The TMTP – helpful, but painful: the approaches and risk considerations for TMTP recalculation

Nick Ford & David Harrison

21 November 2017

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Thoughts from across the industry

Nick Ford

21 November 2017

Companies with TMTP and recalculation

Company	Recalculated?	Date of approval
Aviva	Yes – as at 1/1/16 & 30/6/16	10/8/16 & 20/7/16
Canada Life	Yes – as at 30/6/16	2/8/16
Scottish Widows	Yes – as at 30/6/16	21/12/16
Just Retirement	Yes – as at 30/6/16	19/8/16
MGM Advantage	Yes – as at 30/6/16 & 31/12/16	14/7/16 & 21/12/16
Pacific Life Re	Yes – as at 30/6/16	21/12/16
Partnership	Yes – as at 30/6/16	19/8/16
ReAssure / Guardian	Yes – at Part VII date	13/8/16 / 9/12/16
Rothesay	Yes – as at 10/3/16 & 30/6/16	11/4/16 & 7/11/16
Aegon	No	n/a
Standard Life	Yes – as at 30/6/16 & 31/12/16	22/7/16 & 30/11/16
Prudential	Yes – as at 30/6/16	22/7/16

Company	Recalculated?	Date of approval
Unum	Yes – as at 30/6/16	22/12/16
Legal & General	Yes – as at 30/6/16	15/7/16
NFU Mutual	No	n/a
PIC	No	n/a
Phoenix	Yes – as at 30/6/16 & 1/11/16	5/8/16 & 10/11/16
Royal London	No	n/a
LV=	Yes – as at 29/4/16, 30/6/16 & 31/8/16	13/7/16, 25/8/16 & 14/10/16
Reliance Mutual	No	n/a
Hodge Life	Yes – as at 30/6/16	31/10/16
Equitable Life	No	n/a

Source: Financial Services Register

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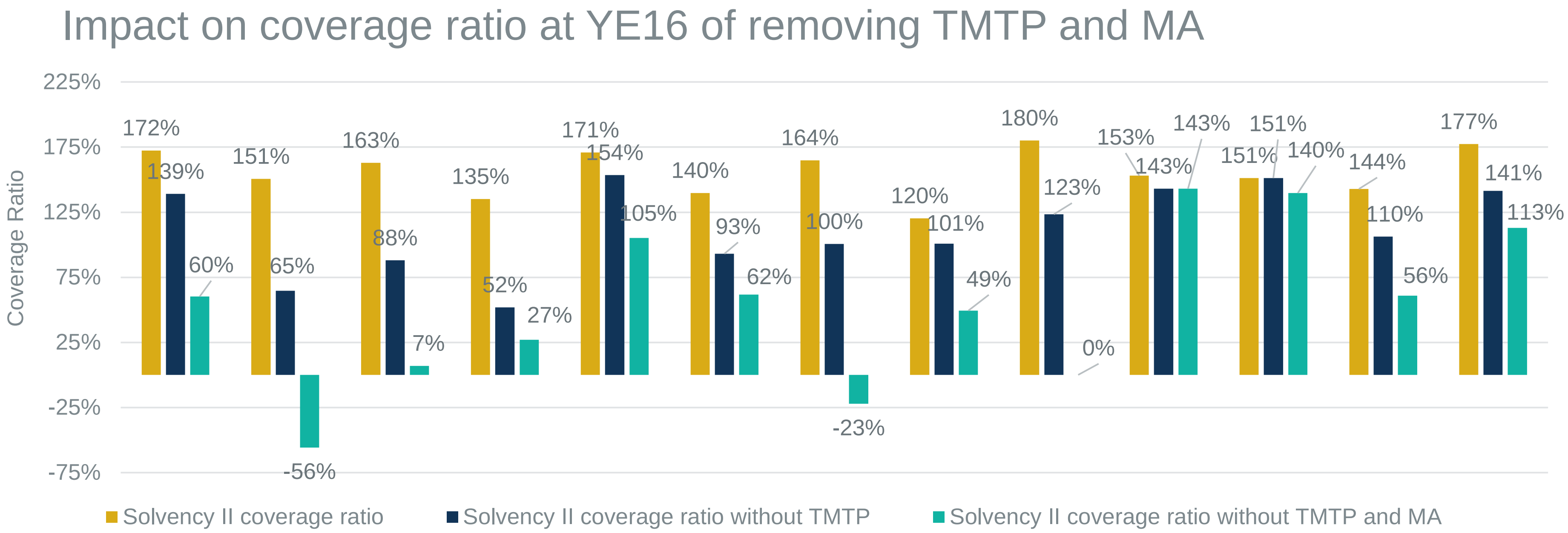
The TMTP: helpful…



Source: Analysis based on S22.01 QRT from selected YE16 SFCRs

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…but painful

2 year recalculation

Solvency I Pillar 1 and Pillar 2?

