



Institute
and Faculty
of Actuaries

Solvency II data requirements – Raising the Bar

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Agenda

- 1 Recap of Solvency II data requirements
- 2 Raising the bar – challenges faced
- 3 The role of tools and technology
- 4 Company focus – Reliance Mutual
- 5 Q&A Forum



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Recap of Solvency II data requirements

Recap of Solvency II data requirements

- Solvency II data requirements focus on ensuring that data used to calculate technical provisions are:

Appropriate

Complete

Accurate

- The requirements apply to both internal and external data

Recap of Solvency II data requirements

Appropriate

- Suitable for the intended purpose
 - e.g. data used in experience investigations for assumption setting or data used in valuation of technical provisions
- Relevant to underlying risks
- Representative of liabilities being valued

Complete

Accurate

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Recap of Solvency II data requirements

Appropriate

Complete

- Sufficient granularity to allow identification of trends and the behaviour of underlying risks
- Sufficient historic information to assess experience
- More detail needed for portfolios with heterogeneous risks

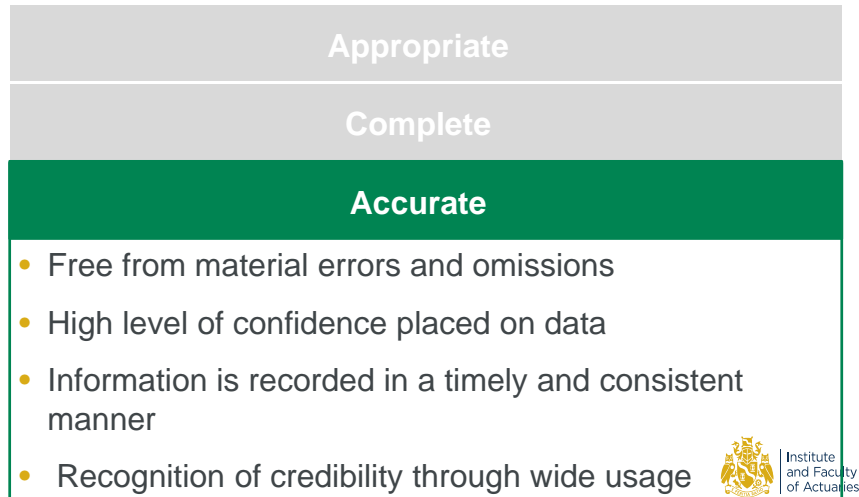
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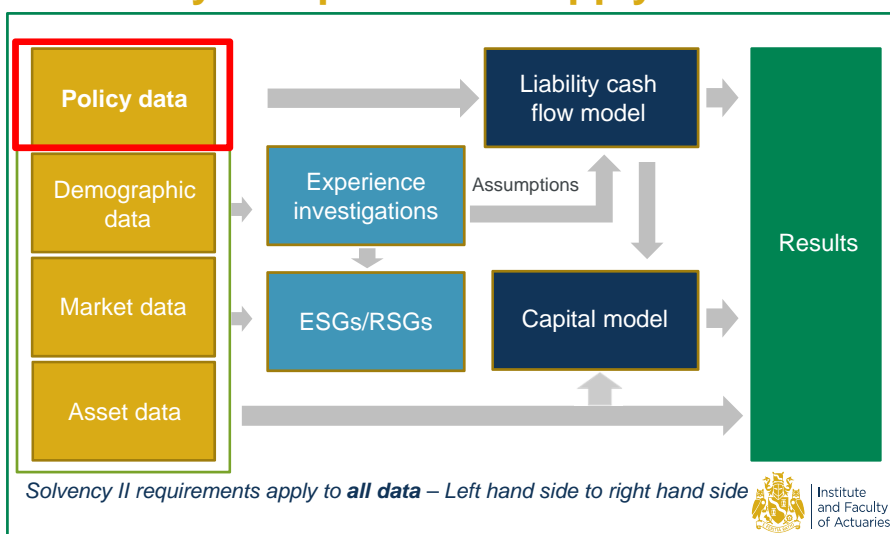
Recap of Solvency II data requirements



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Solvency II requirements apply to all data



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Raising the bar – challenges faced



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Current data quality challenges

Companies already face significant data quality challenges:

- Multiple administration systems
- Poor documentation
- Inefficient & inconsistent processes
- Limited & incomplete data checks
- Manually intensive review
- Review results not easily communicated



