

A score of 6 means to a very high extent, a score of 1 means to a very low extent



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8. “Which of the following are important for setting the stresses/scenarios?”

| Firm | Views from external experts e.g. academics | Views from internal experts | Benchmarking | Peer analysis | Analysis by ratings agencies, banks | Other |
|----------------------|--|-----------------------------|--------------|---------------|-------------------------------------|-------|
| A | 3 | 6 | 3 | 4 | 4 | |
| B | | 5 | | | | |
| C | 3 | 6 | 4 | 4 | 1 | |
| D | 2 | 6 | 2 | | 2 | 6 |
| E | 4 | 6 | 3 | 2 | 1 | |
| F | 4 | 5 | 3 | 5 | 4 | |
| G | 5 | 5 | 5 | 3 | 3 | |
| H | 2 | 6 | 5 | 4 | 2 | |
| I | 3 | 4 | 3 | 2 | | |
| J | 4 | 6 | 6 | 6 | | |
| K | 5 | 6 | 5 | 4 | 5 | |
| L | 4 | 2 | 4 | 4 | 1 | 4 |
| M | | 6 | 4 | 4 | | |
| N | 4 | 4 | 4 | 4 | | |
| O | 4 | 4 | 3 | 3 | 1 | |
| P | 2 | 5 | 3 | 2 | | |
| Q | 4 | 6 | 5 | 5 | 4 | |
| R | 2 | 6 | 5 | 5 | | 4 |
| Smaller Firms | 3.6 | 5.5 | 4.2 | 3.8 | 3.0 | 4.0 |
| Larger Firms | 3.2 | 4.7 | 3.5 | 3.8 | 2.0 | 5.0 |
| Overall | 3.4 | 5.2 | 3.9 | 3.8 | 2.5 | 4.7 |

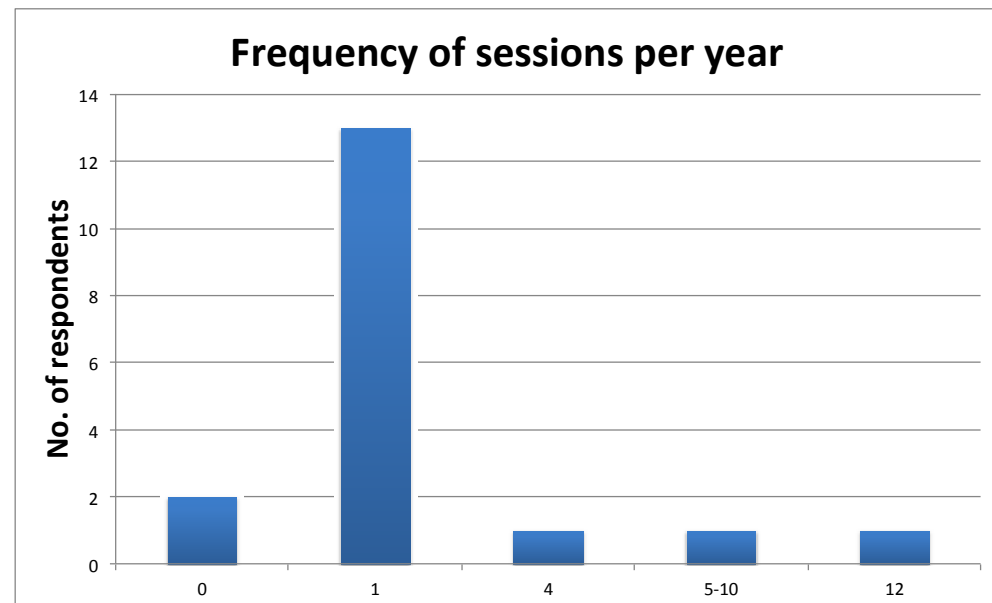
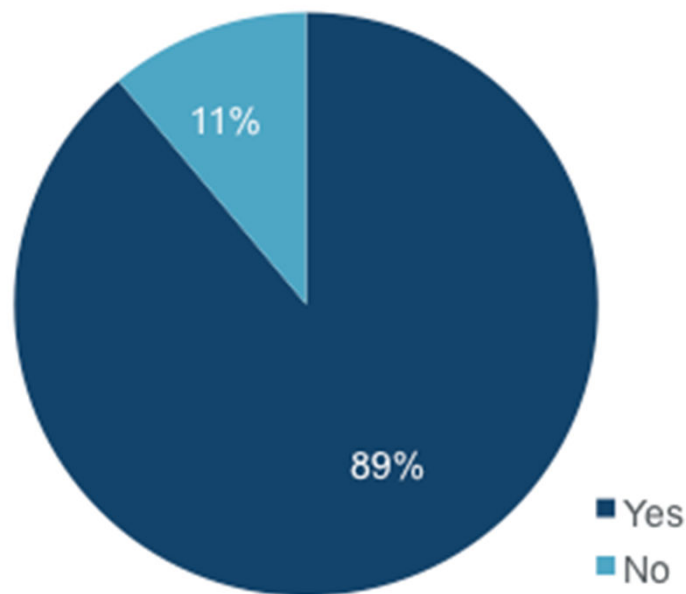
Other influences cited were the regulator and management.

