Agenda

- A history of projections and their retrospective accuracy
- FSA's current proposals (CP12/10)
- Responses to CP12/10
- What customers really need to know
- Options to deliver
- The European horizon

A brief history

- <1988 current bonus rates (sometimes capped)
- 1988-93 low 8% high 13% (tax-favourable)
- 1994-99 low 6%, high 12%
- 1999+ low 5%, high 9%
- 2013+ low 2% high 8% (proposed)

- CP12/10: PM/F00; low 2%, high 8%
- SMPI: 2003+ growth 7% (max); inflation 2.5%: annuity, real gilt yield +0.5%

Success rate

- For each year since 1988, we have compared actual returns earned with the illustration rate used:
  - Single premiums with terms 1,5,10 and 20 years
  - Regular premiums with terms 10 and 20 years
- We also track the projected benefits each year on regular premium 25 year policies and single premium 40 year policies commencing in 1988, 1995 and 1999
- Assumptions:
  - Effect of expenses, tax etc ignored
  - Asset mix: 67% FTSE All Share, 33% UK Gilts
  - Rebalanced monthly.

Single premium policy: illustration success rates

1 year policy	< lower rate	Within envelope	>higher rate
1988-1994	32%	25%	43%
1995-1998	18%	40%	42%
1999-2004	43%	19%	38%
2005-2011	44%	21%	35%

5 year policy	< lower rate	Within envelope	>higher rate
1988-1994	7%	93%	0%
1995-1998	42%	48%	10%
1999-2007	73%	21%	6%

Single premium policy: illustration success rates

10 year policy	< lower rate	Within envelope	>higher rate
1988-1994	38%	62%	0%
1995-1998	100%	0%	0%
1999-2002	100%	0%	0%

20 year policy	< lower rate	Within envelope	>higher rate
1988-1992	100%	0%	0%

Regular premium policy: illustration success rates

10 year policy	< lower rate	Within envelope	>higher rate
1988-1994	42%	58%	0%
1995-1998	100%	0%	0%
1999-2002	100%	0%	0%

20 year policy	< lower rate	Within envelope	>higher rate
1988-1992	100%	0%	0%

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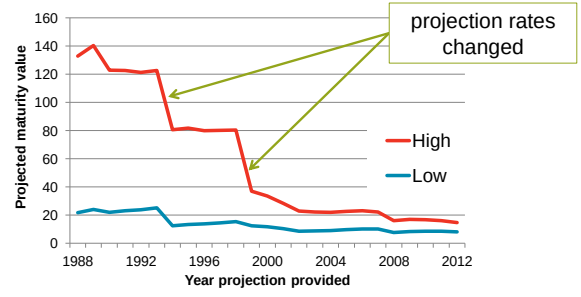
Projection tracking
40 year £1 SP policy written in 1988

- 1988 projection: Low £22; High £133
- 2012 projection: Low £8; High £14
- CP12/10 (2012): Low £5; High £13.



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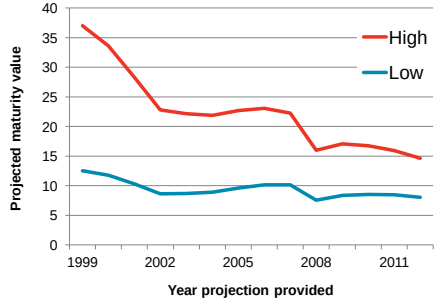
Projection tracking:
40 year £1 SP policy written in 1988

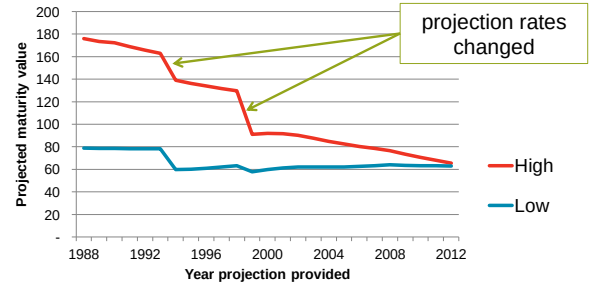
Since the current projection rates came in:

- 1999 projection (5%/9%): Low £13; High £37
- 2012 projection (5%/9%): Low £8; High £14



Projection tracking:
25 year £1pa RP policy written in 1988

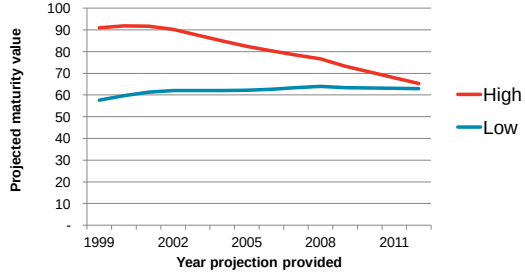
- 1988 projection: Low £79; High £176
- 2012 projection: Low £63; High £65
- CP12/04 (2012): Low £61; High £65