What about ICG?

2 different matching adjustments?

Full recalculation of ICA?

Double run-off

TMTP policy

TMTP for business planning

Use IF at 1/1/16 or valuation date?

What if I'm Part VII-ing?

What are my recalc triggers?

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Survey of different approaches taken

- Survey performed of all UK insurers with an approved recalculation
- Performed during the first quarter of this year
- 12 simple questions covering a variety of technical, governance and process topics

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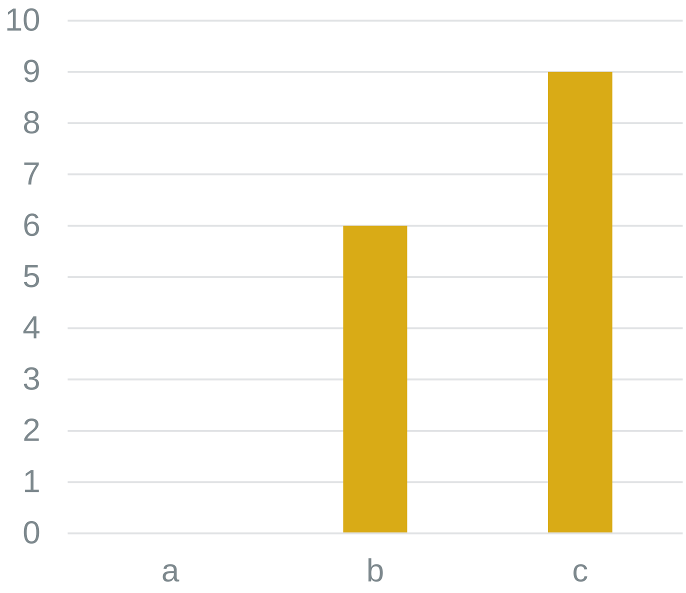
Overall approach

Are you recalculating (even if doing so using approximations)

a) Solvency I Pillar 1

b) Solvency I Pillar 2

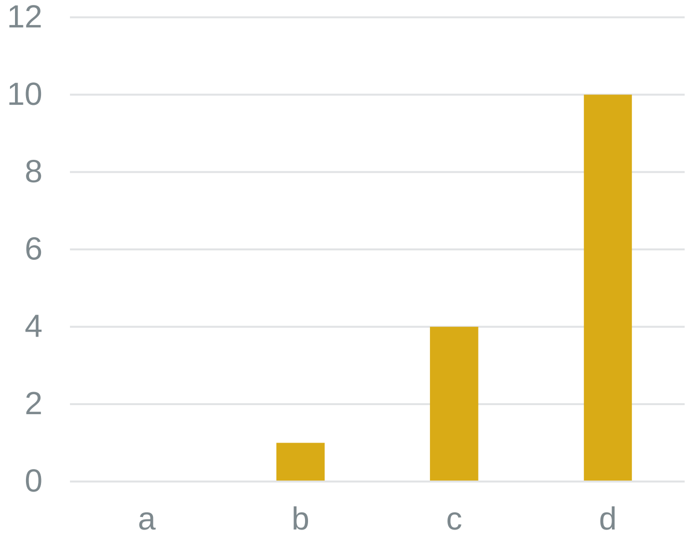
c) Solvency I Pillar 1 and Pillar 2?



- Some companies not calculating Solvency I Pillar 1 – appeared to be due to headroom
- The size or type of company was not a clear indicator of approach

Liabilities

How would you describe your overall approach to the unrestricted TMTP recalculation?
a) Calculate only the change in risk margin (i.e. assuming TMTP is effectively only the risk margin)
b) Calculate changes to TMTP based on approximations of changes to factors that make up components of TMTP (i.e. more than just the risk margin)
c) Estimate the TMTP by fully recalculating main component of TMTP
d) Full recalculation of both Solvency I and Solvency II liabilities



- Most perform a full recalculation of Solvency I liabilities.
- Of the five who perform some form of approximation, three of these only consider Pillar 2.
- Approximations are typically performed by the larger companies.