A score of 6 means very high importance, a score of 1 means very low importance.



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9. “Do you run a session or sessions involving different functions where potential risk scenarios are discussed, in order to inform the scenario setting?”

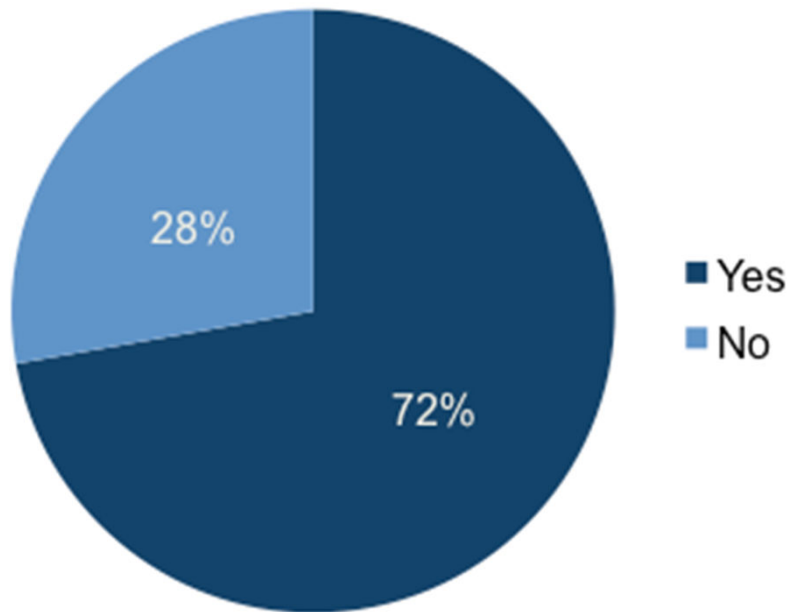


Number of firms responding: 18



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10. “Do you assign probabilities to stresses/scenarios?”



“When do you not assign probabilities and why?”

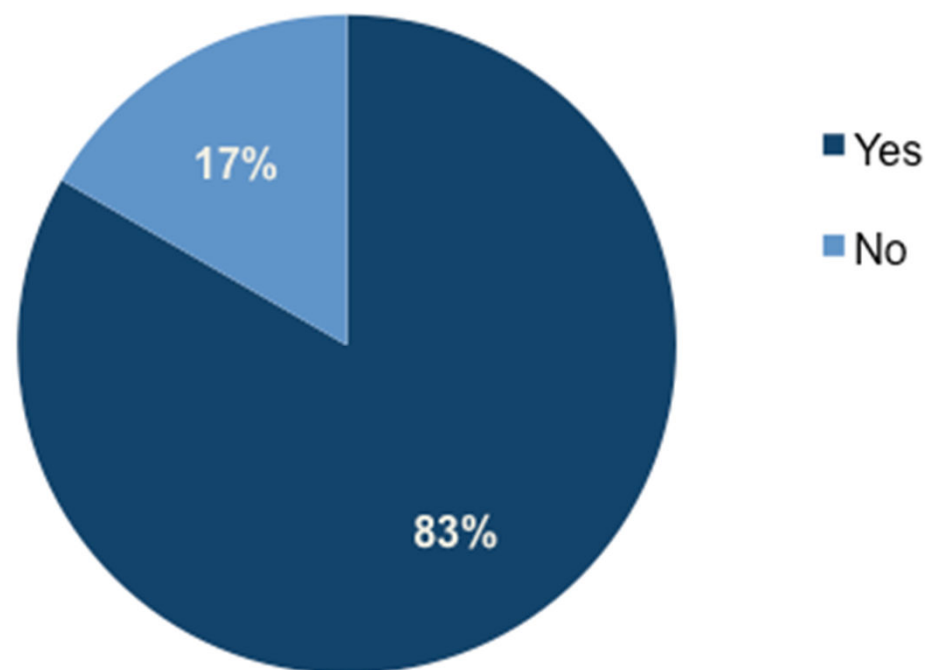
- When costs outweigh benefits
- When it is purely speculative
- When it is not necessary for the use of results
- When there is not sufficient information

