



The Actuarial Profession

making financial sense of the future

De-risking with-profits customers fairly

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De-risking with-profits customers fairly

- Agenda
 - Why de-risk?
 - Options for de-risking
 - The impact on policyholders and shareholders
 - Conclusions

What do we mean by “de-risking” with-profits funds?

- Historically, with-profits business has been written with significant guarantees underpinning the policies
- The erosion of inherited estates, coupled with low interest rates has led to significant shareholder burn-through costs
- The shareholder can implement a number of measures which can reduce the burn-through costs
- The question we are addressing today is, how can shareholder risk be managed whilst still treating customers fairly?

What are the options for “de-risking” with-profits funds?

- Removal/reduction of non market risks
- Removal/transfer of market risk

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De-risking: removal of non-market risks

- Key issues:
 - Materiality of non-market risks
 - Term of non-market risks compared with profile of with-profit liabilities
 - Cost of removal
 - Equity between generations of policyholders
- Case study – longevity risk within a with-profits fund

Transfer of longevity risk - recent precedents

Seller	Buyer	Year	Liabilities
Alba Life	AIG	2004	£364m
Scottish Life	Prudential	2004	£1,110m
Phoenix L&P	Prudential	2005	£1,500m
CIS	XL Re	2005	£1,000m
PAFS	Partnership	2005	£200m
Scottish Life	Prudential	2005	n/a
Phoenix & London	Canada Life	2005	£2,180m
Royal London	Prudential	2006	£650m
Equitable	Canada Life	2006	£4,600m

Transfer of longevity risk – case study

- Relatively weak with-profits fund
- Significant longevity risk through in-force non-profit annuity book
- Term of longevity risk considerably longer than term profile of with-profit policies
- Cost of removal of risk was unknown
- Existing charge mechanism meant that not solely a shareholder issue
- Pressing issue due to ensuring equity between generations of policyholders, and steep projected run-off of policies

Case study – transfer of longevity risk

Solution:

- Competitive tender to quantify cost of risk transfer
- Reinsurance and then Part VII transfer
- Approval of terms by WPC
- Swift implementation
- Significant impact on ICA & burn-through costs
- Reduction in uncertainty over level of policyholder charges

Outcome for policyholders

- With-profits policyholders
 - Increased certainty over level of future charges to asset shares
 - Equitable crystallisation of costs across generations of policyholders
- Annuitants
 - Financially strong provider, focused on the provision of annuities

What are the options for “de-risking” with-profits funds?

- Removal/reduction of non market risks
- Removal/transfer of market risk

A full spectrum of alternatives exists to manage investment risk

- Reduce EBR
- Hypothecation
- Purchase hedges
- Dynamic hedging
- Manage fund as before with reduced guarantees
- Smoothed fund
- Unitisation

**'Manage' the
guarantees**

**'Spend' the
guarantee reserve**

**Partially distribute
the guarantee
reserve**

**Fully distribute
the guarantee
reserve**

To examine the effects on policyholders and shareholders we have created a simple model office

- Range of 10 and 25 year CWP endowments with last maturity in 2015
- Range of single premium UWP pensions business with guaranteed bonuses of 2% p.a with last maturity in 2017
- Products are spread between heavily in the money (asset share is 50% of guarantee, to heavily out of the money, asset share is 120% of guarantee)
- Management actions:
 - To distribute the estate via annual enhancement to asset shares
 - To recover deficits via maximum of 0.5% pa charge for 10 years
 - Current RBS assumes 0.25% pa for max of 10 years
 - No other reversionary bonuses projected
 - Static EBR 40%

Current position

	Value
Realistic assets	1,000
Asset shares	911
Cost of guarantees	98
Value of future charges	(9)
Working capital	0