Projection tracking: 25 year £1pa RP policy written in 1988

Since the current projection rates came in:

- 1999 projection (5%/9%): Low £58; High £91
- 2012 projection (5%/9%): Low £63; High £65



CP12/10 Projection rate proposals

- Maximum central projection rate of 5% (was 7%)
  - Maximum low rate 2% and high rate 8% (were 5%/9%)
  - Tax deduction of 0.5% (was 1%)
- Rates must "accurately reflect the investment potential of the product"
- Why 5%?
  - PWC recommended 6% for a 67% EBR
  - FSA concern about
    - Short term economic outlook
    - Lower EBR for some Funds
- FRC: Should SMPI align or deviate?

CP12/10 Actuarial Profession Response

- Inconsistency between reflecting investment potential and capping rates based on a reduced EBR fund
- Propose instead:
  - Setting a higher cap based on 100% equity
  - Better policing the use of lower rates for other mixes
  - Making this an explicit duty of the WPA or WPC
- SMPI ideally would be consistent, but not at 5%.

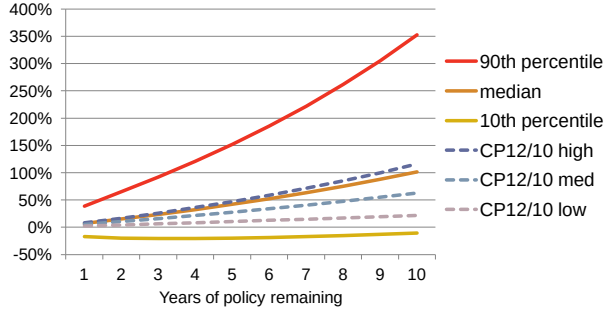
CP12/10 Actuarial Profession Response

- Concern that the flanking rates are too rigid:
  - Can't reflect investment potential of different asset mixes
  - Don't reflect greater variation over shorter horizons
  - Unclear quite what the rates are intended to portray
- Propose FSA conduct a wider review
  - 90^{th} and 25^{th} percentile suggested as broad aim
  - Encourage FRC/DWP to consider flanking rates for SMPI.

CP12/10 compared with stochastic projection

Stochastic model: 7% mean, 20% volatility

CP12/10 projection rates: low 2%, med 5%, high 8%



Policyholder risk appetite

- Policyholder risk appetite can be expressed in relation to projected payout volatility
- Especially downside risk as maturity or retirement nears
  - E.g. <P% change of payout being X% less than the current mid-point projection
- Use stochastic projection model
- Initially assume reasonably high EBR (and ignore maturity guarantees).

Policyholder risk exposure Methodology

Model

- Simplistic
- Normal distribution

Assumptions

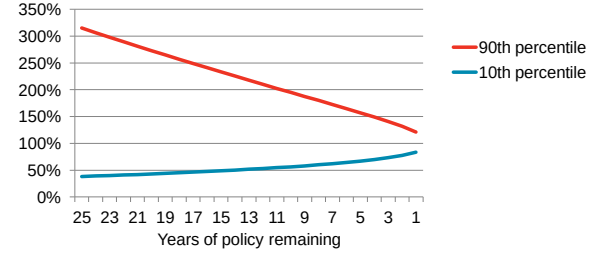
- 67% Equities with 7% mean return and 20% volatility
- 33% Fixed interest with 4% mean and 3% volatility
- Lifestyling, when invoked, moves in a straight line towards 100% fixed interest

Results

- Potential payout as a percentage of the median payout.

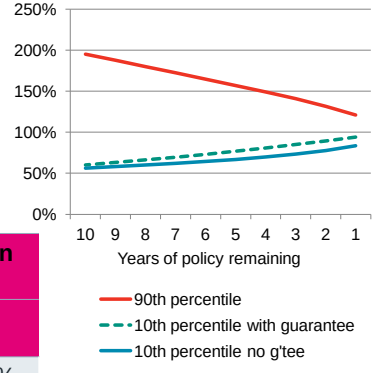
Policyholder risk exposure 90th and 10th percentiles as a % of the 50th

- 25 years to run:
  - 10th percentile projection is 38% of central
  - 90th percentile projection is 315% of central
- With 1 year remaining they are 83% and 121%.