Number of firms responding: 18



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11. “Do you show the impact of stresses/scenarios before and after the impact of management actions?”

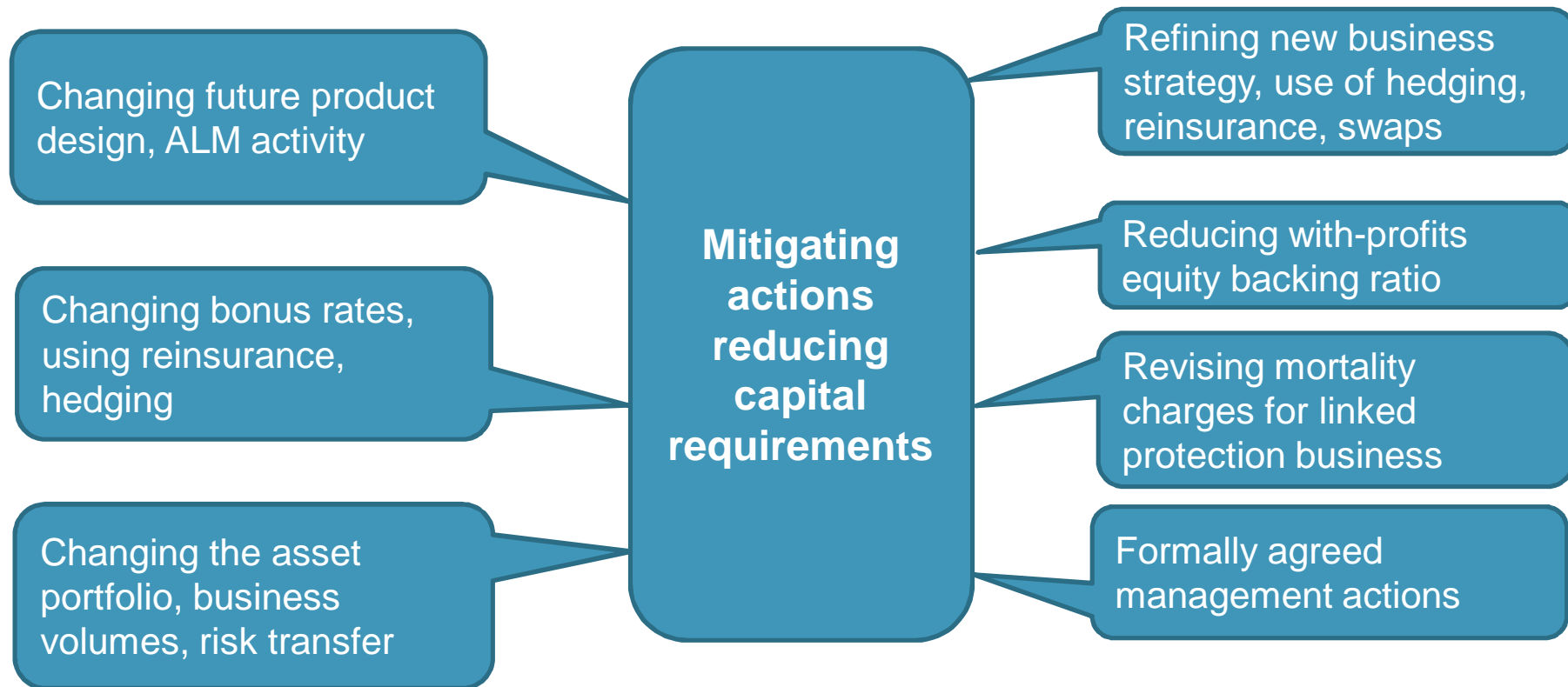


Number of firms responding: 18



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12. “What types of mitigating actions do you allow for in quantifying the impact of a stress/scenario that reduce capital requirements under stress?”