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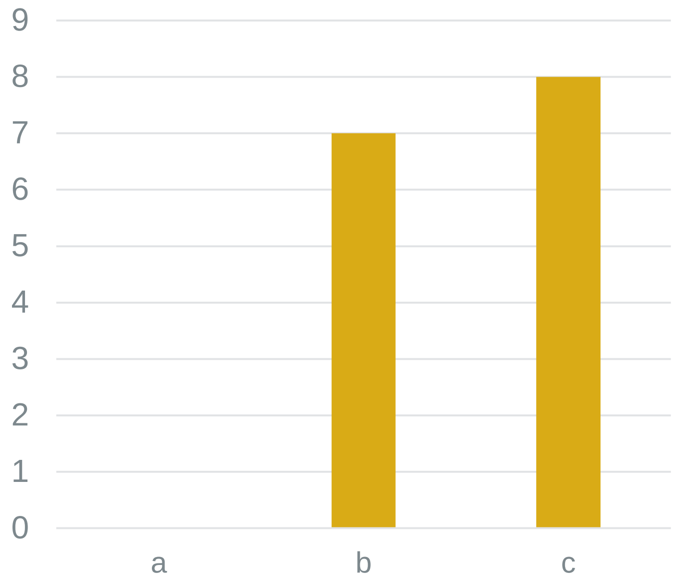
Capital requirements for FRR test

How would you describe your overall approach to the FRR test / restricted TMTP recalculation:

a) Ignore the FRR test

b) Estimate the changes in ICA / LTICR and RCR

c) Full recalculation of the ICA / LTICR and RCR



- More approximations for capital requirements than for liabilities.
- Of the 6 companies who only calculate Pillar 2, it was a 50:50 split between estimation and full recalculation of the capital requirement.
- Estimates mainly used by larger / more complex companies. Although a couple of the larger companies are performing full recalculations.

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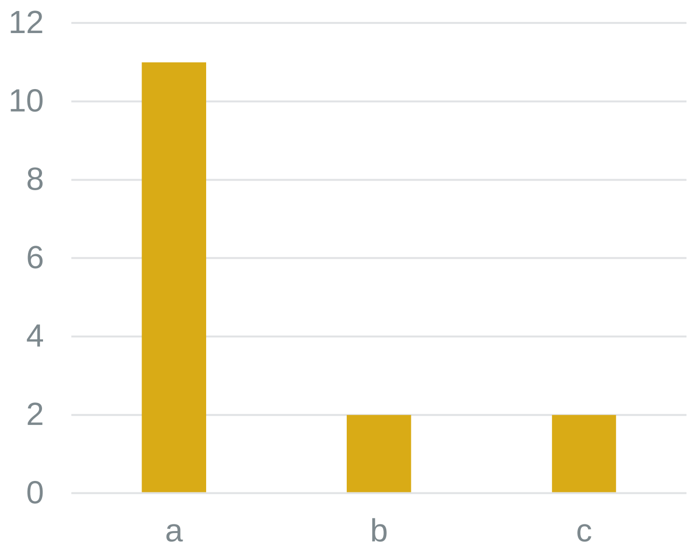
Risk Margin

Are you using any approximations when you recalculate the risk margin for pre 1/1/16 business?

a) Fully recalculated

b) Assuming changes only in key SCR capital amounts (e.g. longevity, lapse) – modelled fully

c) Assuming changes only in key SCR capital amounts (e.g. longevity, lapse) – estimated



- Of those who fully recalculated risk margin:
  - 7 separate using the ‘new’ and ‘old’ data points
  - Two approximate the risk margin for post 1/1/16 business (e.g. using business volume or BEL)
  - Two have no material new business
- Of the four companies who use approximations, three of these are large companies providing a wide range of products.

