February 2021

Solvency II Review: The impact

The following numbers have been calculated to illustrate the potential impact on the insurance industry of EIOPA's proposals on the 2020 Review.

Results

#	Impact of	Impact
The impact of EIOPA proposals on capital and volatility…		
1.	EIOPA proposals on EEA surplus own funds	-€60bn
2.1	EIOPA proposals on aggregate industry SCR ratio	-20%
2.2	EIOPA proposals on Life and Composite SCR ratio	-35%
3.1	High market volatility (similar to spread movements in 2009) on aggregate EEA SCR ratio and Own Funds under current regulation	-50% points = -€300bn
3.2	High market volatility on aggregate EEA SCR ratio and Own Funds with EIOPA proposals	-75% points =- €480bn
3.3	High market volatility on Life Business SCR ratio under current regulation	-90% points
3.4	High market volatility on Life Business SCR ratio with EIOPA proposals	-130% points
Negative impacts of EIOPA's proposals on customers and investment		
4.	Extra charges to consumers (needed if insurers were to raise new capital to cover the loss of Own Funds resulting from EIOPA proposals).	€7bn- €13bn per annum
5.	De-risking: Reduction in equity needed to offset the loss in own funds arising from EIOPA proposals	€170bn
6.	De-risking: Reduction in corporate bonds (BBB-rated) needed to offset the loss in Own Funds arising from EIOPA proposals	€680bn
Benefits of getting the capital right…		
7	The amount of additional equity investments insurers could make with every extra €1 of capital	€1.7 €3.4 if f long-term equity category works
8	The amount of additional green bond type investments insurers could make with every extra €1 of capital	€6 €9 if DVA is extended to SF
9	The amount of additional windstorm underwriting insurers could make with every extra €1 of capital	€1000

Annex: Supporting calculations – explanation and methodology

Notes

Within the calculations, we have tended to use prudent assumptions. We have also validated the approach by modelling the impact Q1 2020 and we derive number broadly consistent with those reported by EIOPA.

Red ink gives source of data

Key assumptions

- UK market is excluded from analysis.
- Extrapolation mechanism is not modelled.
- IRR transition period is also ignored.

This document (along with further details on the calculations in the spreadsheet below) covers the numbers relating to rows 1 to 6 in the table above.

2020 Review impact numbers_final.xlsx

The documents below cover the numbers in rows 7 to 9 in the table above

Risk margin_increasing ris

Methodology for risk margin calculations.px

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1. Impact of EIOPA proposals on EEA surplus own funds = €62bn

The approach is as follows

1) Derive the SCR and OF of the EIOPA sample
2) Use 68% of TP as scale factor for life business and 45% of GWP as scale factor for non-life (provided in EIOPA Impact Assessment)
3) Multiple impacts provided by EIOPA by scale factors
4) Add the impact of the Enhanced Prudency Principle for the DVA

CIR		
45%	Non-life	
68%	Life TP	
Sample	**Partial**	**Total**
Total	**-21**	**-40**
Life	-24	-43
NL	3	3
Market	-29	- 57
Enhanced PP - DVA		-5
	Total	**- 62**

2. Impact of EIOPA proposals on aggregate industry SCR ratio

1) For Aggregate EEA, the scaled impact on SCR and OF is transposed to the EEA-market SCR (ex UK).
2) For Life and Composite, the impact on SCR ratio at EEA level is assumed to be the same as the sample.
3) It ignores the impact of the extrapolation implementation mechanism

Aggregate EEA

- Impact is -20% points

EEA-MARKET		
Scaled using TP/GWP		
All		
	Base case	EIOPA prop
SCR	609	660
OF	1 468	1 457
SCR ratio	241%	221%
Delta		-20%

Life & composite market

- Impact is -35% points

Life insurance and composite insurance undertakings			
	Base case	Scenario 1	Scenario 2
SCR ratio	223%	188%	206%
Change of surplus in excess of SCR	/	-43 bn	-23 bn
Change of SCR	/	+30 bn	+11 bn
Change of own funds	/	-13 bn	-12 bn

3. Impact of high market volatility on SCR ratios under current regulation and with EIOPA's proposals

Aggregate EEA

Approach used is to calculate the SCR ratio after stress by modelling the changes to the TPs (ie impact of VA) and the changes in the asset values from the spread stress. This gives the change in the Own Funds under stress which is used to calculate the stressed SCR ratio.

