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Modelling assets in a Solvency II world - more complex than liability valuations?

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Content

- Where we've been
- Where we are
- Issues we've faced
- Solutions




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Pre Solvency II

- Focus on market value and yield
- Much less data....
- Example:
 - SI 22 fields and 288 rows (6,336 items of data)
 - SII 136 fields and 4642 rows (631,312 items of data)




Regime	Fields	Rows	Items of Data
Solvency I	22	288	6,336
Solvency II	136	4642	631,312

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Solvency II

- Technically challenging
- Enhanced modelling skills
- More focus on governance
- Complex regulation
- Complex reporting requirements



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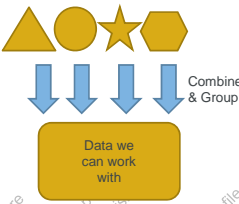
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Issues we've faced

Data cleansing

- New processes for everyone concerned
- Missing information or open to interpretation
- Comprehensive data conversion program
 - Data Categorisation using CIC (if provided!)
 - External advice necessary

Data from many sources in different formats



Combine & Group

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Issues we've faced

Modelling

- Property and equity risks are straightforward (usually)
 - Exceptions are property funds and infrastructure funds
- Spread and interest rate risks are more complicated
- Lots of unfamiliar parameters that need updating
- Index-linked assets require historic information too




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Solution

Modelling

- Specialist software with sufficient flexibility to meet demands
- Advice from investment managers where required
- Additional data requests
- Technical oversight and review



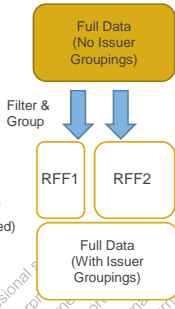
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Issues we've faced

Concentration risk

- Grouped by Issuer Group but only if they're ...
 - Not part of default risk (market value excluded)
 - Not part of a unit linked fund (market value excluded)
 - Not gilts (zero shock applied but market value included)
 - Not covered bonds or property (treated separately)
 - Part of the same ring-fenced fund




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Solution

Concentration risk

- Specialist software (Excel will generally not cut it)
- Three stage process:
 - Group data, calculate average credit steps
 - Calculate concentration risk for each issuer group (squared)
 - Take aggregate of these and perform square root calculation



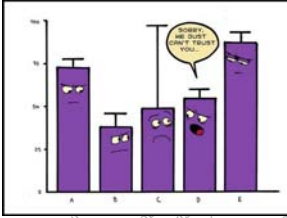
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Issues we've faced

Counterparty risk

- Data tends to be limited (and unreliable)
- Complex calculation
- Flexibility across clients is required




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Solution

Counterparty risk



- EIOPA supply calculator (Excel) but the data is the tricky bit
- Specialist software helps with data and calculation
- Three stage process:
 - Identify and group assets
 - Calculate probability of default for each
 - Perform matrix multiplication

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Summary/conclusion

- Main issue for us has been data cleansing
- Likely to be an ongoing improvement process for a few years....




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Questions

Comments

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.


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