An overview of PPI modelling

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Aims of PPI modelling

To show:

- Policy implications
- Differences between policy options
- The interaction between state and private pensions
- Uncertainties

By:

- Using consistent and realistic assumptions
- Using externally validated models
- Being transparent and accessible

Range of analysis

Distributional Model
Distribution of income, Pension Credit costs and income tax receipts

Individual Model
Individual outcomes for state and private income

Aggregate Model
Cost of state pensions and private pension flows

Consistent modelling

Informs distributional changes

Average income growth

Distributional Model
Static model based on the Pensioners' Incomes Series dataset

Individual Model
Range of hypothecated individual characteristics

Aggregate Model
A cell-based projection of the labour market using extracts from admin (L2) data

Common set of financial + demographic assumptions

Using the models

- Excel-based with Visual Basic code
- An additional core model runs the Individual, Aggregate and Distributional Models and synchronises results
- Takes about 10 minutes per policy option to run all of the models together to 2050
- Around 300 user inputs
- Around 450 Excel worksheets
- Around 13,000 lines of code

Simplifications

- The Distributional Model is static – it does not automatically pick up changes to the income distribution within cohorts (although refinements for S2P are being investigated)

- Broad comparison rather than detailed projection – not a prediction of the future

- Not a behavioural model – possible changes in savings behaviour are investigated using sensitivity analysis

Externally validated

Distributional Model
Validation against DWP's Pension Credit projections

Individual Model
External check of formulae; Commissioned by DWP to validate their savings incentives modelling

Aggregate Model
Commissioned GAD to check key aspects of code/method; Comparison against OECD's tax relief model

Review board of experts from academia, public sector and industry
Discussions with broad range of experts

Transparent and accessible

- Frequent discussions with interested parties
- All PPI papers explain assumptions and limitations of modelling used
- Full technical details published
- Disseminate results and methodology through commissioned research (Aviva, TUC, EEF, NAPF, EOC, DWP)
- A question: *What more can the PPI do to encourage understanding and wider use of its modelling?*

What next?

- Another question: *How can the PPI usefully develop its modelling?*
- Currently updating the models for new data and making some improvements to their methodology
- Nuffield Foundation project complete September 2006
- Specialised short-term model? Likely to need access to administrative data