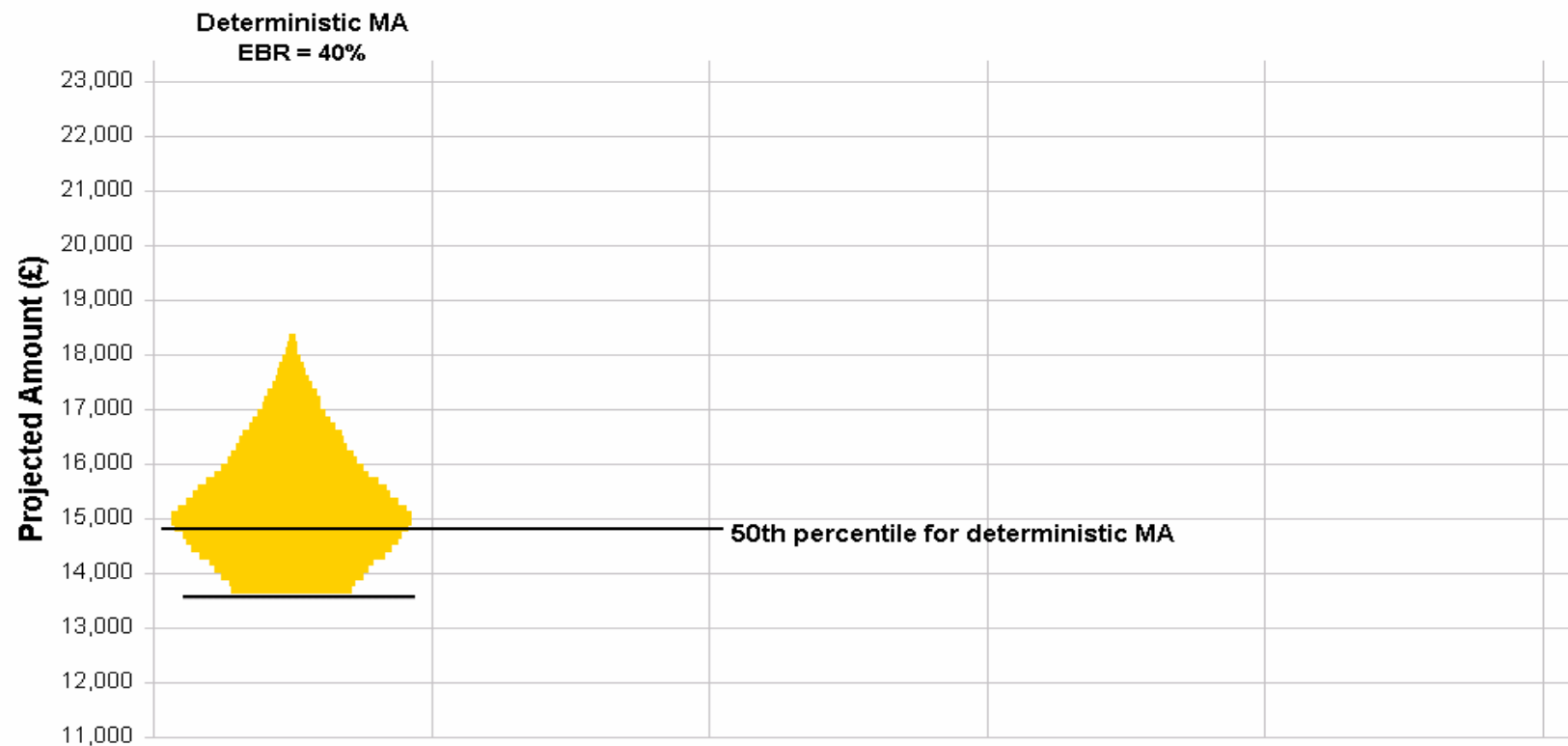
Burnthrough calculated to be 29

To illustrate impact on policyholders we will consider 2 policies

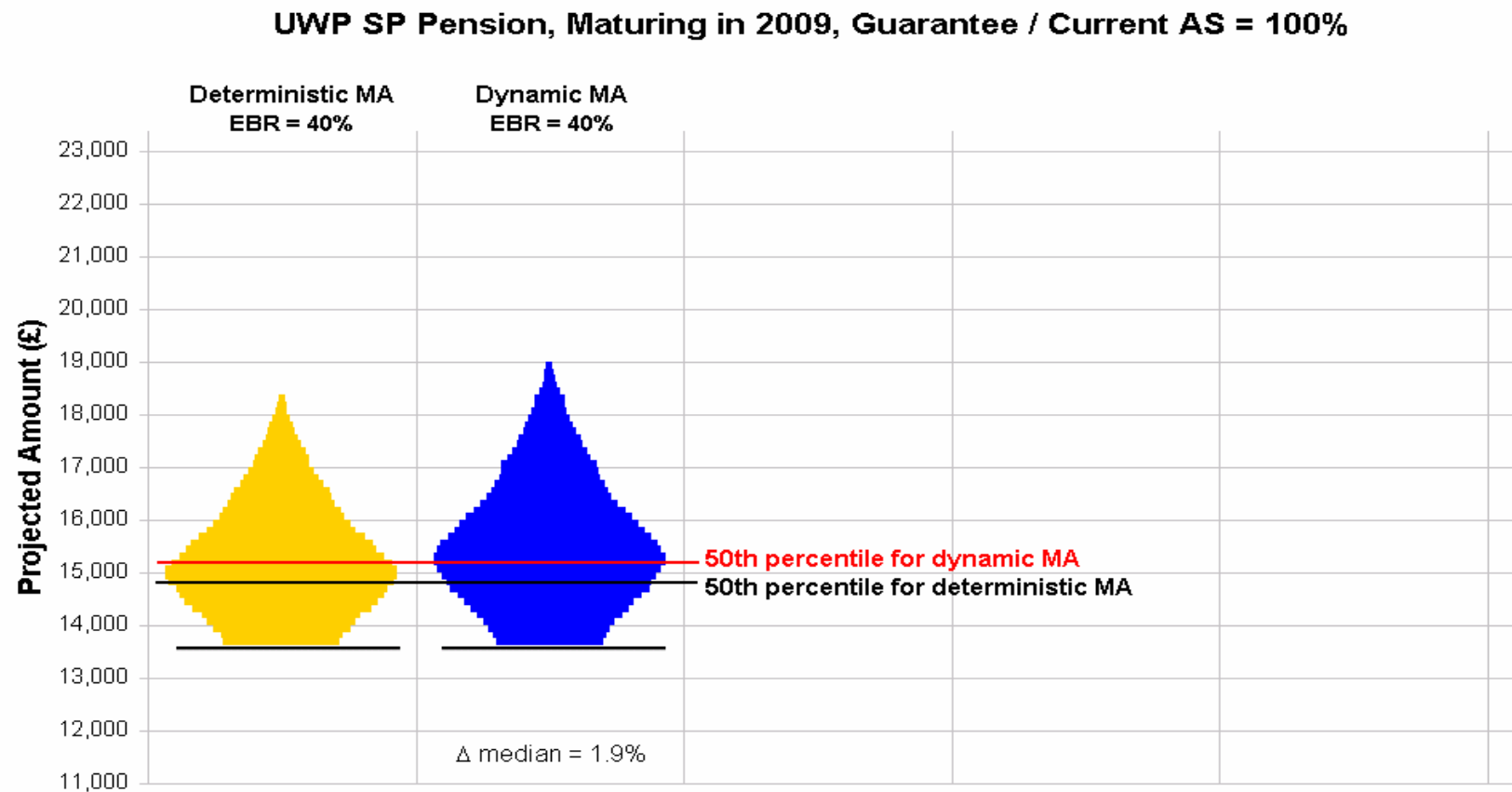
- Both SP UWP Pensions
 - One maturing in 2009
 - One maturing in 2015
- Current asset share/ current guarantee is 100% for both
- We have investigated the impact of the de-risking options using real world stochastic simulations

We have illustrated the impact on policyholder payouts using stochastic modelling

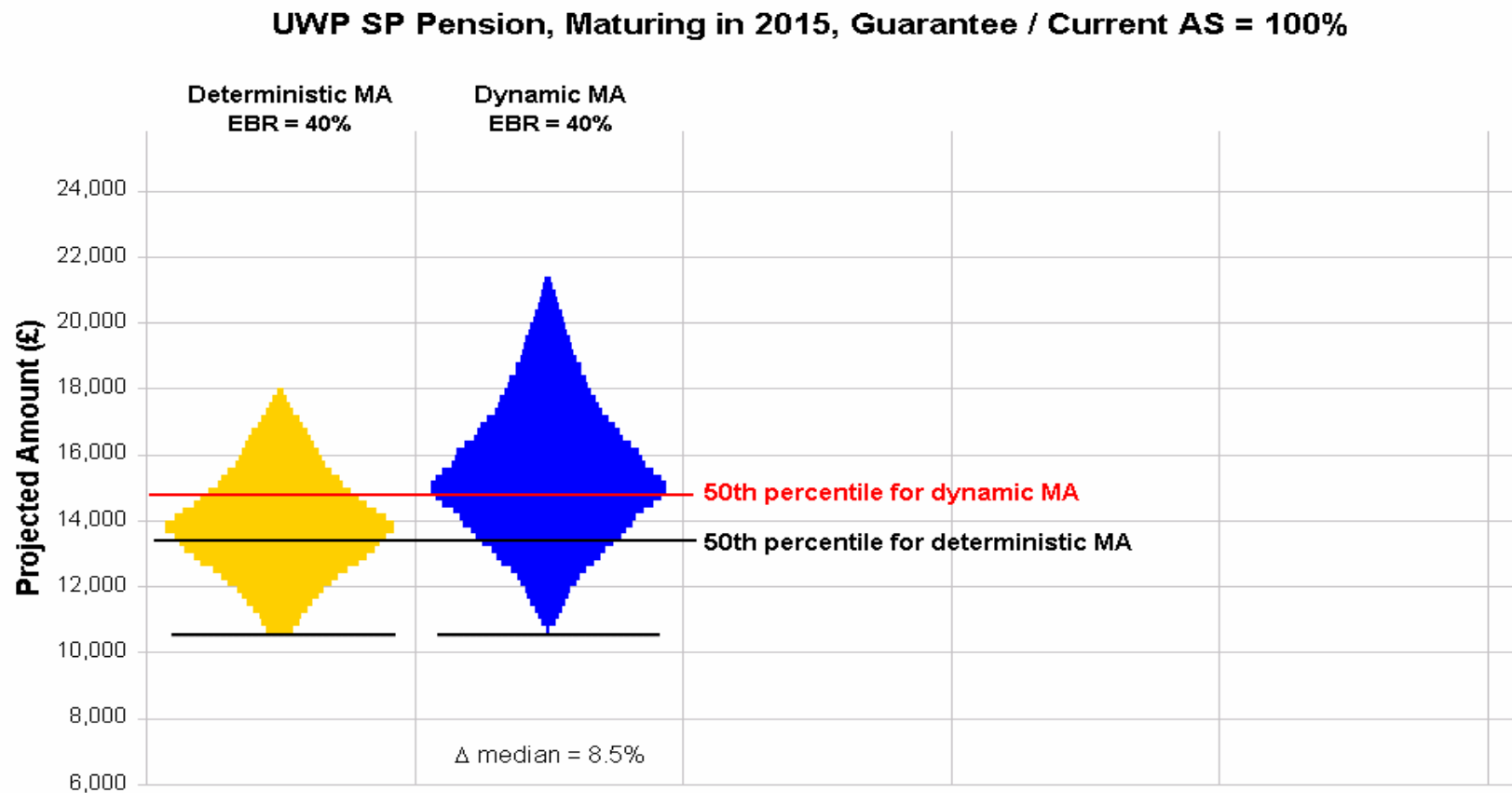
UWP SP Pension, Maturing in 2009, Guarantee / Current AS = 100%



Impact of MA's can be material in assessing policyholder's value



Impact of MA's can be material in assessing policyholder's value



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'Manage' the guarantees

'Spend' the guarantee reserve

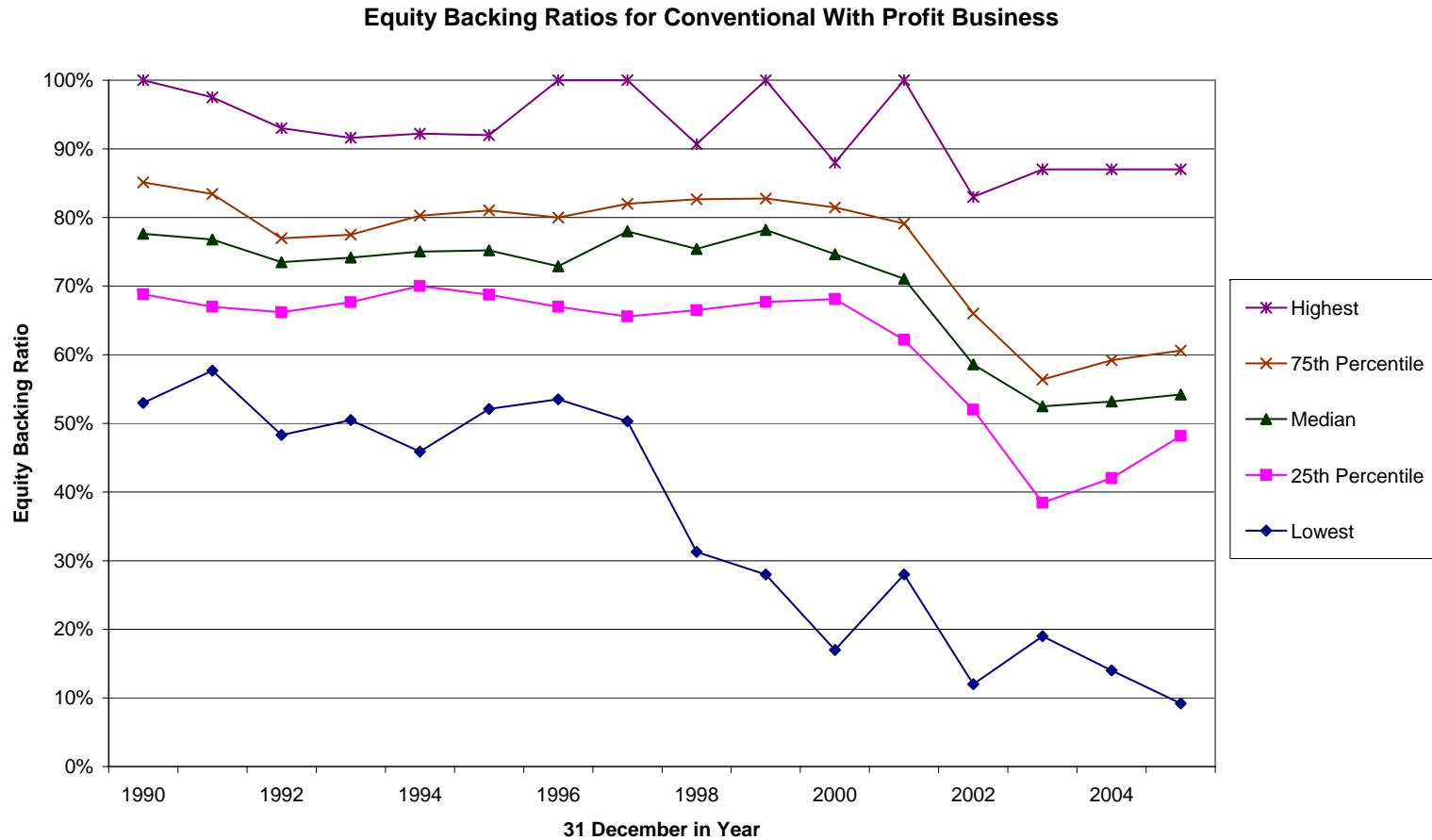
Partially distribute the guarantee reserve