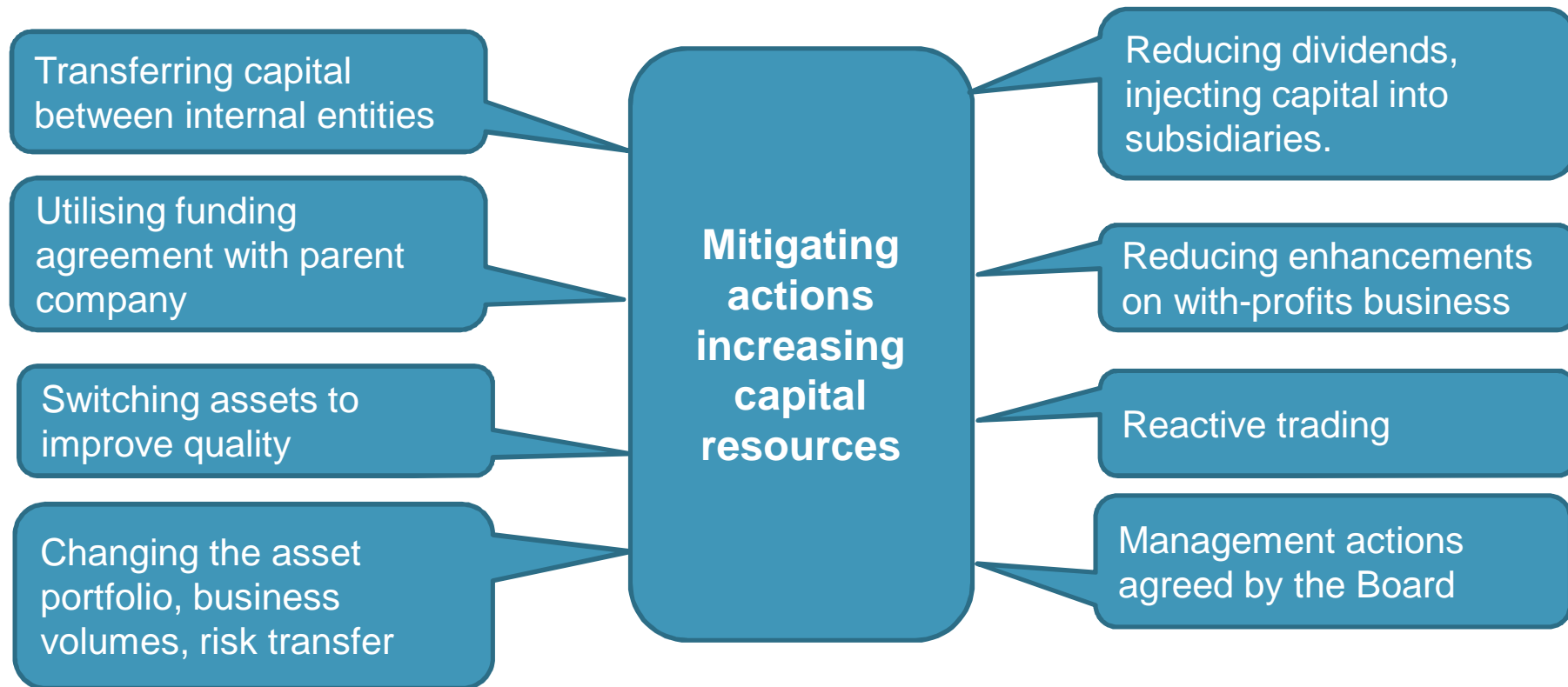


Number of firms responding: 14



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13. “What types of mitigating actions do you allow for in quantifying the impact of a stress/scenario that increase capital resources under stress?”



Number of firms responding: 14



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14. “What types of management actions are disclosed in reports as being available but the impact of which is not quantified?”

