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Risk and Investment Conference Brighton: 18 June 2013 So how do you do Risk Appetite for With-Profits?

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Three key questions

1 What is risk appetite?

2 Why is it harder to do for a with-profits fund?

3 How can this nut be cracked for a with-profits fund?

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Risk appetite within a wider ERM framework

Requirements for optimal Risk Appetite framework

- Link with business and risk strategy (feedback cycle).
- Clearly articulated to provide assurance and guidance to stakeholders.
- Support allocation of resources (capital, people, risk versus reward)., and monitoring of risk profile
- Helps to shape the risk culture of the Group.
- Stable, yet flexible to adopt to changes in risk profile or external environment.

Design challenges

- No standard definition of Risk Appetite in any regulatory guidance, yet integral part of ERM requirements.
- Sufficiently high-level to ensure consistent measurement and guidance to the Board and external stakeholders (oversight).
- Sufficiently granular to provide guidance in decision-making and assurance to management.
- Reporting: Simplicity in high-lighting areas of concern, while providing sufficient assurance on areas within tolerances.
- Roles and responsibilities: Subject to maturity of enterprise's risk management framework – combining financial and operational risk.
- ORSA: Forward-looking perspective (Recovery & Resolution Planning)
- No 'one size fits all' – pragmatic, flexible solutions for all parts of the enterprise.

Strategy and business plans
(corporate and risk strategy, including the risk preferences of the corporate and longer-term goals)

Provide context for stakeholders (external and internal)

More detailed quantitative and qualitative levels

Reporting and decision making throughout the enterprise aligned

Limits and thresholds; Embedding to guide decision-making

Risk MI and wider ERM framework
(link with wider ERM, including ORSA)

What is risk appetite?

Qualitative Examples

- We do not want longevity risk
- We take on credit risk as it is rewarded
- We accept and manage interest rate risk
- These risks (…) we hedge out to the maximum extent
- These risks (…) we do not hedge out

Can apply easily for a WPF

Quantitative Examples

- We wish to maintain a AAA rating
- We want the ICA/SCR to be covered 150%
- We want to cope with a 1 in 500 event
- We want to cope with a 1 in 10 event and still cover ICA/SCR 100%

Can apply to a WPF but there is more to it for a WPF

Why is it harder to do for a with-profits fund?

Essentially because there are so many aspects which can change or be changed:

Investment mix backing asset shares

Investment mix backing guaranteed liabilities

Investment mix backing capital requirements

Investment mix backing excess assets

- Management actions and decision rules in cost of guarantee liabilities
- Overriding or additional management actions in stress scenarios
- Speed of estate distribution (if any)
- Support from outside of the with-profits fund (if applicable)

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Self-supporting and capital support

If for WPF: [Assets] – [Liabilities] – [(100+X)%ICA] > 0 = WPF self-supporting

If for WPF: [Assets] – [Liabilities] – [(100+X)%ICA] < 0 = WPF not self-supporting

Very common requirement:

WPF must be ICA **self-supporting.** X = 0 often for this purpose. X>0 sometimes.

Shareholder will often require action if WPF not self-supporting

Capital Support Arrangements: Common modification: No action needed if deficit < CSA

Note:
Regulations require a contingent loan of assets into WPF if liabilities not covered.
Does **not** apply to capital requirements.

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Burn through

Question	Answer
When is a WPF really insolvent?	• When all terminal bonuses have been reduced to zero • And all estate has been exhausted • And it is necessary for the shareholder to inject money permanently into the WPF to pay guaranteed benefits

THIS IS KNOWN AS BURN THROUGH

TCF

- Normally pay 100% asset share (or more if estate being distributed)
- But legal position is as above

- **Common component of a WPF Risk Appetite: Monitor/ Minimise Burn Through**
- Often qualified in £V calculations for 90/10 funds
- Not often quantified for closed 100/0 funds

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Summary so far …

Most risk appetite statements for a WPF will include:

- Manage the fund so that it covers its own capital requirement for RBS/ICA/EC/SLR etc.
- Or to within any agreed capital support arrangement outside of the fund
- Manage/minimise burn through risk

But where do you from here?