Fully distribute the guarantee reserve

Managing the guarantees: reduce the EBR

- Implemented by virtually all firms
- EBR is the first and simplest mechanism to manage risk within the with-profits fund
- PPFMs usually give wide range of latitude to management to implement, with step changes requiring no communication
- Reducing the EBR can have an instant impact on the realistic balance sheet

Equity backing ratios have fallen from all time highs – but are showing some signs of recovery



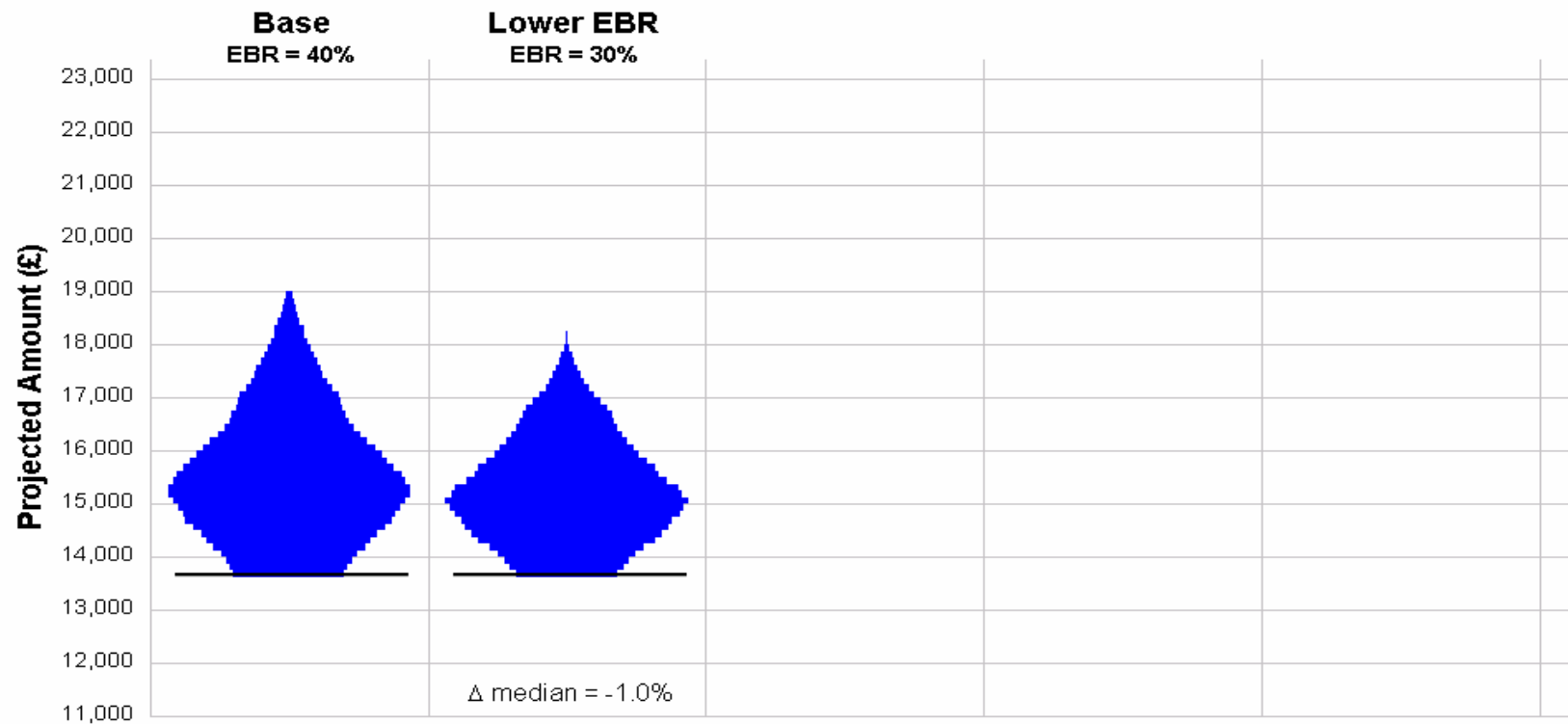
Source: Tillinghast asset share survey 2006

Shareholder perspective

	Base	Reduced EBR
Realistic assets	1,000	1,000
Asset shares	911	911
Cost of guarantees	98	92
Value of future charges	(9)	(9)
Working Capital	0	6
Burnthrough	29	21

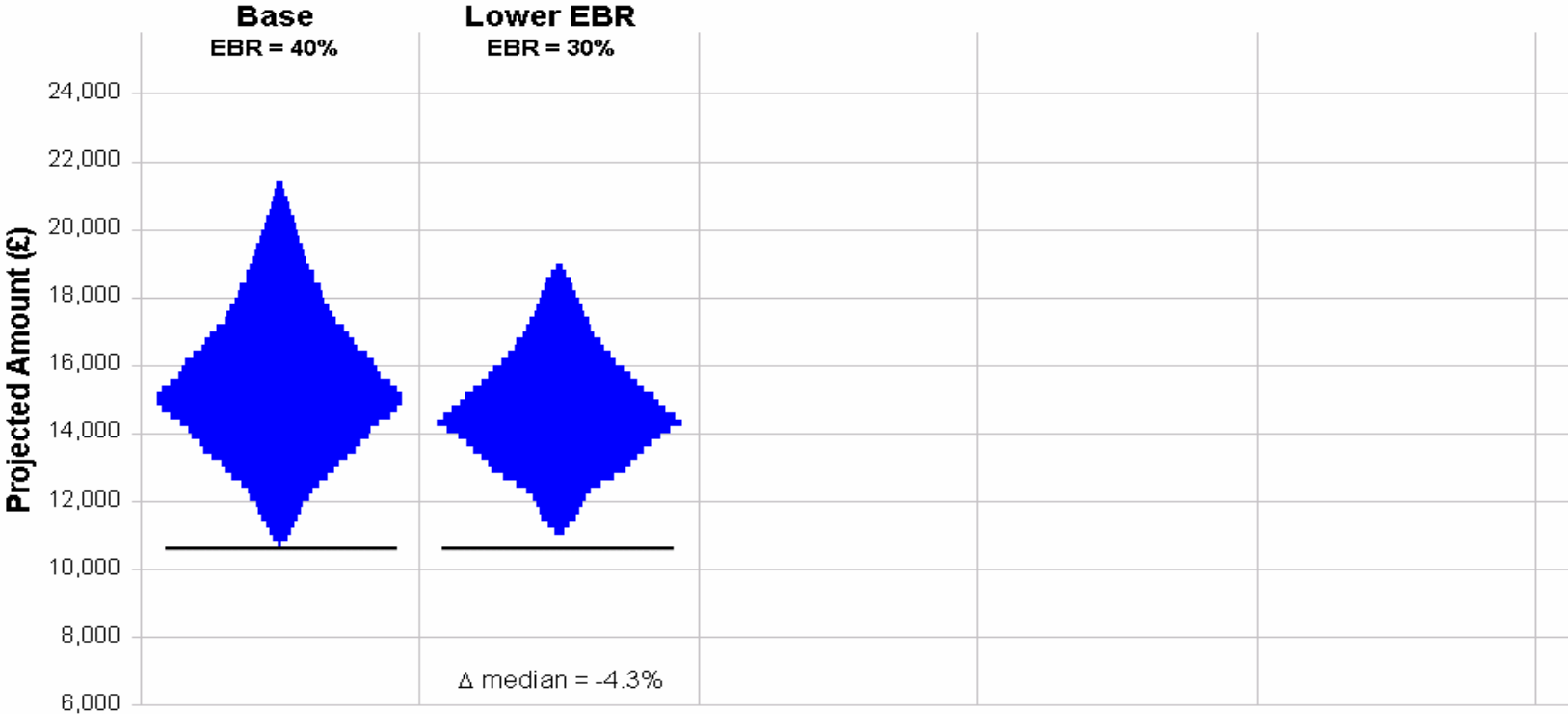
Impact of reducing the EBR

UWP Pension, Maturing in 2009, Guarantee / Current Asset Share = 100%



Impact of reducing the EBR

UWP Pension, Maturing in 2015, Guarantee / Current Asset Share = 100%



Managing the guarantees - hypothecation

- With-profits funds need to strike a balance between different classes of policy
- The relationship between the value of guarantees and asset shares differs for different policies between :
 - (a) “In the money” (guarantees $>$ asset shares).
 - Where the difference is large there is very little potential “upside” from investment performance → behaves as a non-profit policy.
 - (b) “Out of the money” (guarantees $<$ asset shares).
 - Policyholders will continue to seek significant equity exposure for good long-term investment performance.