Closure to new business

Reduction of bonuses

Requesting capital from parent

De-risk pension scheme

Review of margins

Change in asset mix

Reduction of WP pay-outs

Change in strategy

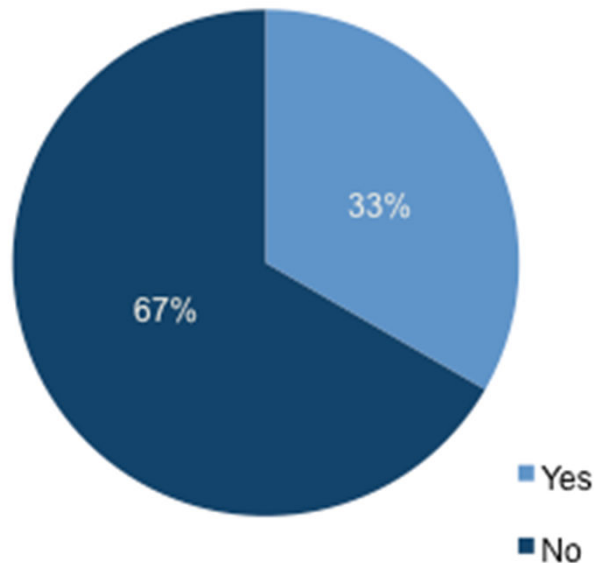
Increase solvency monitoring

Number of firms responding: 15



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15. “Do you use war-gaming as part of your SST process?”



If yes, why?

- Greater understanding
- Different perspectives
- Identifying areas of improvement

If no, why?

- Business continuity testing carried out
- May be considered under new framework

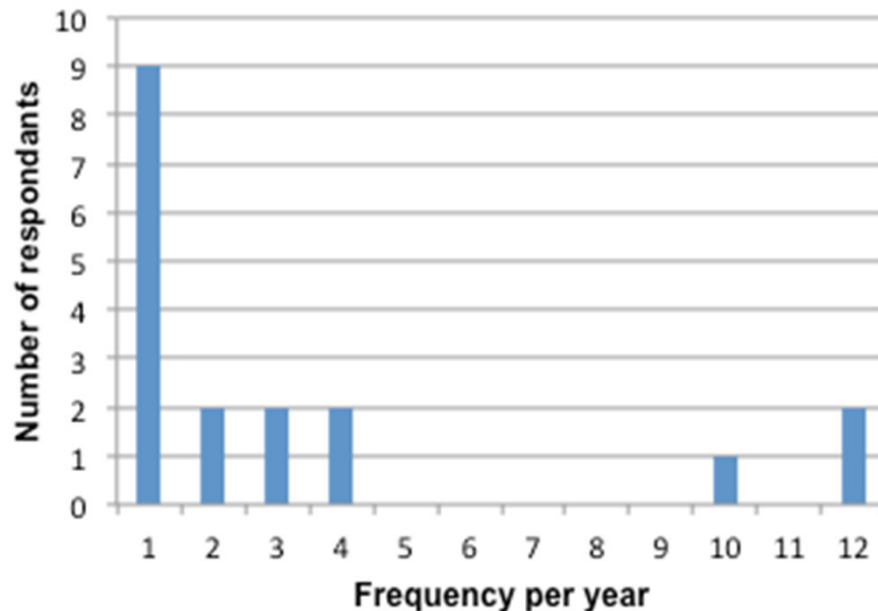
Definition of war-gaming - testing the firm's response in a simulated crisis situation, including dimensions such as information flow, speed, organisation, leadership and communication.