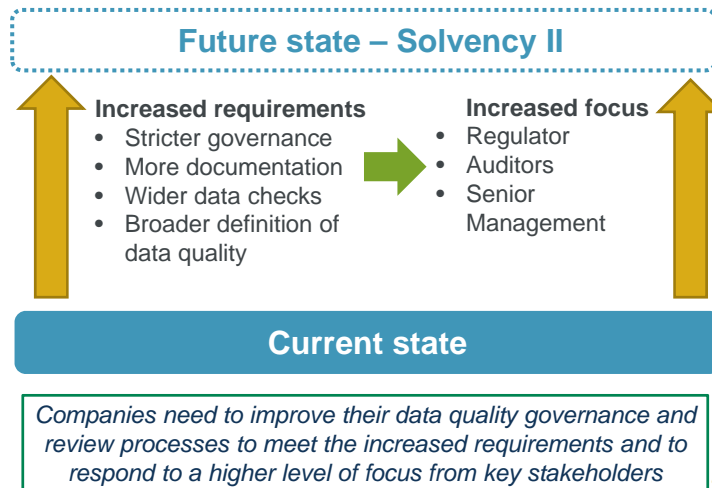
Data quality is a bottleneck in the reporting process

Increased Solvency II requirements will raise the bar in terms of the challenges of data quality

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Raising the bar – increased requirements



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Raising the bar – increased requirements

Increased data quality requirements include:

Governance	Set data quality policy and governance framework. Establish data governance committee specific roles.
Data directory	Directory of data used including information on: source; classification; usage; and relationship with other data.
Data analysis	Increased requirements to regularly review and monitor data quality. Identify and address material errors.
Documentation	Increased documentation and evidence of checks and judgements applied when reviewing data.

The remainder of the presentation focuses on data analysis and documentation

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Raising the bar – improvements

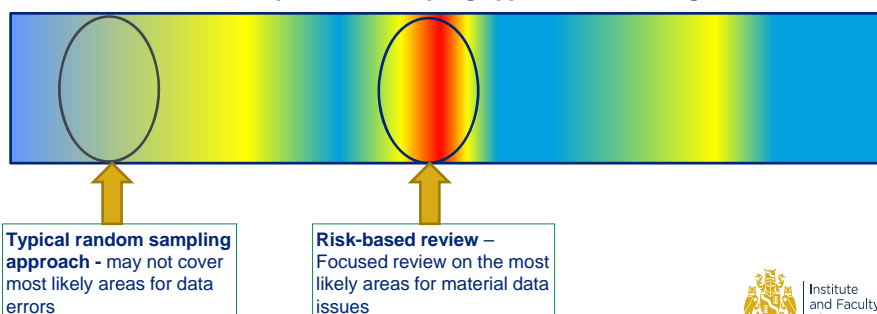
We believe that companies will use technology as an enabler to improve the data analysis process, including:



Raising the bar – risk based data review

- Utilise technology to shift from random sampling to risk based techniques to identify most likely source of material issues.

Illustrative heat map of data - sampling approach versus targeted review



Raising the bar – analytics

- Utilise technology to generate automated tests and analytics to gain greater insights from data



Improves understanding of business and enables earlier identification of trends



Enables clearer communication with stakeholders, including senior management

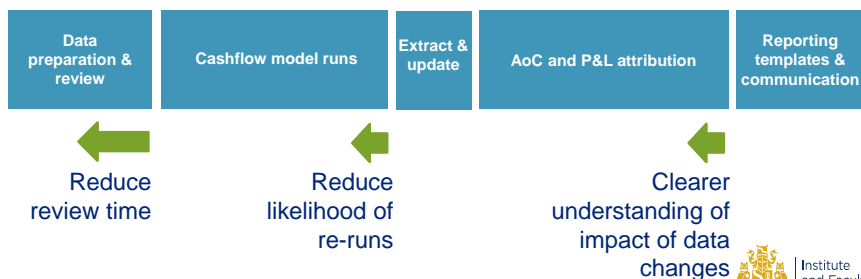


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Raising the bar – improving the WDT

- More efficient & effective data reviews will enable companies to improve the working day timetable



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Role of tools and technology



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Role of tools and technology

- Tools and technology have an important role in the data quality review process, as these enable:
 - ✓ Greater coverage of data
 - ✓ Less time spent performing checks, more time to review and respond to the results
 - ✓ Systematic approach
 - ✓ Key results are summarised
 - ✓ Faster completion of review and identification of material issues