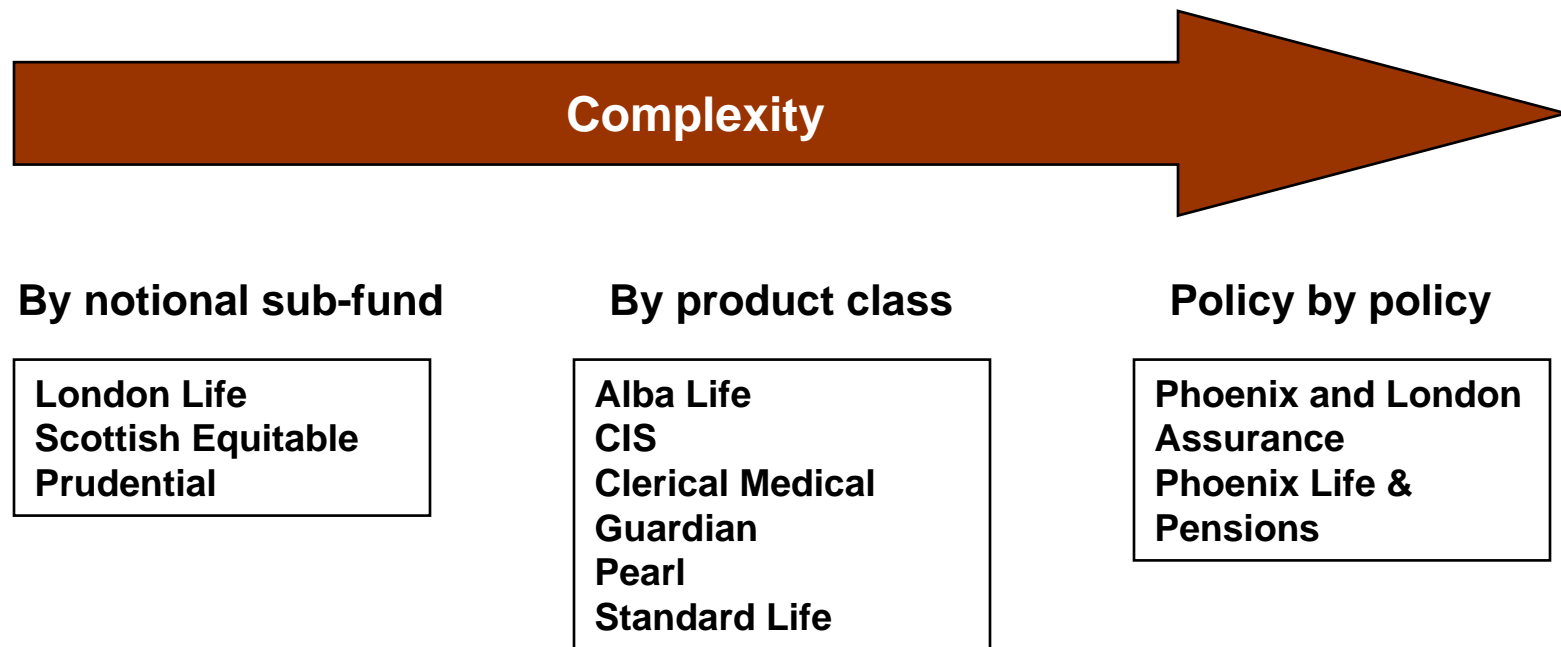
...the cost of guarantees will often be met by charges to asset shares

- Higher EBR leads to higher risk, hence higher cost of guarantees and higher charges:
 - for policies with guarantees in the money, any charge to asset share will have minimal or zero impact.
 - cost falls on those policies where the guarantees are out of the money
 - cost subsidies between groups of policyholders are potentially very large and inequitable.
- Lower EBR reduces the cost of guarantees but also reduces the potential return
 - again, this is inequitable.

Possible use of hypothecation to improve equity

- Under a simple hypothecation strategy, the company might use fixed interest assets of appropriate outstanding term specifically to match benefits on policies with higher levels of guarantees:
 - reduces the overall risk profile of the fund
 - reduces the charges levied on other policies in poor scenarios
 - reduces spreading guarantee charges over fewer policyholders in later years
 - allows policies where the guarantees are less of an issue to benefit from higher EBRs consistent with their long-term expectations.
 - allows hedging strategies to be implemented at reduced cost
-

There are several precedents for different approaches



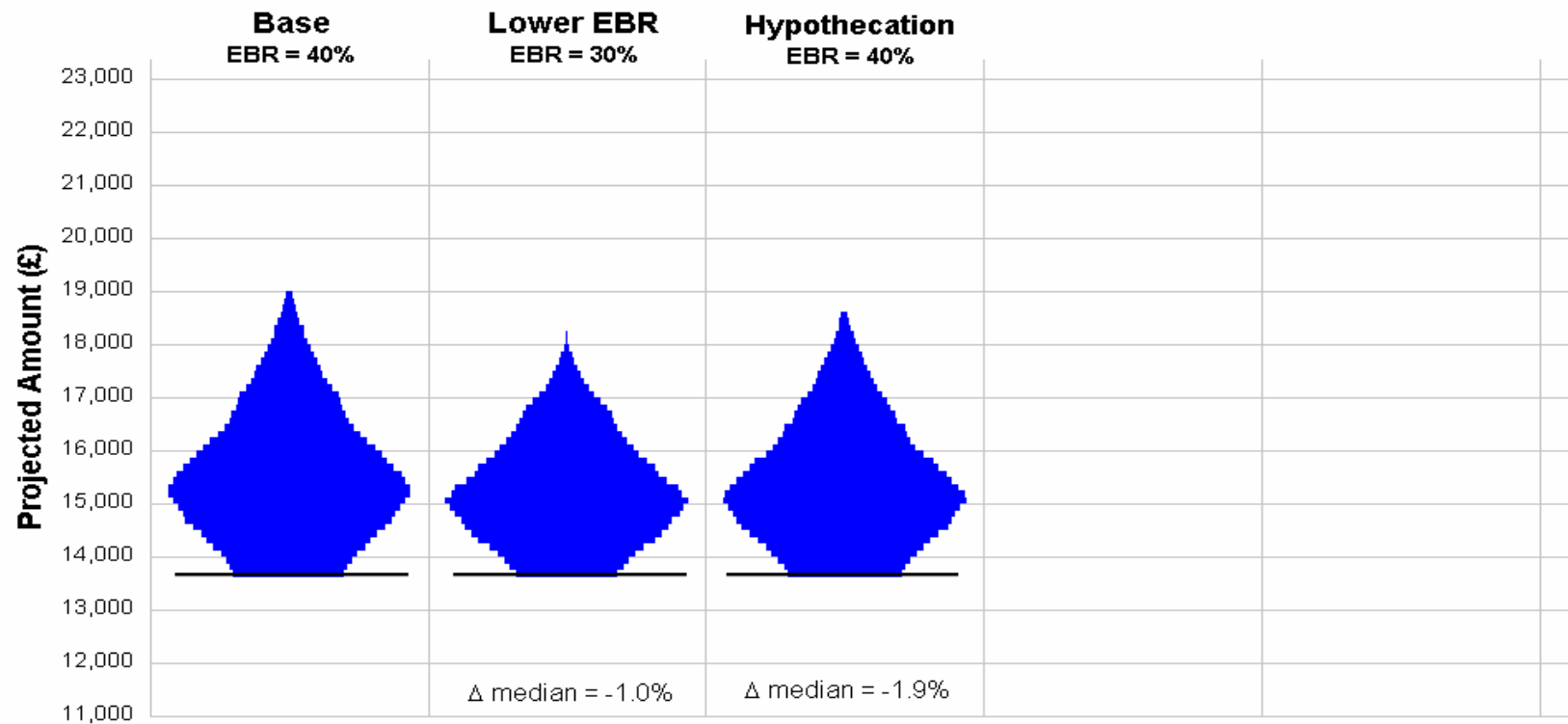
Hypothecation is a widely accepted way of managing the investment risks in a with-profits fund.