Number of firms responding: 18

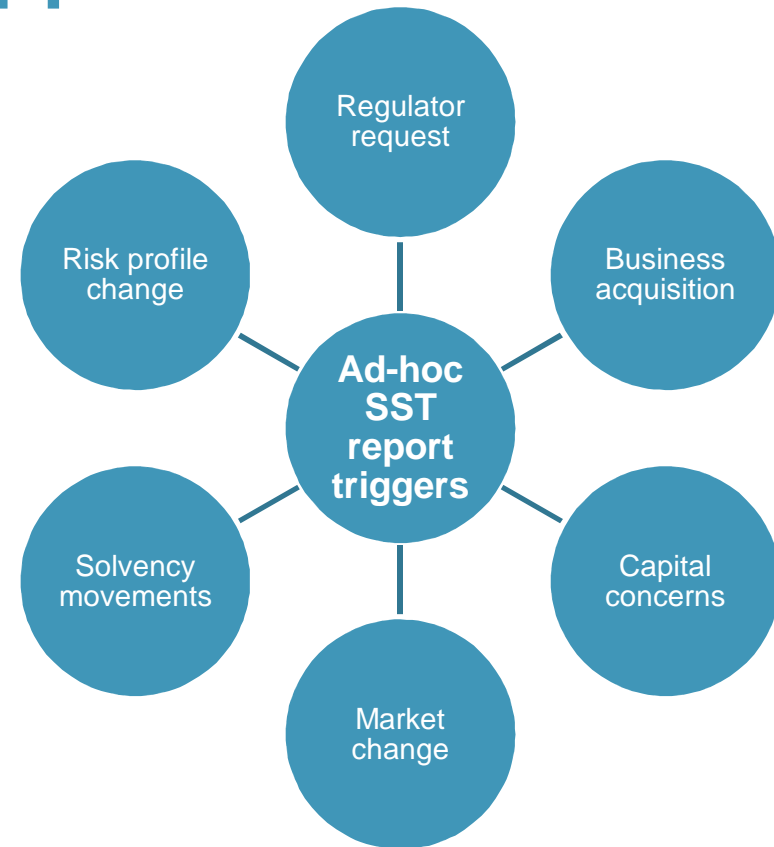


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16. “How often/why are reports produced for Management on SST?”



Number of firms responding: 18



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17. “To what extent do you agree/disagree with the following statements?”

| Firm | a) The SST process improves management's understanding of the business, and the risks the firm is exposed to | b) Material approximations, reliances and limitations of SST are well documented and understood by Management | c) The Board and senior committees provide effective challenge to the SST process | d) SST has enabled improved communication of the firm's risk profile to stakeholders | e) SST is a compliance exercise | f) SST is an action-based exercise | g) SST results are compared against risk appetite | h) Risk preferences are influenced by SST results |
|---------------|--|---|---|--|---------------------------------|------------------------------------|---|---|
| A | 6 | 4 | 4 | 6 | 6 | 5 | 6 | 5 |
| B | 6 | 6 | 4 | 4 | 1 | 3 | 6 | 4 |
| C | 5 | 4 | 5 | 4 | 4 | 4 | 4 | 4 |
| D | 6 | 3 | 3 | 5 | 2 | 3 | 3 | 2 |
| E | 6 | 4 | 4 | 4 | 1 | 5 | 6 | 4 |
| F | 6 | 6 | 4 | 3 | 1 | 3 | 1 | 3 |
| G | 4 | 3 | 5 | 4 | 4 | | 3 | 3 |
| H | 6 | 2 | 3 | 3 | 2 | 4 | 3 | 3 |
| I | 5 | 4 | 5 | 5 | 2 | 4 | 5 | 4 |
| J | 6 | 4 | 6 | | 4 | 3 | 4 | 4 |
| K | 6 | 4 | 4 | 6 | 2 | 2 | 5 | 5 |
| L | 6 | 3 | 4 | 4 | 2 | 5 | 3 | 4 |
| M | 4 | 3 | 4 | 3 | 1 | 3 | 6 | 2 |
| N | 5 | 3 | 3 | 3 | 2 | 4 | 5 | 4 |
| O | 4 | 3 | 2 | 4 | 4 | | 5 | 5 |
| P | 5 | 4 | 4 | 3 | 4 | 3 | 4 | 5 |
| Q | 4 | 4 | 4 | 5 | 2 | 4 | 6 | 4 |
| R | 4 | 5 | 5 | 4 | 3 | 3 | 3 | 4 |
| Smaller Firms | 5.5 | 4.0 | 4.3 | 4.2 | 2.5 | 3.8 | 3.9 | 3.6 |
| Larger Firms | 4.7 | 3.6 | 3.7 | 4.0 | 2.7 | 3.3 | 5.0 | 4.1 |
| Overall | 5.2 | 3.8 | 4.1 | 4.1 | 2.6 | 3.6 | 4.3 | 3.8 |

A score of 6 means strongly agree, a score of 1 means strongly disagree



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18. “What are the main challenges of SST in your organization?”