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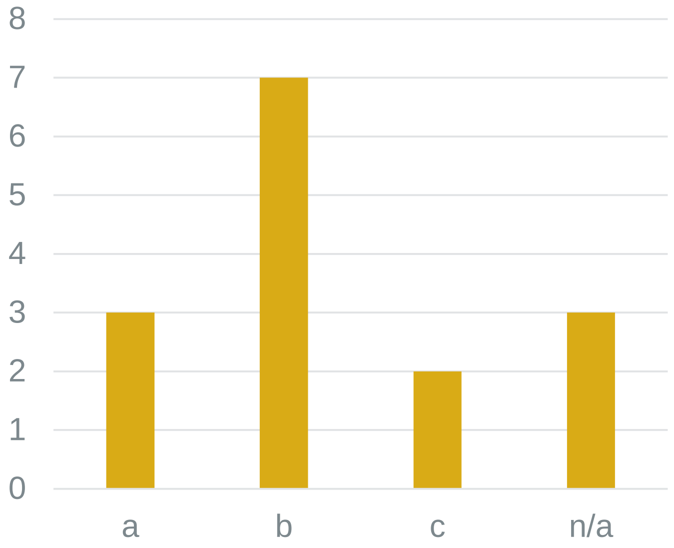
Yield curves – MA and LP

Are you using any approximations when you recalculate the difference between Solvency II matching adjustment and ICA liquidity premium?

a) Using a fixed bps difference calculated at 1/1/16 (and adjusting only if triggers are breached)

b) Updating the LP and MA calculation at the valuation date

c) Other



- The majority of companies fully update both LP and MA at the valuation date.
- The three companies who use the fixed bps approach are not all large companies.
- However, two of the larger companies have devised a different option, which can be categorised as scaling approaches.

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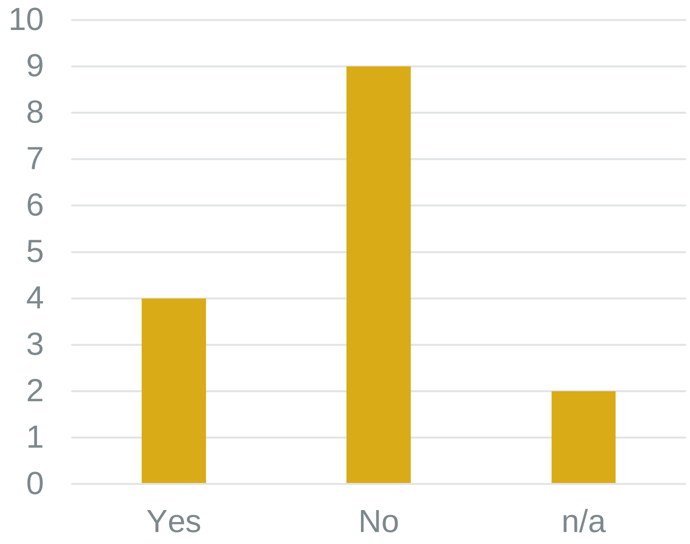
Solvency II SCR for FRR test

Do you use the Solvency II SCR for all business (i.e. not just that in-force as at 1/1/16)?



- Four companies performed the FRR test at the level of the whole book, rather than trying to calculate a SCR (and ICA / LTICR / RCR) for only the pre-1/1/16 business.
- Nine of the remaining attempted to split this out – 5 using some type of approximation such as scaling to derive SCR attributable to pre-1/1/16 business or simply deducting SCR attributable to new business sold since 1/1/16 from the total SCR.

Reminder: this was pre the PRA's PS11/17 and subsequent update to SS6/16

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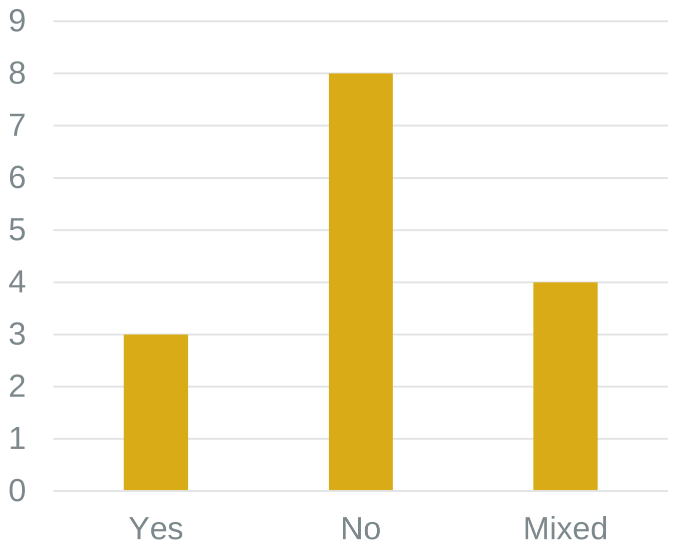
Pillar 2 capital requirements for FRR test

Do you assume Solvency I Pillar 2 capital requirement is a scalar from the Solvency II SCR, set as at 1/1/16 and only changed if triggers are breached?