Shareholder perspective

	Base	Hypothecation
Realistic assets	1,000	1,000
Asset shares	911	911
Cost of guarantees	98	100
Value of future charges	(9)	(11)
Working Capital	0	0
Burnthrough	29	15

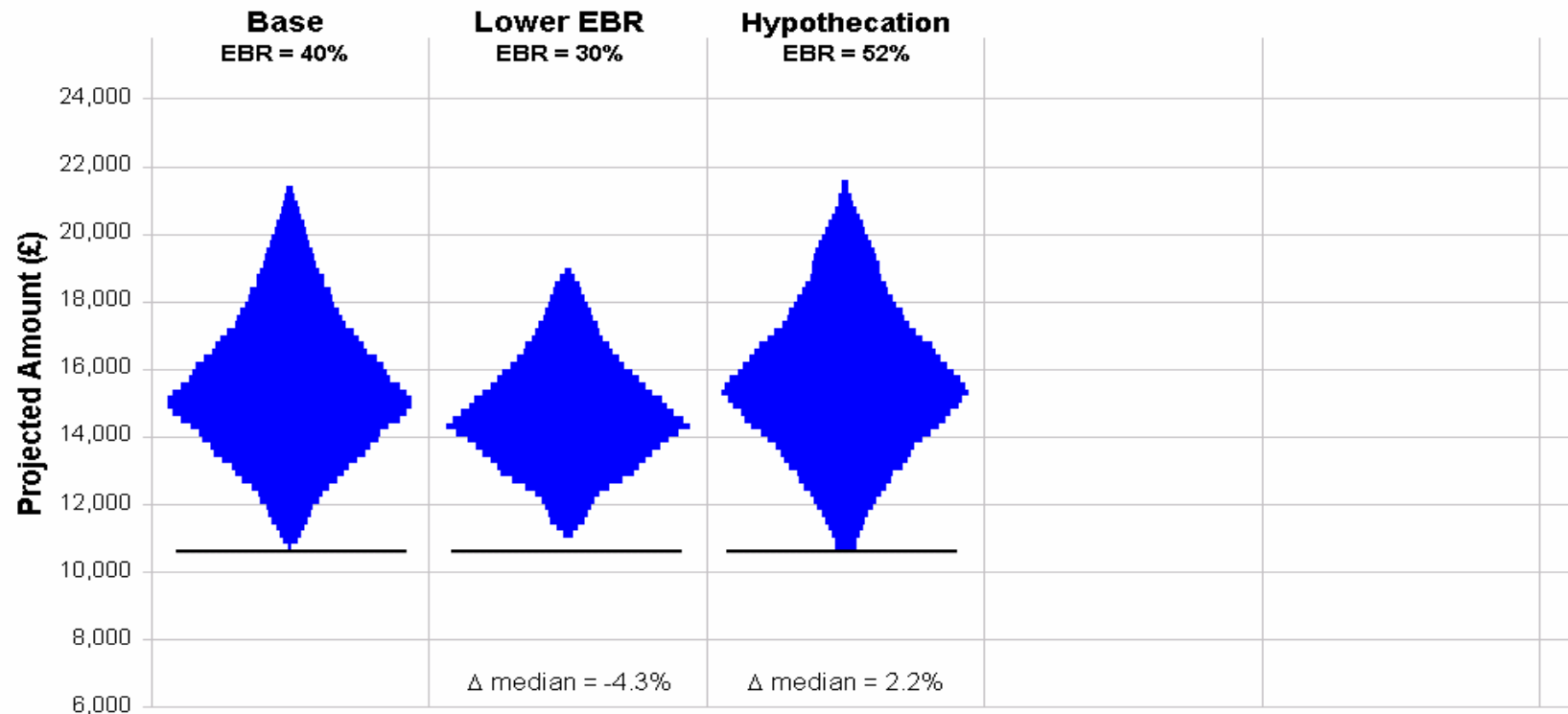
Impact of hypothecation

UWP Pension, Maturing in 2009, Guarantee / Current Asset Share = 100%



Impact of hypothecation

UWP Pension, Maturing in 2015, Guarantee / Current Asset Share = 100%



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Partially distribute the guarantee reserve

Fully distribute the guarantee reserve

De-risking: hedging guarantees

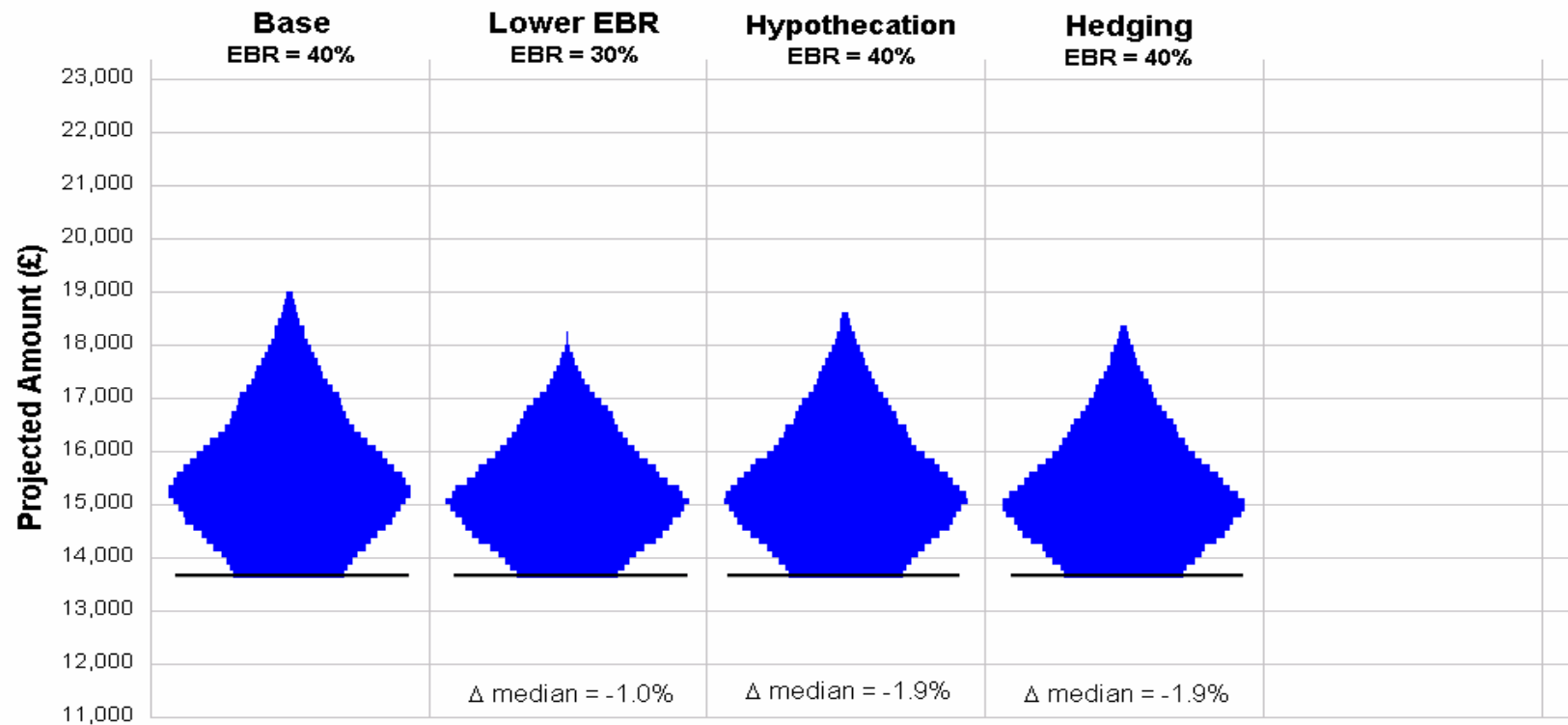
- Proliferation of hedging of guarantees
 - Guaranteed annuity rates
 - Guaranteed sums assured
 - MVR-free dates
- Benefits to shareholders are clear – downside protection
- Impact on policyholders less clear – at what cost has hedging been achieved?

Shareholder perspective

	Base	Hedge
Realistic assets	1,000	1,000
Asset shares	911	911
Cost of guarantees	98	98
Value of future charges	(9)	(9)
Working Capital	0	0
Burnthrough	29	0