| Firm | a) Appropriate stress & scenario selection | b) Recalibration of scenario generator under stressed conditions | c) Assessment of Impact of selected stresses / scenarios | d) Presenting results / insights from SST in an effective way | e) Making SST relevant to business decisions | f) Lack of time / resources | g) Other |
|---------------|--|--|--|---|--|-----------------------------|----------|
| A | 5 | | | 3 | 1 | 3 | |
| B | 4 | | 2 | 2 | 5 | 5 | |
| C | 2 | 2 | 3 | 5 | 3 | 6 | |
| D | 5 | 2 | 4 | 3 | 4 | 5 | |
| E | 5 | 2 | 2 | 2 | 4 | 4 | |
| F | 4 | 3 | 5 | 3 | 4 | 4 | |
| G | 3 | 6 | 3 | 3 | 4 | 3 | |
| H | 3 | 4 | 2 | 5 | 5 | 5 | |
| I | 4 | 4 | 3 | 5 | 5 | 6 | |
| J | 5 | 5 | 5 | 4 | 4 | 4 | |
| K | 5 | 2 | 3 | 3 | 3 | 4 | |
| L | 4 | 4 | 5 | 4 | 4 | 5 | |
| M | 3 | | 5 | 3 | 4 | 4 | 5 |
| N | 5 | 5 | 2 | 2 | 3 | 4 | |
| O | 2 | 3 | 3 | 3 | 2 | 4 | |
| P | 3 | | 3 | 2 | 5 | 3 | |
| Q | 4 | | 3 | 4 | 4 | 4 | |
| R | 6 | | 3 | 4 | 4 | 5 | |
| Smaller Firms | 4.4 | 3.7 | 3.1 | 3.3 | 3.5 | 4.3 | |
| Larger Firms | 3.4 | 3.2 | 3.6 | 3.4 | 4.1 | 4.4 | 5.0 |
| Overall | 4.0 | 3.5 | 3.3 | 3.3 | 3.8 | 4.3 | 5.0 |

The ‘other’ challenge noted by a respondent was allowing for management actions
A score of 6 means very challenging, a score of 1 means not challenging



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19a. “How do you rate your SST processes relative to your peers?”

| Firm | Risk identification | Setting stresses / scenarios | Defining mitigating actions | Quantitative assessment | Qualitative assessment | Presentation / reporting of results |
|---------------|---------------------|------------------------------|-----------------------------|-------------------------|------------------------|-------------------------------------|
| A | 3 | 3 | 3 | 3 | 3 | 3 |
| B | 3 | 3 | 3 | 3 | 3 | 3 |
| C | 4 | 2 | 5 | 4 | 3 | 4 |
| D | 4 | 4 | 4 | 4 | 4 | 4 |
| E | 4 | 4 | 4 | 4 | 4 | 4 |
| F | 3 | 3 | 2 | 3 | 3 | 3 |
| G | 5 | 4 | 4 | 5 | 4 | 3 |
| H | 5 | 4 | 4 | 4 | 4 | 4 |
| I | 2 | 2 | 3 | 4 | 3 | 4 |
| J | 4 | 3 | 3 | 3 | 4 | 5 |
| K | 4 | 4 | 4 | 4 | 4 | 4 |
| L | 3 | 3 | 4 | 5 | 4 | 4 |
| M | 4 | 4 | 4 | 4 | 4 | 5 |
| N | 4 | 2 | 4 | 3 | 4 | 3 |
| O | 3 | 3 | 3 | 3 | 3 | 3 |
| P | 4 | 4 | 4 | 3 | 4 | 3 |
| Q | 4 | 3 | 3 | 3 | 4 | 4 |
| R | 5 | 4 | 3 | 4 | 4 | 4 |
| Smaller Firms | 3.6 | 3.2 | 3.4 | 3.4 | 3.6 | 3.7 |
| Larger Firms | 4.0 | 3.4 | 3.9 | 4.1 | 3.7 | 3.7 |
| Overall | 3.8 | 3.3 | 3.6 | 3.7 | 3.7 | 3.7 |

A score of 6 means far ahead of peers, a score of 1 means far behind peers



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19b. “How much development of your SST processes do you expect in the next 2 years?”