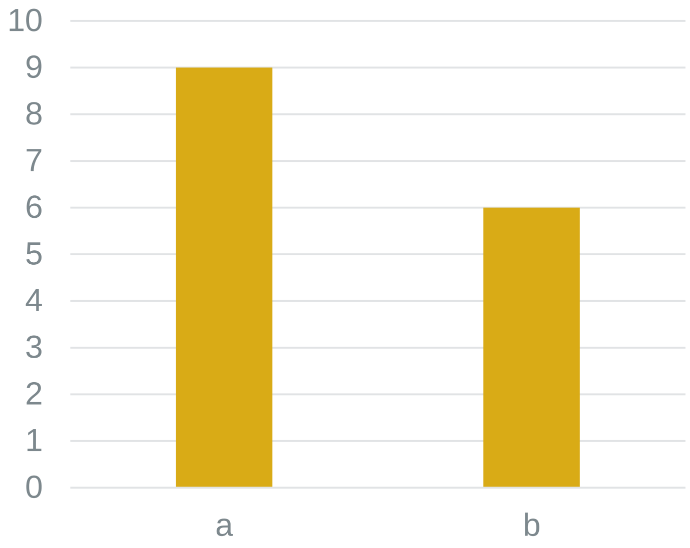
- Maintaining the ICA capital requirement is a significant task and many opted for simplifications initially.
- However, most companies have chosen to fully recalculate the ICA capital requirement.
- Of the remaining, 4 have used a mixed approach – fully recalculating some risks and using scalars for others.
- The remaining three companies using pure scaling approaches, at risk or product level

Double run-off

How are you ensuring that you don't allow for the so-called 'double run off'

a) Calculate the new TMTP using in-force at valuation date and 'gross up' (new TMTP at 1/1/16 = TMTP at valuation date N * (16/(2032 – N)). Then apply the 1/16th linear deduction to the valuation date.

b) Calculate the new transitional using in-force at 31/12/15 and apply 1/16th run off to this.



- Most companies are using the option of using the actual run-off to the recalculation date and then grossing-up to reach the appropriate new 1/1/16 equivalent transitional.
- Although option a) implied a linear gross up, three companies use other factors such as policy count or BEL.
- The remaining 6 companies are using the in-force data as at 31/12/15 and simply apply the 1/16th run off to this.

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Run-off of TMTP

Are you allowing for / planning to allow for the run-off of the transitional

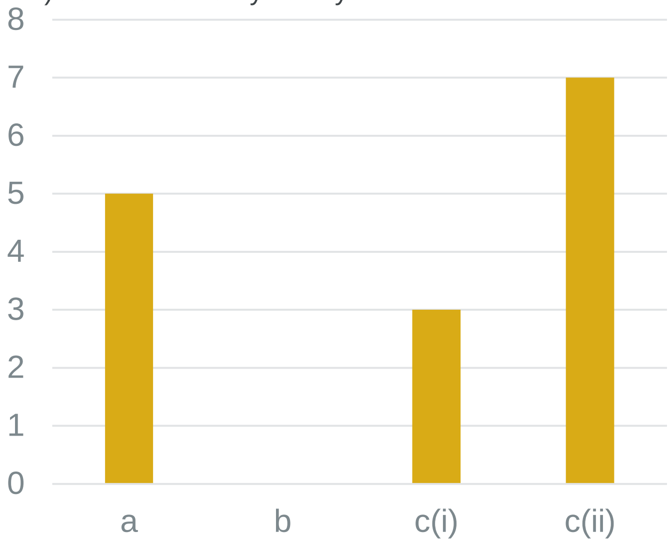
a) in your quarterly results (i.e. 1/64th)

b) only in your half-yearly results (i.e. 1/32nd)

c) in your annual results

i) as at 31st December each year

ii) as at 1st January each year



- Only 7 companies apply the run-off annually as at 1st January each year.
- Eight companies apply the run-off at the end of the preceding year and five of these allow for quarterly run-off in their quarterly QRTs.