WPF risk appetite – more detailed level

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First step – a clear segmented ALM approach

Balance sheet component	Inserted in ….
Asset shares	• Need rule/ framework to set EBR – equities (and property) • Need rule/ framework to set CBR – credit (versus gilts)
Cost of guarantees	Gilts? Credit? Matched by term? Negative equity hedge? Use of derivatives?
Other long term liabilities	Depends on nature of liabilities
Current liabilities	Cash, short gilts?
RCM/ ICA/SCR	Gilts? Credit? Cash? Short Term? Short term?
Excess assets	• As per RCM/ICA/SCR? • Or different?
Total assets	**As per the above**

Many funds have something along these lines – not that hard to do in practice

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Next step – apply extensive stress and scenario tests on the balance sheet

Apply stress tests on the entire fund and evaluate impact on the working capital / estate

Or impact speed of estate distribution

Total balance sheet approach

Can apply RCM tests, ICA tests, EC tests
Both stresses and scenarios

Important to apply in both directions

- equities up and down
- interest rates up, down and twists
- Credit spreads up and down
- Property up and down
- Actual credit events

With and without derivatives

Management actions are key for adverse stresses

This will flush out what really hurts the fund, and/or severity of management actions needed

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Realistic balance sheet – basic projections

Realistic value of assets of fund

	Line	YE 2012 0	End of Year 1	2	3
Regulatory value of assets	11	1,020,000	849,218	731,861	674,465
PV of NP business	22	100,000	90,000	81,000	72,900
Realistic value of assets	26	1,120,000	939,218	812,861	747,365

Realistic value of liabilities of fund

	Line	YE 2012 0	End of Year 1	2	3
Asset Shares	31 + 32	788,284	628,733	517,009	462,623
Cost of Guarantees	41+43	138,470	121,972	107,557	102,401
Other liabilities	47	7,000	5,427	4,347	3,799
Current liabilities	51	-	-	-	-
Realistic value of liabilities	**59**	933,754	756,131	628,913	568,823

Risk Capital Margin (RCM) Components

	Line	YE 2012 0	End of Year 1	2	3
RCM	65	70,004	55,820	45,890	41,055
Realistic excess capital	66	116,242	127,267	138,058	137,487
Realistic excess available capital	67	116,242	127,267	138,058	137,487
Working capital / Estate	68	186,246	183,087	183,948	178,541

ICA

	Line	YE 2012 0	End of Year 1	2	3
Assets net of current liabilities		1,120,000	939,218	812,861	747,365
Liabilities (excl. current liabilities)		933,754	756,131	628,913	568,823
Available capital / Working capital / Estate	68	186,246	183,087	183,948	178,541
ICA including ICG		63,250	52,072	44,218	40,349
Excess assets		122,995	131,015	139,730	138,193

- **Being able to project the balance sheet and capital requirements is a key need**
- **Many funds now able to do basic projections via run off planning**

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Possible next step – clever projections

Project balance sheet stochastically

Project capital requirements stochastically

Define complex criteria, e.g. self-supporting on 1 in 200 ICA following a 1 in 10 actual shock

Some sophisticated companies do this

But is this level of sophistication really necessary?

Assumed management actions in severe stress scenarios

Two schools of thought. Both need Board buy-in and consideration of TCF.

A RESTRICTIVE APPROACH	Pros/Cons
• Build management actions into stress cases according to normal base case decision rules • No overriding or additional management actions in severe (1 in 200) stress	• Easier to get agreed by Board • Maybe less regulator pushback • But does not display true strength of fund • Could lead to adverse actual actions

B PERMISSIVE APPROACH	Consequences
• Allow for reasonable overriding or additional management actions in severe (1 in 200) stresses • Such as: RB=0, remove past estate distributions, cancel smoothing, change EBR etc	• Sometimes more difficult to get agreed – but by no means always • Demonstrate the true strength of the fund more realistically • Better enables fund to be managed as wished for

So, overall …

Do all this and you’ll know very clearly what your risk appetite is.