Policyholder risk exposure
90th and 10th percentiles as a % of the 50th

- With an at-the-money guarantee
- Upper projection unaffected (no charge)
- Lower projection improved



Projected payouts for 10th percentile	Years to run	
	10	1
With guarantee	60%	94%
No guarantee	56%	83%

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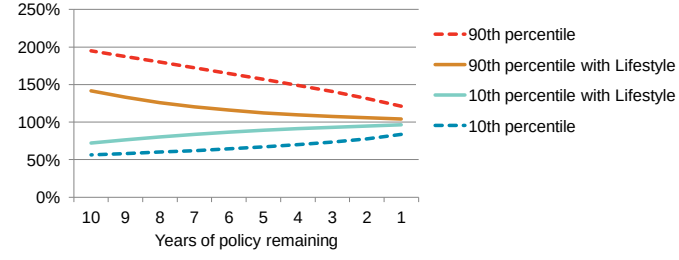
Adjusting policyholder risk exposure
90th and 10th percentiles as a % of the 50th

- With lifestyling over final 10 years
- 10 years remaining: 72% and 142%
- 1 year remaining: 96% and 104%



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Adjusting policyholder risk exposure
90th and 10th percentiles as a % of the 50th

- Projected downside protection of lifestyling is offset by lower growth.
- Example of a single premium of £100

Projected payouts	10 Years		1 Year	
	Level	Lifestyling	Level	Lifestyling
High	£359	£232	£129	£108
Medium	£184	£164	£106	£104
Low	£104	£118	£89	£100

Another example
Appetite: 90% chance payout not < current value

μ	σ^2	10th percentile payout as % of current value each year									
		1	2	3	4	5	6	7	8	9	10
7%	20%	83%	80%	79%	79%	80%	81%	83%	85%	87%	90%
4%	10%	92%	90%	90%	91%	92%	93%	94%	96%	98%	99%
4%	5%	98%	99%	101%	103%	106%	109%	112%	115%	118%	122%

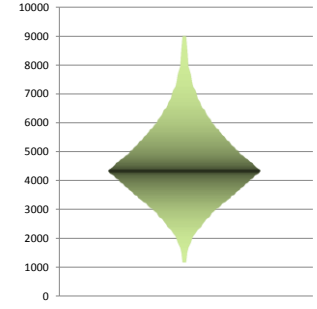
- Possible to mix assets to set a lifestyling strategy matching policyholder risk appetite.

Another example
Appetite: 90% chance payout not < current value

- At shorter terms requires lower volatility than FTSE All Share Index
  - Need to shorten term of hypothecated FI stocks
  - Avoid significant default risk exposure
  - But not if funding for pension rather than cash.

	Setting 10th percentile payout = current value									
	1	2	3	4	5	6	7	8	9	10
Return	4%	4%	4%	4%	5%	5%	6%	6%	7%	7%
Volatility	3%	5%	7%	9%	12%	13%	15%	17%	20%	20%
Av. Ret	4%	4%	4%	4%	4%	4%	5%	5%	5%	5%

Towers Watson example



- Widest point is the median
- Width is the cumulative frequency, reversed after the 50th percentile.

Phoenix example

Tax-free cash	Before change	After change
Guaranteed minimum	£7,260	£7,260
Low	£7,260	£10,300
Mid	£7,260	£14,300
High	£7,260	£20,000

and

Annual pension income	Before change	After change
[Guaranteed><illustrative>minimum]	£1,890	No guaranteed minimum
Low	£1,890	£1,600
Mid	£1,910	£2,460
High	£1,950	£3,870

Key to level of risk	
Low	There is a 10% chance that the actual outcome will be lower than this.
Mid	There is an equal chance of the actual outcome being higher or lower than this.
High	There is a 10% chance that the actual outcome will be higher than this.

Other considerations

Pensions TAS FAQ (December 2011)

- Applies to advice on growth rate used in SMPI illustrations
- Do all life office actuaries know this?
- How is this consistent with C1.24 of the Insurance TAS, which excludes work on individual policyholder benefit projections from scope.

Other considerations

PRIPs KID (July 2012)

- Proposed EU regulation on pre-sale information
- PRIPs include investment policies and individual pensions policies
- Standardised document with sections such as
  - "What might I get when I retire?": projections of possible future outcomes

EIOPA IORP Consultation (11/06)

- Discussed benefit projections and KIDs
- Mixed response.

Summary

- Opportunity to
  - Define new methods of projecting outcomes
  - Improve customer expectation management
- Care needed to avoid
  - Repeating historic mistakes
  - Understating both positive and negative risk
- Changes across Europe will increasingly influence the UK.

Questions or comments?

Expressions of individual views by members of The Actuarial Profession and its staff are encouraged.

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