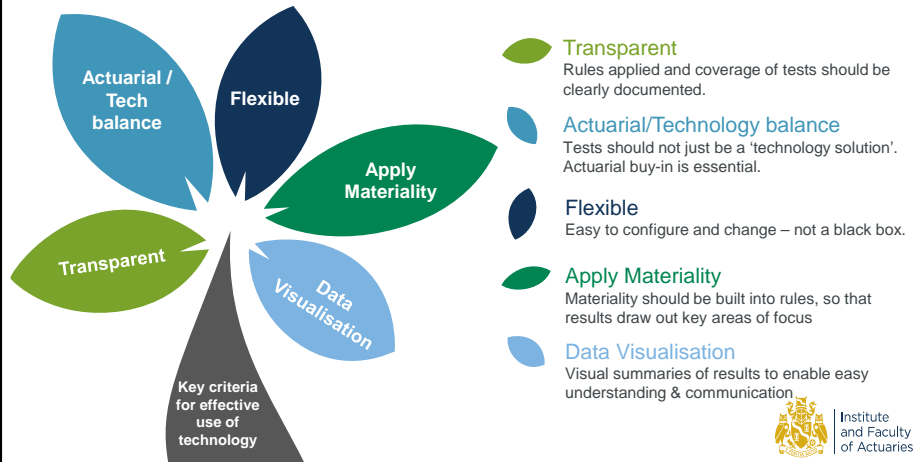


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Role of tools and technology

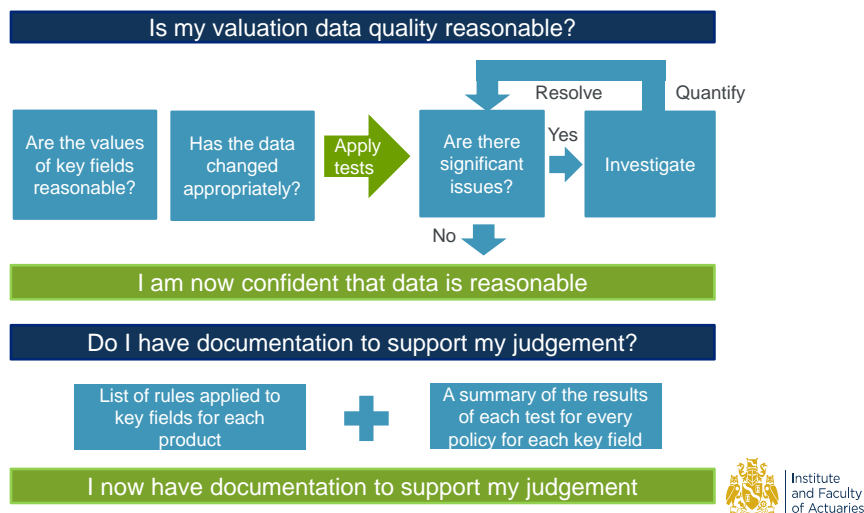
Through discussions with companies, we have identified key criteria for effective use of tools and technology:



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Example – Data review process

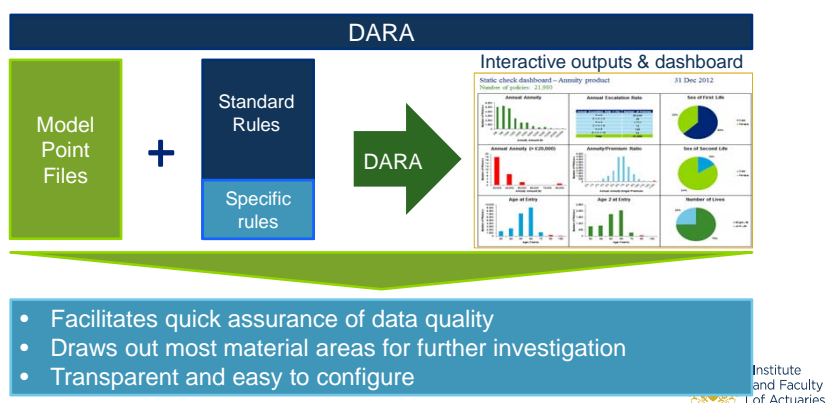


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An example – our DARA tool

- We have developed a tool to perform effective data reviews:



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Company focus – Reliance Mutual

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Agenda

- Context – general setting of data within Life companies
- Key challenges
- Outcomes
- Next steps