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Aegon Case Study: Background

- ✓ Key component of Enterprise Risk Management Framework
- ✓ Core aim is to establish the organisation's tolerance for risk and assist in the management in carrying out Aegon's strategy
- ✓ Includes limits and actions to hold the business to account
- ✓ In line with Aegon Group we have risk tolerance statements on:

Fund structure:
- Non-profit subfund and shareholder fund
- 100:0 With-profit subfund

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Aegon Case Study: Adopting the Non-profit subfund approach to with-profits?

1) <u>Financial Strength – Capital Buffer Targeted</u>
- Set equal to withstanding a preset shock event to agreed strength (1 in 10 year event or 90th percentile confidence)
- Set for Pillar 1 and Pillar 2 in £'s or coverage ratio
- Dynamic buffer methodology

2) <u>Risk Balance – Setting limits for more granular risk types</u>
- Ensures concentration of risks is well managed
- Promotes risk diversification

Risk Strategy Statement	Level 1 Risk Type	Level 2 Risk Type	Target ERC Level	Blue Range (Opportunity)	Green Range	Amber Range	Red Range
Desirable up to reasonable and manageable levels	Investment and Counterparty Risk	Fixed Income	200	0 - 150	151 - 180	181 - 250	251+
		Equity	150	0 - 100	101 - 130	131 - 180	181+
		Alternative	20	0 - 15	16 - 19	20 - 25	26+
		Counterparty	10	0 - 5	6 - 9	10 - 15	16+
		Equity Vol	5	0 - 2	3 - 4	5 - 8	9+
Aegon UK does not seek to gain from 'targeted mismatching'	Mismatch Risk	Interest Rate	200	0 - 150	151 - 180	181 - 250	251+
		Int Rate Vol	150	0 - 100	101 - 130	131 - 180	181+
		Currency	20	0 - 15	16 - 19	20 - 25	26+
Desirable	Underwriting Risk	Mortality P	200	0 - 150	151 - 180	181 - 250	251+
		Mortality C	150	0 - 100	101 - 130	131 - 180	181+
		Morbidity P	20	0 - 15	16 - 19	20 - 25	26+
		Morbidity C	10	0 - 5	6 - 9	10 - 15	16+
		Lapse P	5	0 - 2	3 - 4	5 - 8	9+
		Lapse C	200	0 - 150	151 - 180	181 - 250	251+
		P&C u/w	150	0 - 100	101 - 130	131 - 180	181+
		P&C cat	20	0 - 15	16 - 19	20 - 25	26+
		Expense	10	0 - 5	6 - 9	10 - 15	16+
Aegon UK seeks to maintain operational risk to acceptable levels	Operational Risk	Op. Risk	200	0 - 150	151 - 180	181 - 250	251+

Apply to with-profits subfund

- ✖ Does not directly relate to the capital management of the WPSF
- ✖ Does not handle run-off of a WPSF
- ✖ Allowance for Management actions unclear
- ✖ In reality constrained by PPFM

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Aegon Case Study: Defining approach for with-profit subfund

Step 1 – set overall statement

We aim to actively manage the with-profits subfund in such a way as to achieve a stable run-off of the fund, managing customer and shareholder interests equitably

Step 2 – understanding the risks in the fund

Series of stress and scenario testing under different bases, including future projections. Consider keep guarantees and other 'pinch points'

Step 3 – linking to fund management

3i Outline regular management actions

Quarterly: Review TB Rates
Annual: Annual estate distribution

3iii Map severity of management action to assessment of tolerance

- Maintaining business within tolerance
- Monitoring mechanism
- Clear and concise

3ii Set out further management actions and apply grouping

Group A	Stop future estate distributions Reduce Regular Bonuses to 0
Group B	Remove some/all past estate distributions Reduce EBRs (to 0) Investment switching to gilts
Group C	Reduce payments below 100% asset share
Group D	Burn-through to s/h