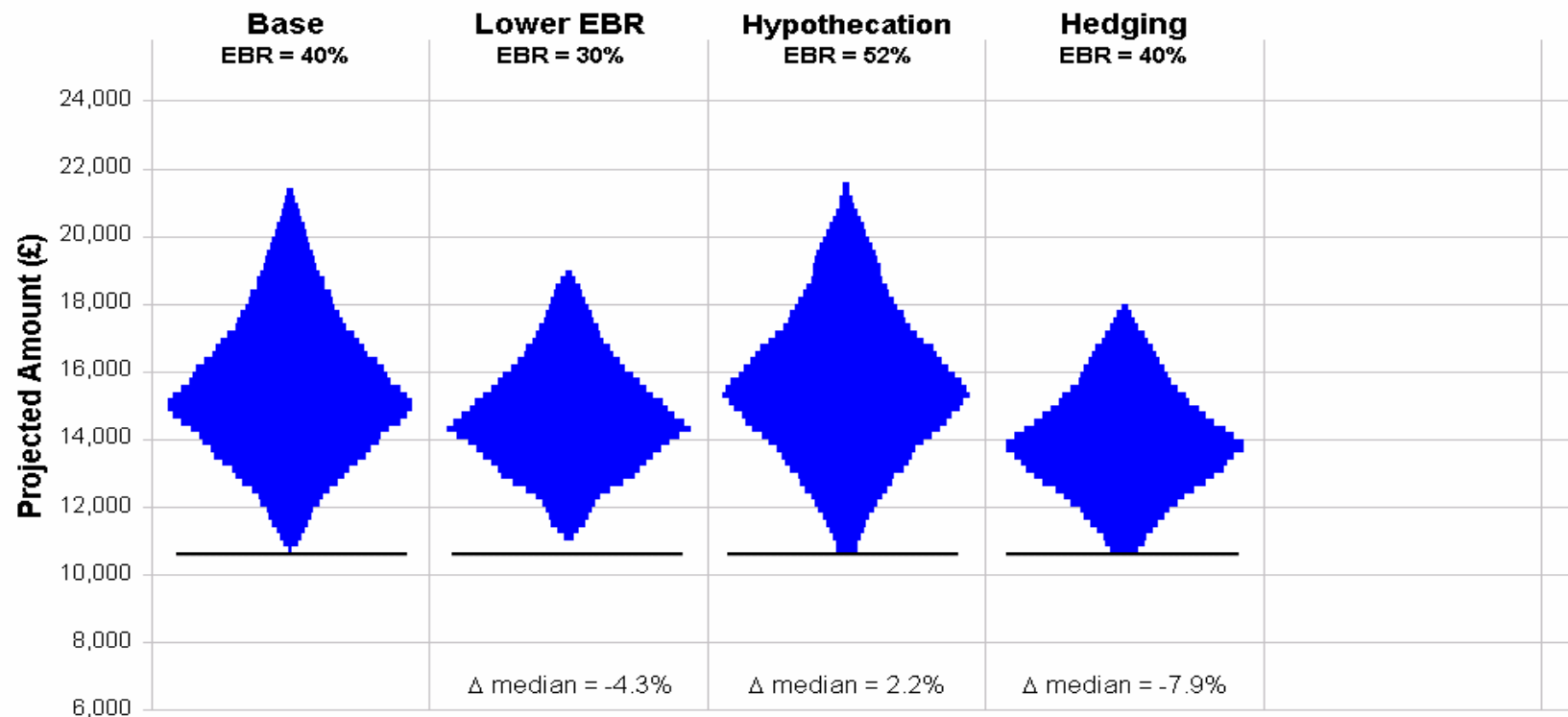
Impact of hedging guarantees

UWP Pension, Maturing in 2009, Guarantee / Current Asset Share = 100%



Impact of hedging guarantees

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Unitisation

- Most extreme form of a compromise Scheme - all guarantees are sacrificed in return for full flexibility of benefits
- Policyholders take full investment risk
- Policyholders compensated for loss of guarantees
- Compensation funded from release of guarantee reserve (and RCM covered within WP fund)
- Shareholders may also contribute part of burn-through cost
- Can create “win-win” for policyholders and shareholders

Significant value can be 'released' via full unitisation

	Value (£m)
Current realistic surplus/deficit	Xxx
+ Risk capital margin released (covered by fund)	Xxx
+ Future costs of guarantees removed	Xxx
- Future charges for guarantees removed	Xxx
- Future surrender profits lost	Xxx
+ Value of future surrender profits	Xxx
Value generated	Xxx
Amount available to distribute	xxx

Value needs to be distributed across policies fairly

Unitisation - process

- Section 425 Scheme of Arrangement
 - Effected via Companies Act
 - Can be used to bind minority
 - Requires majority by number and 75% by value of those voting to agree to Scheme for it to be effected

Equitable GAR compromise Scheme is the only example of this type of Scheme applied to a life company

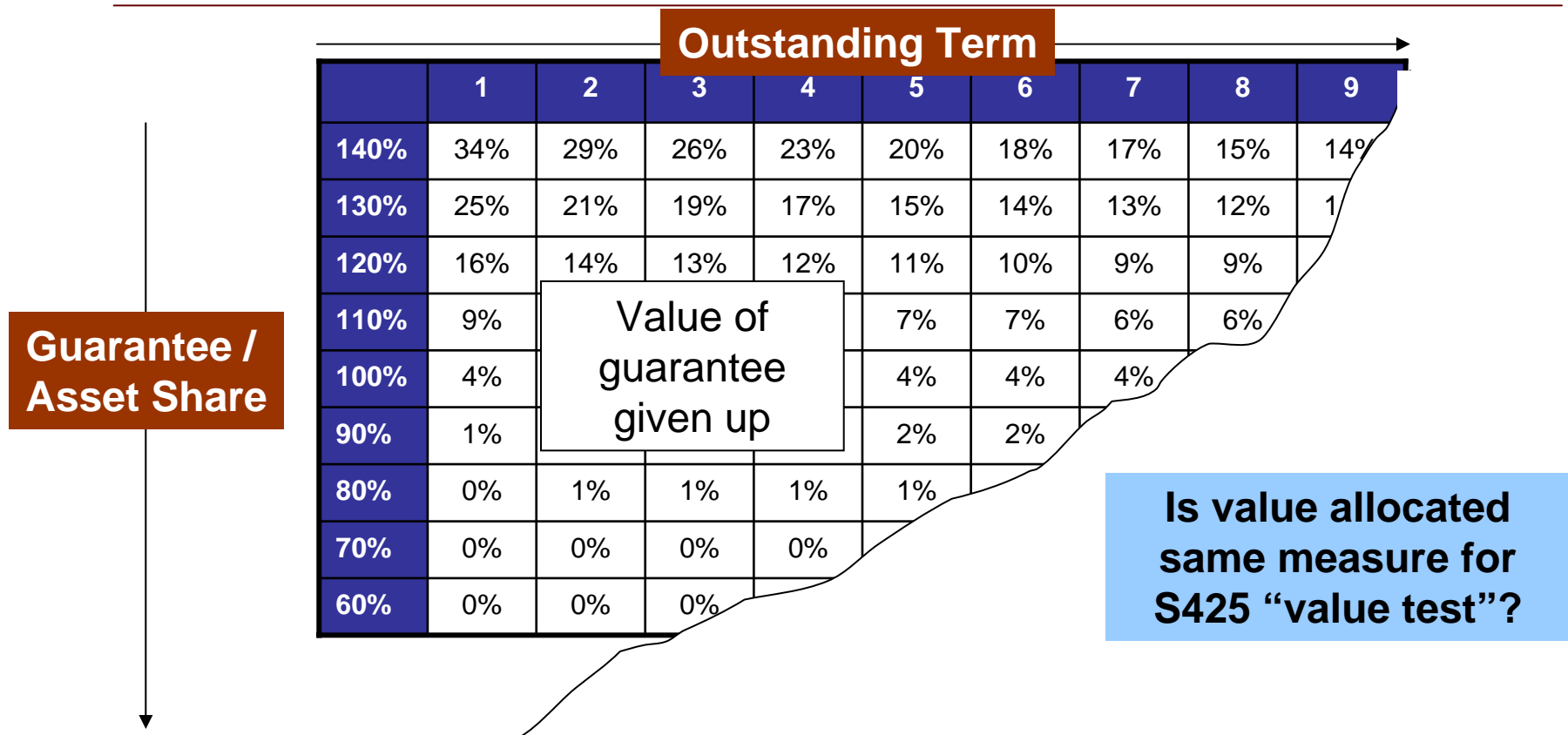
What can we learn from the Equitable Scheme?

- Rights given up need to be valued both for voting purposes and compensation
- Theoretical correctness may lead to a complex solution
 - Need to temper this with a practical approach
 - Approach needs to be communicated
- Need to pay attention to the different potential interests of different groups of policyholder