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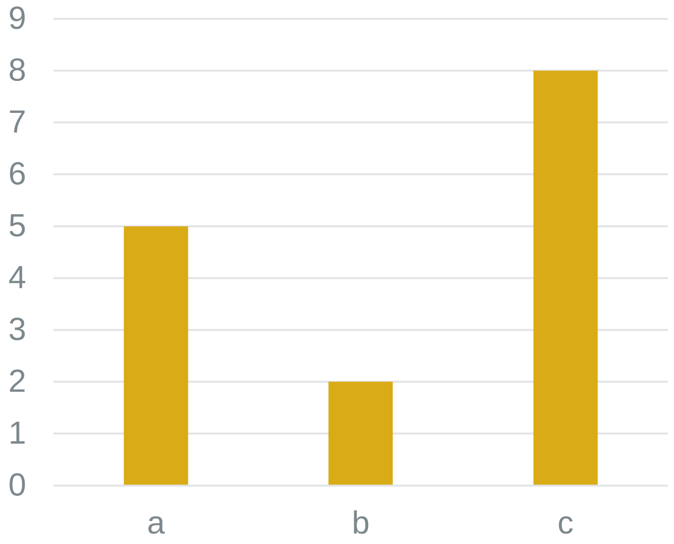
Basis for newly acquired business

How do you intend to treat new business that is acquired (e.g. by Part VII transfer):

a) Move the business onto our Solvency I methodology and basis and recalculate the transitional and apply the run off

b) Keep the acquired business's methodology and basis and run it off separately

c) Not applicable



- The responses depended on the materiality of the acquired business
- Approach b) has the issue of sustainability of keeping assets separate (and potential merge of assets in future), after Part VII transfer.

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Risk appetite framework

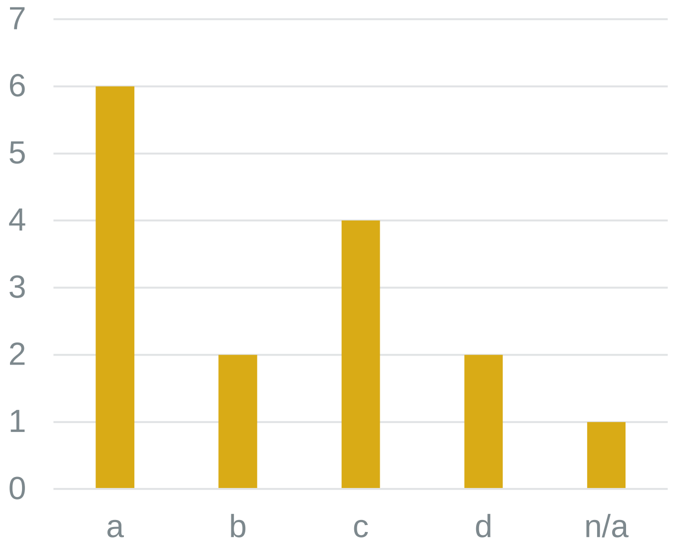
Have you considered changing your risk appetite limits due to the existence of the TMTP?

a) Considered and implemented for Group and solo capital appetite limits

b) Considered and implemented for Group, solo and individual risk capital appetite limits

c) Considered, but not yet implemented

d) Not yet considered



- Mixture of responses shows that this is something that companies were thinking about, but not always formulated in the mind

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Recalculation of TMTP – disclosure at HY17

HY17	Aviva	L&G	Prudential	Phoenix	Standard Life	Royal London	PIC	Just Group
Allow for HY17 recalc for market changes	✓	✓	✓	✓	×	×	×	×
Allow amortisation of half year	✓	✓	✓	×	×	×	n/d	✓
Included disclosure of run off of TMTP	×	×	×	×	×	×	×	×
Stated size of TMTP	×	×	✓ (£2.1bn)	×	×	✓ (9%)	×	×
Stated impact of HY17 recalc	✓ (£0.5bn)	✓ (£0.2bn)	✓ (£0.7bn)	×	×	×	✓ (marginal)	✓ (£63m or 5%)