severity

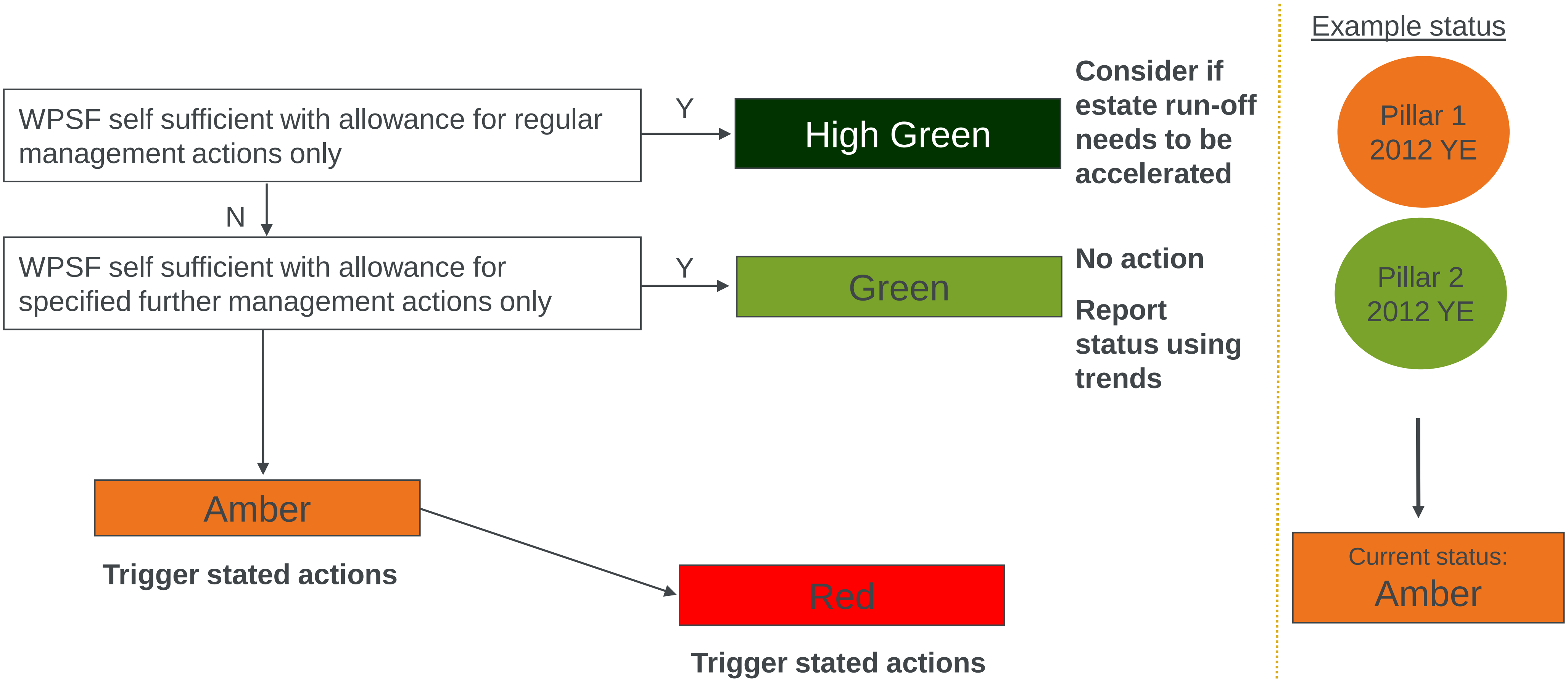
Aegon Case Study: Monitoring definitions

	Definition	*Action triggered*
Green	WPF can meet all regulatory capital requirements. Regular management actions allowed for Group A - Stop future distributions of the estate.	• No specific action
Amber	New management actions have started to be implemented Group A (1 & 2) and Group B Management Actions	• WPA to report to Governance • Risk Reporting • TCF
Red	More significant management actions have started to be implemented in practice Group C and Group D Management Actions	• WPA to report to Governance including Board • Regulator engagement? • Capital funding / TCF?

Test RAG status for Pillar 1 and Pillar 2. The lower RAG status takes precedence

All subject to on-going judgement

Aegon Case Study: Monitoring against Risk Tolerance



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Aegon Case Study: Proceed with caution

Not setting the high level ‘self- supporting’ statements first

Following the approach for non-profit business

Overly complex tolerance Limits not mapped to how fund is truly managed

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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 presenters.

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