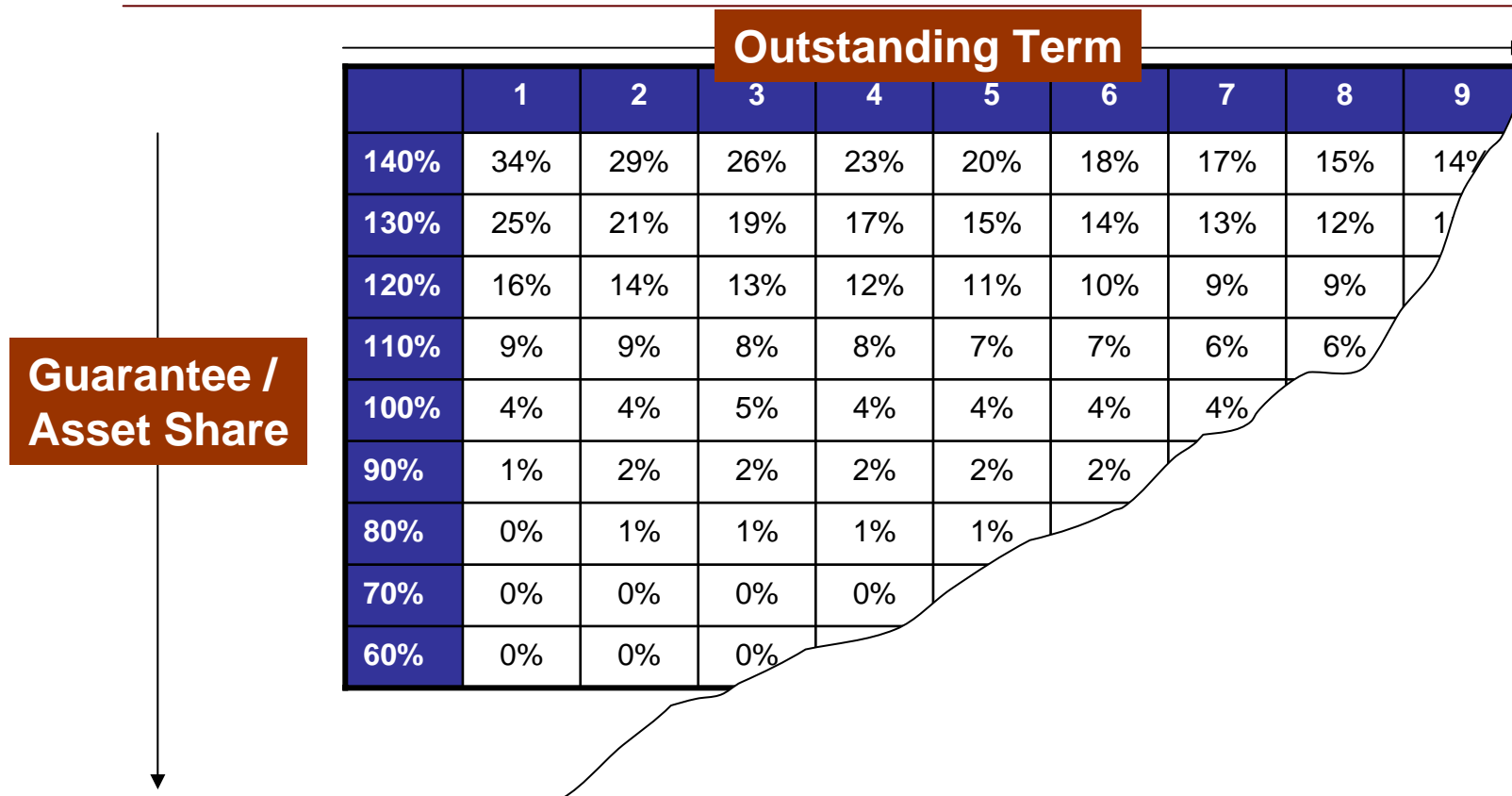
The key hurdle may well be communication to policyholders

- No knowledge of asset share
- May not appreciate guarantees
- How to communicate risks and reward

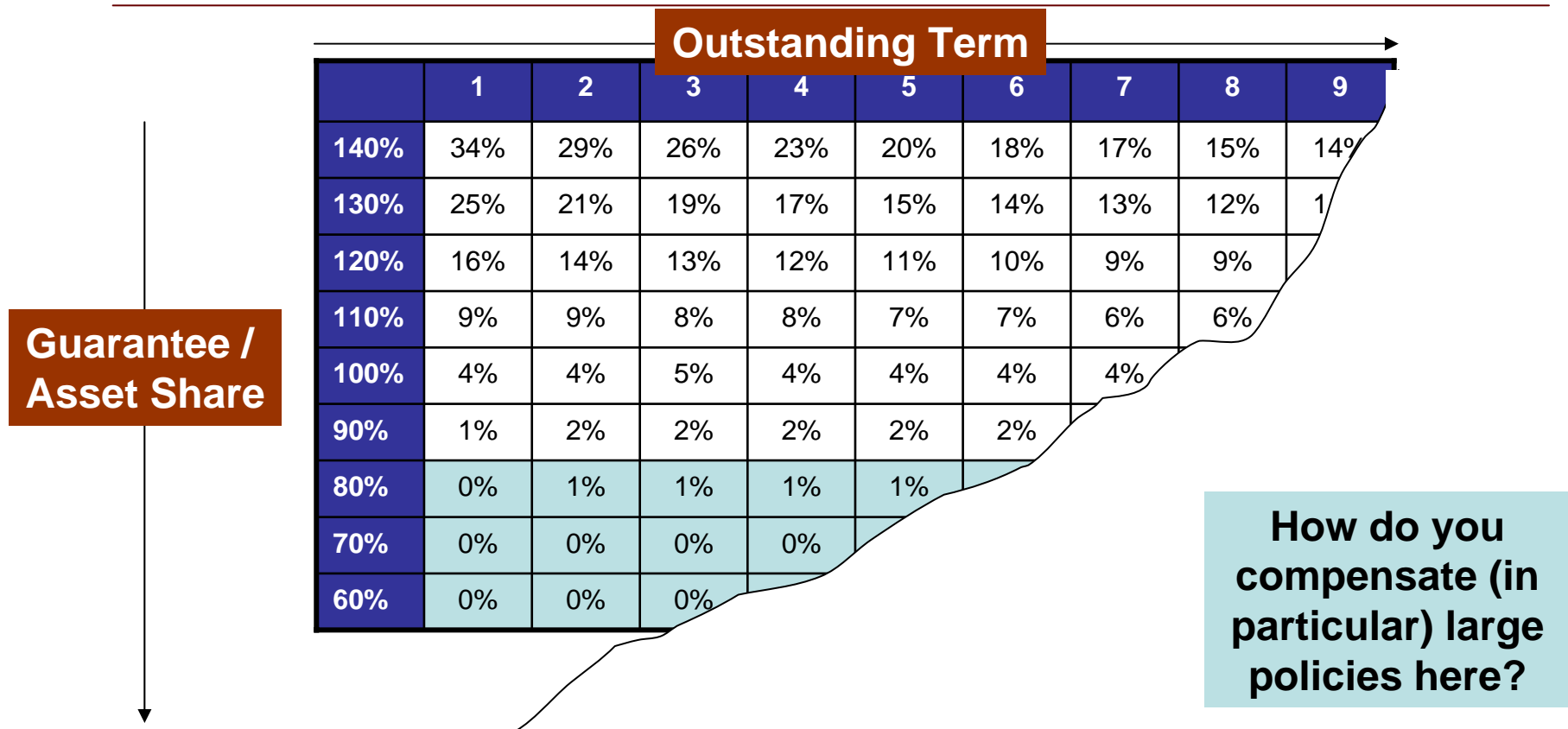
Value allocated needs to reflect value given up – not just based on asset share



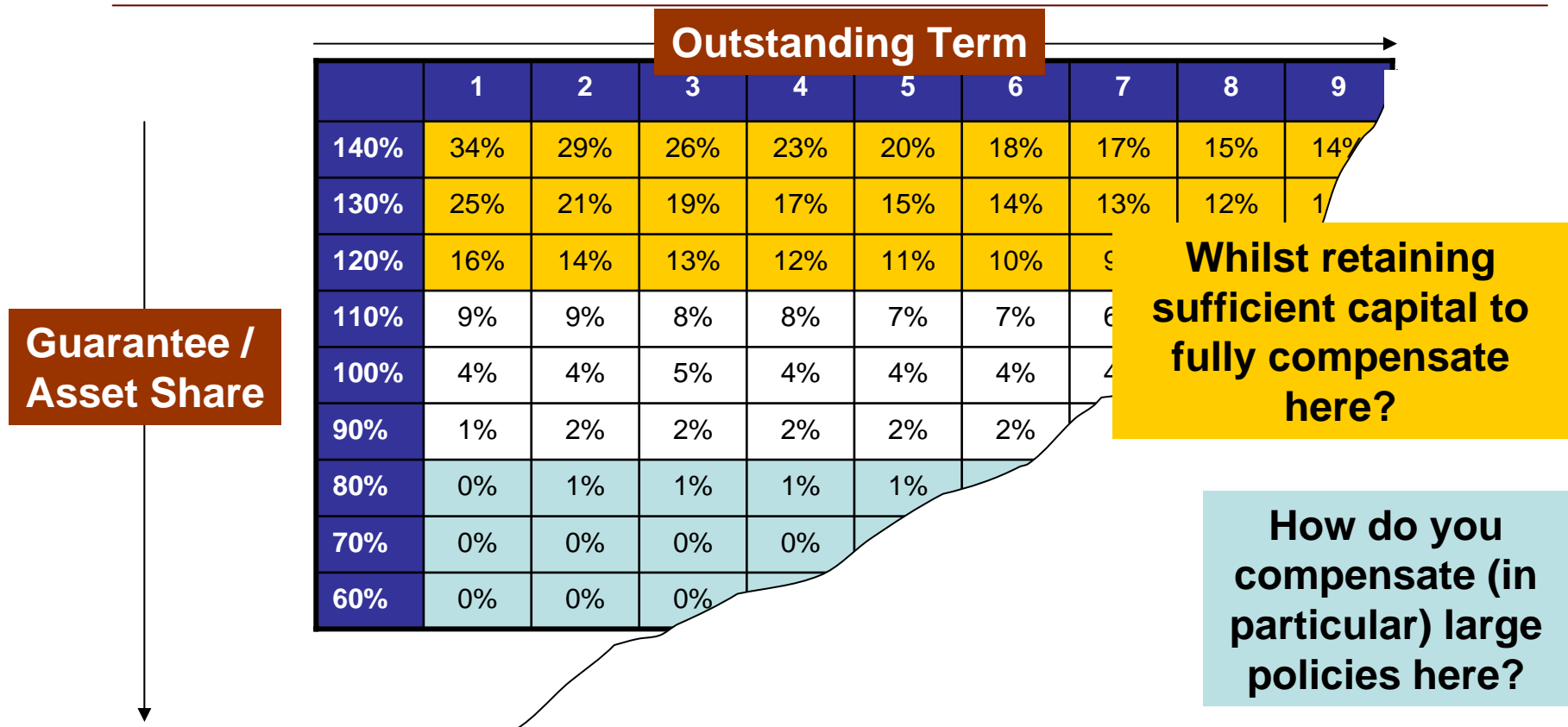
Tension between pragmatism/ and theoretical correctness