YE16	Aviva	L&G	Prudential	Phoenix	Standard Life	Royal London	PIC	Just Group
Allow for YE16 recalc for market changes	✓	✓	✓	✓	✓	×	×	×
Allow amortisation of one year	✓	✓	✓	✓	✓	n/d	n/d	✓
Included disclosure of run off of TMTP	×	×	✓	✓	✓	×	×	×
Stated size of TMTP	×	×	✓ (£2.5bn)	✓ (£1.9bn)	✓ (£1.5bn)	✓ (10%)	×	×
Stated impact of YE16 recalc	✓ (£0.4bn)	×	✓ (£0.4bn)	✓ (£0.3bn)	×	×	×	✓ (2-3%)

Source: Analysis based on public market disclosures of companies

Summary

- A fair amount of inconsistency in approaches to recalculation methodology
- Fewer approximations used than were originally expected – largely due to internal pressure given the materiality of the TMTP
- Still a number of areas where thoughts were developing and changing
- These were based on recalcs that were c. 6 months in to Solvency II – a recalc that is 6 years, say, into Solvency II will likely be different
- These can be big numbers which impact the balance sheet significantly. Keeping on top of developments (regulatory or market practice) is key.

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TMTP from a CRO's perspective

David Harrison

From a risk angle…..
…painful!!

Key concerns for the Risk Function:

- Potential dis-incentive to take positive Risk Management actions
  - Management actions decided on a ‘post TMTP’ impact basis – eg MA allocation
  - Business managed on a S1 basis!
- Uncertain (re)-valuation
  - Not audited, approximations taken for Solvency I
  - Movement under stress dependent on PRA approval
- Operationally onerous
  - Now 3 solvency bases (plus various others….)
- Scarcity of data
  - Key issue for acquisitive business
- Illiquid

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Risk Management Framework & Appetite

Key areas TMTP should be considered:

- Capital Management Buffer
- Stress testing & forward looking assessment
- Interest Rate Hedging & risk limits
- Regulatory risk
- Operational risk

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Capital Management Buffer

"Transitional Measures are a legitimate part of the regime….do not distort the solvency reality"

"…the transitional asset created by TDTP will qualify as Tier 1 capital"

- However, TMTP (re)valuation is:
  - subject to PRA approval
  - reliant on S1 processes & assumptions, possibly including approximations
  - 'un-smooth'; P1 v P2 cap / interest rate sensitivity

…..not quite as nice as cash!

- CMB should consider extent firm is happy to rely on TMTP, given above

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Stress testing & Forward looking assessment

Stress tests

- Difficult !!
- Recalculation subject to PRA approval
- ‘principles based’ (eg move in line with risk margin) can be very wrong
  - need a bigger envelope !!
- Full balance sheet recalculation on all bases very onerous, but….

The firm must have an understanding of how the balance sheet moves under stress

Stress testing & Forward looking assessment

Forward looking assessment

- Project run off of TMTP
- Full balance sheet projection on all bases (!?)
- Need to consider liquidity for future dividend capacity
- Impact on future interest rate hedging
- Forward looking stress tests……!?

Interest rate hedging

- TMTP is interest rate sensitive and hence should be considered in the hedging strategy.
- TMTP *should* have a similar DV01 to Risk Margin – but this may not be the case! (eg impact of ICG on P2 basis)

A possible hedging strategy:

Interest rate hedging

Helpful….

- Using TMTP rather than derivatives useful to avoid accounting volatility
- Avoid liquidity restrictions of derivatives
- Difficult to get required duration from bonds

..but painful!

- TMTP interest sensitivity is not smooth or easy to predict
- Recalculation onerous and subject to PRA approval
- Ignoring TMTP could end up being ‘over hedged’.
- TMTP are temporary! Therefore need to rebalance hedges in line with run-off.

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Regulatory risk

- Recalculation subject to approval
- Each element of FRR test subject to PRA approval
- ICA / ICG review
- Brexit !!!! – Risk Margin changes?

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Acquisitions

Helpful – key source of capital!

Painful……

- Increasing scarcity of data
  - Target may not maintain S1 P1 & P2 information
- Due diligence assessment
  - accessing data on all bases, understanding impact on existing company of P1 v P2 position.
  - Increased risk of mis-estimate final balance sheet position
- Combination of bases
  - Shifting target ICA / S1 assumptions
- Operational impacts

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Conclusion

- helpful, but painful!

- Care should be taken to ensure use of TMTP are driving appropriate risk behaviours.
- Reduction in TMTP reliance should be its own reward

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Questions

Comments

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