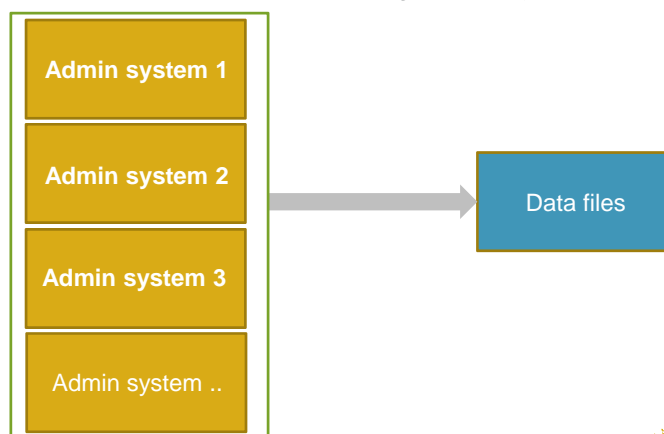


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Context – Multiple systems

Multiple data sources made up of past growth / projects / acquisitions

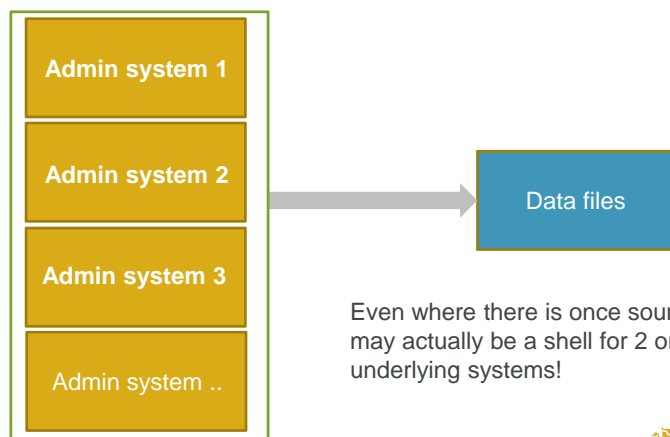


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Context – Multiple systems

Multiple data sources made up of past growth / projects / acquisitions



Even where there is once source it may actually be a shell for 2 or more underlying systems!

Context – Limited documentation

Lack of transparency - knowledge bottlenecks and risk of people leaving

Context – Limited documentation

Lack of transparency - knowledge bottlenecks and risk of people leaving

Worked on a project where only person in the whole company knew how to run the data scripts and they were 6 months from retiring!



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Context – Resources and buy-in

- Looking at data is not engaging
- Resource pull on more 'sexy' stuff like capital / pricing and modelling



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Context – Resources and buy-in

- In general data governance and systems knowledge has improved and yes there has been positive milestones:
 - TAS's (D)
 - New SII requirements
- However, compared to more interesting stuff, data still feels like the 'also ran' party



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Context – Resources and buy-in



Capital /
Modelling /
Pricing etc



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Context – Resources and buy-in



Challenge

- Different departments viewed the same data in different ways
 - Client services (busy with client demands and data can be treated like admin)



Challenge

- Different departments viewed the same data in different ways
 - Data processing team (get data in and push data out with limited time for context of how data impacts results)



Challenge

- Different departments viewed the same data in different ways
 - End users then attempt to infer insights from the data



Challenge

- We faced two challenges:
 - Developing a common platform across the company. Enabling more departments to see a COMMON relation between coal and diamond
 - Becoming more engaged with Data but without building expensive and time consuming processes

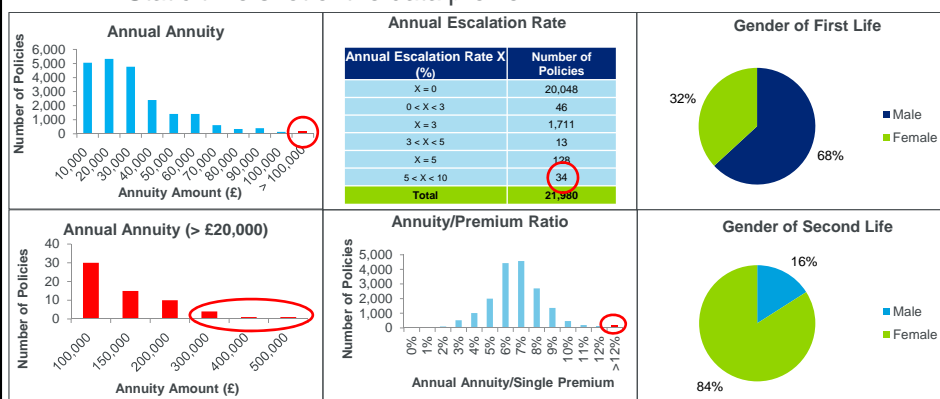


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Outcomes (1/4)