Tension between pragmatism/ and theoretical correctness



Tension between pragmatism/ and theoretical correctness



Other key issues

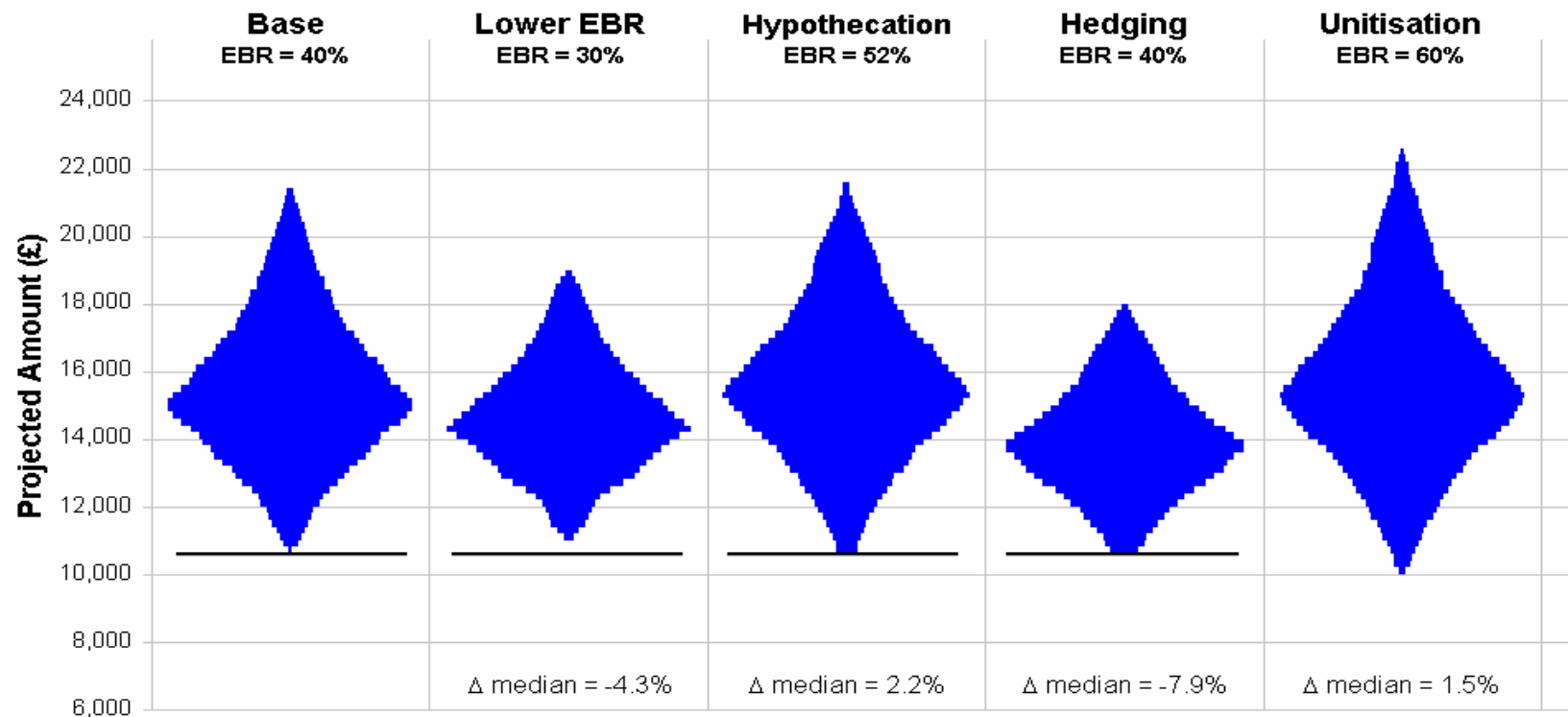
- Unitisation of illiquid assets (e.g. head office)
- Allocating policyholders to appropriate unit funds (protecting guarantees)
- WP fund needs de-risking in other areas prior to unitisation

Shareholder perspective

	Base	Unitisation
Realistic assets	1,000	1,000
Asset shares	911	1,000
Cost of guarantees	98	0
Value of future charges	(9)	0
Working Capital	0	0
Burnthrough	29	0

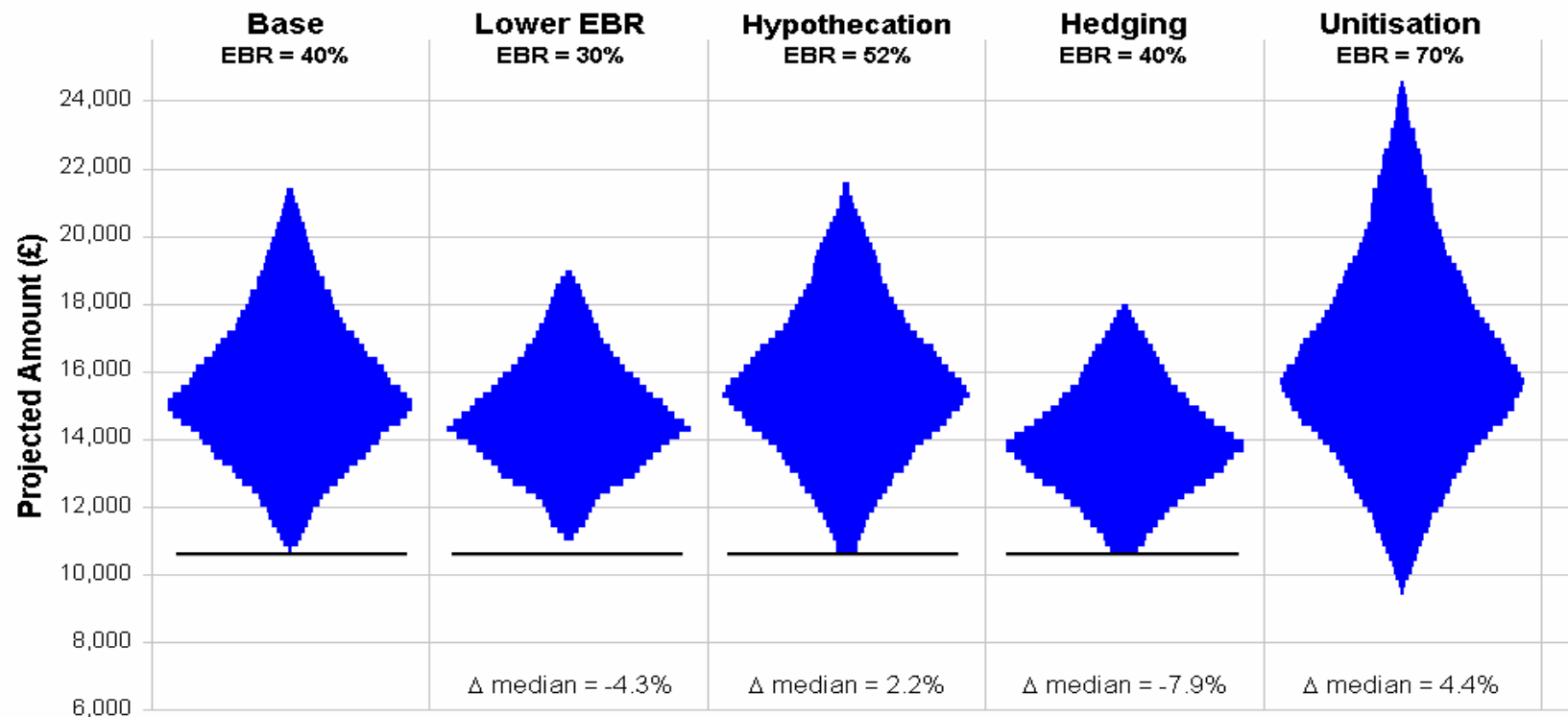
Impact of unitisation

UWP Pension, Maturing in 2015, Guarantee / Current Asset Share = 100%



Impact of unitisation

UWP Pension, Maturing in 2015, Guarantee / Current Asset Share = 100%



What is the overall trade-off?

- Reduce EBR
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Conclusions

- Strike while the iron is hot?
 - High demand for longevity risk reducing prices?
 - FSA 'surprised' not to have seen more examples of schemes of arrangement or unitisation proposals
- TCF
 - Companies should consider if not investigating these options is TCF
 - Arguments are multi-dimensional and very complex
 - Each fund is different – one size does not fit all!

Conclusions

- Policyholder communication
 - Effective and pro-active policyholder communications are key to ensure that customers are treated fairly
 - We have developed stochastic tools to help manage the business, is it now time to use these to communicate better with policyholders?
 - The education process for customers and the financial press should not be underestimated
 - Particularly in trying to describe the de-risking options discussed today!

Conclusions

- In spite of favourable market conditions over recent years, we expect to see more activity in this area
- ..but for some...
 - Equity markets are up
 - Significant removal of non-market risks
 - Better financial management tools
 -time to re-risk?