| Firm | Risk identification | Setting stresses / scenarios | Defining mitigating actions | Quantitative assessment | Qualitative assessment | Presentation / reporting of results |
|---------------|---------------------|------------------------------|-----------------------------|-------------------------|------------------------|-------------------------------------|
| A | 3 | 3 | 2 | 4 | 3 | 4 |
| B | 4 | 4 | 4 | 5 | 5 | 4 |
| C | 2 | 2 | 2 | 5 | 2 | 1 |
| D | 5 | 4 | 4 | 4 | 3 | 4 |
| E | 4 | 4 | 4 | 4 | 4 | 3 |
| F | 2 | 2 | 2 | 4 | 2 | 2 |
| G | 3 | 3 | 4 | 2 | 3 | 3 |
| H | 2 | 4 | 3 | 2 | 2 | 2 |
| I | 3 | 4 | 4 | 4 | 3 | 4 |
| J | 4 | 4 | 4 | 4 | 4 | 4 |
| K | 2 | 5 | 2 | 6 | 2 | 5 |
| L | 4 | 4 | 3 | 3 | 3 | 3 |
| M | 1 | 3 | 4 | 2 | 3 | 5 |
| N | 5 | 5 | 5 | 5 | 5 | 5 |
| O | 2 | 5 | 3 | 3 | 3 | 4 |
| P | 2 | 3 | 1 | 3 | 4 | 3 |
| Q | 5 | 5 | 2 | 4 | 4 | 5 |
| R | 3 | 3 | 5 | 4 | 4 | 4 |
| Smaller Firms | 3.0 | 3.7 | 3.0 | 4.0 | 3.4 | 3.5 |
| Larger Firms | 3.3 | 3.7 | 3.6 | 3.4 | 3.1 | 3.7 |
| Overall | 3.1 | 3.7 | 3.2 | 3.8 | 3.3 | 3.6 |

A score of 6 means very significant development, a score of 1 means no development



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19c. “Do you see any leading practices in SST that are underused in the life insurance industry?”

Use of timely ‘ad hoc’ SST
rather than rigid slower
frameworks

Multivariate
reverse stress
testing

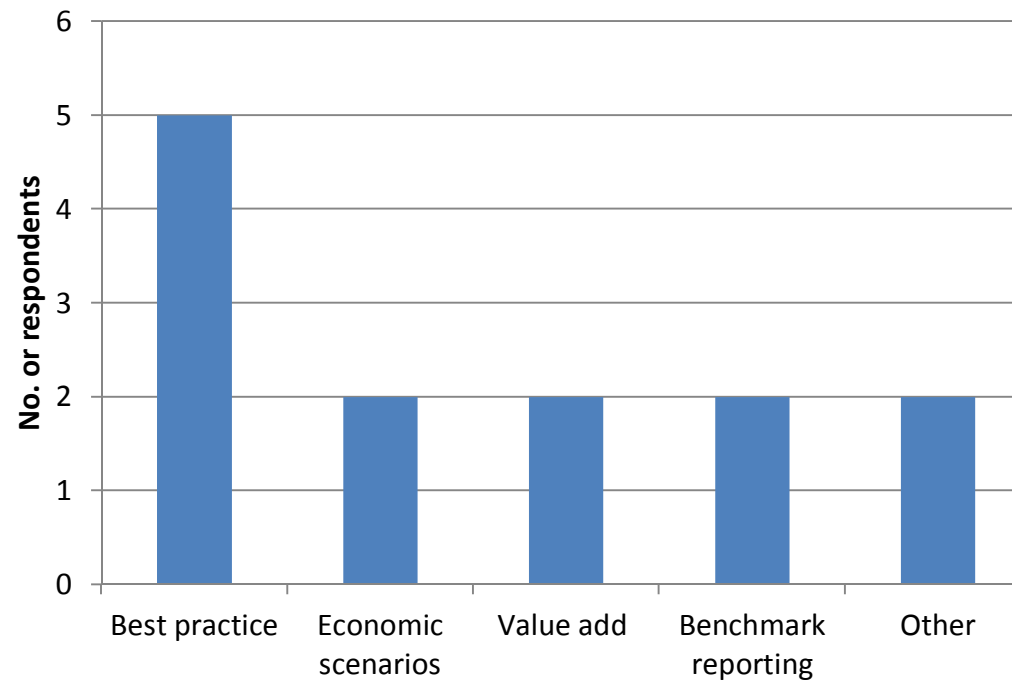
Approach to RST is too
financial focused across
industry – the business
can be unviable for other
reasons

Number of firms responding: 3



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19d. “In which areas do you think the SST Working Party should be focussing its efforts?”



Number of firms responding: 13



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