- DARA was able to provide snapshot of data:
 - Static time shot of the data profile



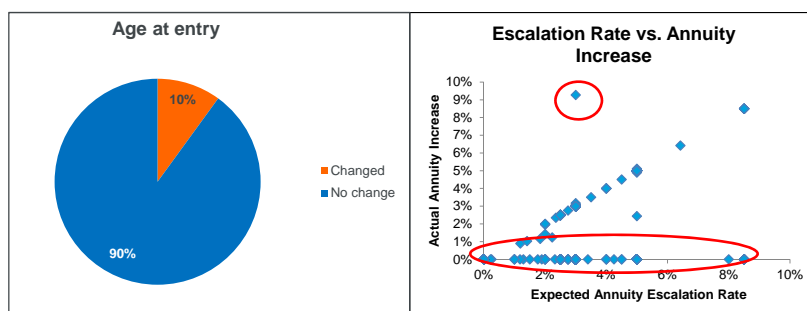
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Sample data – not representative of actual portfolio

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Outcomes (2/4)

- Consistency time shot and check (ensuring data changed as expected, highlighting where this was not the case)



Sample data – not representative of actual portfolio

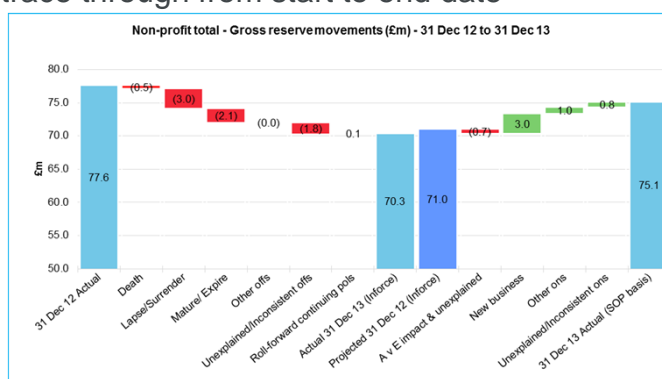


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Outcomes (3/4)

- Mapping data to Modelled results enabling policy level trace through from start to end date



Sample data – not representative of actual portfolio



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Outcomes (4/4)

- The visuals were great at establishing a common view
 - Enabling greater engagement with senior management AND peers too
- Policy level trace through was much stronger than fund level equivalent
- Generated a list of questions with regards to data outliers and policy flow through leading to:
 - Data correction
 - Recalibration of tool



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Next steps

- Intend to use in the valuation production at YE14
- As soon as we have the data files – run through DARA for early warning pre model runs
- Use within Analysis of Surplus to help develop a policy level analysis.



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Q&A Forum



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Appendix - Steps taken and lessons learned



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Steps taken and lessons learned

Companies have already taken a number of steps to prepare for the increased data quality requirements

Significant investment in data warehouses

Established data governance policy

Data quality review process

Materiality exercises



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Data warehouses

Steps taken

- Companies have invested heavily in building data warehouses
- In the most part, these are already embedded in the BAU process

Lessons learned

- Inflexible – Changes associated with the data warehouse are often costly and time consuming
- Inbuilt data checks are not always transparent nor comprehensive

Further improvements

- Need to establish sustainable change framework
- Further data checks and validations are required – not enough to rely on inbuilt checks in isolation



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Data governance policy

Steps taken

- Companies have established data quality frameworks and appointed data governance committees and roles

Lessons learned

- Data goes through several transformations throughout valuation process
- Challenging to establish who is accountable for each stage of the process.

Further improvements

- Need to have owners who are accountable for each stage of the data flow process
- Embed data policy into BAU process and culture



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Data quality review process

Steps taken

- Companies have taken some steps to automate portions of the data review process
- Data warehouses include some validation checks

Lessons learned

- Tests performed need to be transparent and reviewable
- Results need to be meaningful and easily communicated to enable focus on material areas

Further improvements

- Checks are often limited and lack a structured review and escalation process
- Particular area of criticism in PRA thematic IMAP data review – **further work required in this area**



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Materiality

Steps taken

- Data policies reference materiality to ensure efficient prioritisation of reviews and investigation
- Materiality is a key consideration in assessing the impact and importance of data deficiencies

Lessons learned

- Hundreds of data fields used in each modelpoint file – need to avoid getting lost in the detail
- Materiality is key to acting on results from validation checks

Further improvements

- Greater use of actuarial judgement and product knowledge to help define material areas
- Perform sensitivity runs to understand the impact of fields where necessary