The impacts are calculated based on the EIOPA sample and then scaled to the total market using the % of technical provisions as a scalar.

Rounded	Impacts	
	%SCR	€bn
Base case to EIOPA proposal	-20%	60
Base case_volatility	-50%	300
EIOPA volatility	-75%	480

Approach to modelling the spread stress

1) The scenario is based on the March-2009 credit spreads
2) We calculate 2 scenarios

a. The impact on the baseline (ie no change to S2)
b. The impact on EIOPA proposals

3) The impact of the spread movements are modelled on the TPs and assets.
4) For TPs, the key assumptions are
   a. Duration of liabilities = 8 years (based on analysis of LTG report)
   b. % of liabs exposed to VA = 79% (LTG Report 2020)
   c. 22% of liabilities are unit/index-linked (EIOPA statistics)
5) For assets, the key assumptions are
   a. Total asset value = Technical provisions + Own Funds
   b. 72% are fixed income (EIOPA EU reference portfolio)
   c. Average duration of 7.3 years (EIOPA illiquid liabilities Report)
6) The stressed OF are then calculated and used to calculate the impact on the SCR ratio and the €bn value

Life & composite market

Rounded	Impacts	These are the outputs for the presentation
	%SCR	
Base case to EIOPA proposal	-35%	
Base case_volatility	-90%	
EIOPA volatility	-130%	

1) For the life market, a consistent approach to the above is used with some different assumptions
   a. Duration of liabs = 9 years (based on analysis of LTG report)
   b. Duration of assets = 8.3 years (EIOPA illiquid liabilities Report)
   c. 25% of life liabilities are unit-linked or index-linked (EIOPA statistics)

No scaling of the impact is undertaken for the Life market - the percentages shown are based on the EIOPA sample.

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4. Extra charges to consumers = €6bn-€12bn

1) Calculate the additional OF needed to re-establish a 241% SCR ratio after the impact of EIOPA's changes (€134bn)
2) Assume 5% to 10% cost of capital for insurance industry and multiple.

Impact on consumers						
	Baseline	EIOPA prop (scal	Reset SCR ratio	Addn capital needed to	Assumed CoC	
					5%	10%
SCR	609	660	660			
EoF	1468	1 457	1 591			
SCR ratio	241%	221%	241%	134	**7**	**13**

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5. De-risking: Reduction in equity needed to offset the negative impact of EIOPA proposals = €170bn

General approach is to set up a market model using EIOPA data and standard formula. Then calibrate the model to be consistent with the industry capital position at 30/6/2020.

Another model is then set up to model the impact of EIOPA proposals. The calculations then answer the question*: How much we need to reduce Equity SCR / Spread SCR by to get back to the aggregate solvency ratio before the EIOPA changes (=241%)?*

The reduction in undiversified SCR is then transformed into the exposure value via the standard risk charges.

Steps

1) Simplified industry capital model is based on standard formula
2) Baseline uses risk distributions from QIS5 and EIOPA summary statistics document to distribute the capital among risk submodules
3) EIOPA proposal adjusts the baseline for the proposals by
    a. Adding €28bn to IRR SCR
    b. Adding €5bn to spread risk (for DVA)
    c. Scaling the non-market risks to ensure the correct capitalisation is reached
    d. Using the updated aggregation matrix (change in Spread vs IRR down)
4) Copies of the EIOPA proposal are then backsolved to assess how much the undiversified SCR for equity would need to be reduced by to achieve a 241% SCR ratio.
5) The undiversified SCR is then divided by the Type 1 equity risk charge of 39%.

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6. De-risking: Reduction in corporate bonds (BBB-rated) needed to offset the negative capital impact of EIOPA proposals = €680bn

1) As per equity calculations above but with spread risk backsolved
2) 12% risk charge applied which is based on BBB-rated bonds.