BANK OF ENGLAND
PRUDENTIAL REGULATION AUTHORITY

Instructions to firms when completing the market risk sensitivities data item

Section	Please provide the following:
Section 1: Balance sheet data	Total assets, best estimate liability (BEL), risk margin, transitional measure on technical provisions (TMTP) and any caps to the TMTP benefit, other liabilities, excess assets over liabilities, adjustments to Own Funds, Own funds after TMTP, Solvency Capital Requirement (SCR) and capital surplus. Provide a brief description for other liabilities and adjustments to Own Funds in a separate document. For some of the above balance sheet components, use the following calculation conventions: • Other liabilities should be calculated as total liabilities less BEL less risk margin less TMTP post cap. • Excess assets over liabilities should be calculated total assets less total liabilities. • Adjustments to Own Funds should be calculated as Own Funds after TMTP less excess assets over liabilities. • Capital surplus should be calculated as Own Funds after TMTP less SCR. Balance sheet data for A, B and C are provided to allow for any TMTP. • 'Balance sheet A' should show the valuation date position (eg 31 December 2017), including the TMTP currently approved. • 'Balance sheet B' should show valuation date position (eg 31 December 2017) adjusted to illustrate the run-off of the TMTP (a reduction of one-sixteenth or equivalent) that will occur immediately after the valuation date. It differs from Balance sheet A only in the run-off of the TMTP. • 'Balance sheet C', should show only the change to the balance sheet assuming the TMTP had been recalculated as at the valuation date (eg 31 December 2017) given the balance sheet position. In the supplementary note, please state whether the recalculated TMTP includes TMTP run-off since 31 December 2017 consistent with 'Balance Sheet B'.
Section 2: Individual sensitivities to balance sheet date	For each sensitivity listed below, provide the movements in balance sheet components listed in Section 1 'Balance sheet A', assuming no change to the TMTP as at the valuation date (eg 31 December 2017). Hence, the TMTP pre-cap and TMTP post-cap movements should be reported as zero. Firms should not make any changes to their SCR calculation, eg take credit for new management actions not assumed in the base case. Firms are not expected to recalibrate their models following the stresses. Please provide any commentary or further explanation in a separate document. Sensitivity 1) Equity prices fall by 25%. Sensitivity 2) Property prices (commercial and residential) fall by 25%. Please make no adjustment to the stress to allow for any future

movements already anticipated in the current balance sheet.

Please include the impact of a fall in property and other financial instruments with underlying property exposure (such as social housing loans, and mortgages).

Sensitivity 3) Interest rates rise by 100 basis points (bps)

Sensitivity 4) Interest rates fall by 100 bps.

Sensitivities 3 and 4 to the interest rate should reflect a parallel shift, and implicitly assume that both government bond yield and European Insurance and Occupational Pensions Authority (EIOPA) risk free rates move by the same amount.

If necessary, interest rates should be allowed to go negative.

Sensitivity 5) All government bond spreads over EIOPA risk free rates (GSS) rise by 50 bps; ie EIOPA risk free rates and the yield on other assets are unchanged but Government bond yields rise by a uniform 50 bps across the curve.

Sensitivity 6) Credit spreads - firms should apply the following stresses to each rating for the credit spreads sensitivity.

Credit Rating	Credit Quality Step	Credit Spread increase
AAA	0	125 bps
AA	1	175 bps
A	2	250 bps
BBB	3	300 bps
BB and lower and unrated	4+	400 bps

This should reflect a uniform widening across the curve for a given credit rating, assuming that EIOPA fundamental spreads are unchanged.

Sensitivity 7) Downgrade - the impact of 20% of assets by market value (both inside and outside the MA portfolio) downgrading from the current Credit Quality Step (CQS) to the next CQS.

The downgrade of 20% of assets by market value should apply uniformly across all assets, including sovereign exposures, credit risky assets, and internally restructured assets. Participants should also apply the stress to exposures where the risk is related to the credit rating of a counterparty, e.g. reinsurance counterparties. For example, the stress should be applied assuming that a 20% of each credit risky asset in each credit rating bucket (AAA, AA, A, BBB, BB & B) downgrades by one full rating (i.e. following the downgrade 80% of AAA rated assets remain AAA and 20% move to AA). In the case of reinsurance counterparty exposures, participants should quantify exposure in terms of the amount held as credit default adjustment (CDA) in respect of the reinsurance assets. Participants should then take an approach of assuming that specific reinsurance counterparties

		(including intragroup counterparties) downgrade in descending order of exposure size until the proportion (in terms of the total CDA amount) that downgrade is at least 20% and that the selection is considered unlikely to understate the impact of the requested stress. Participants should consider whether this selection of counterparty exposures is likely to understate the impact of the requested stress compared to other approaches, and if so should propose an alternative, more representative stress (with supporting commentary). In respect of the cap on the size of the Matching Adjustment (MA) (as described in rule 7.2(3) of the Technical Provisions part of the PRA Rulebook) please assume that for assets moving from CQS 3 no cap needs to be applied and that for assets with pre-stress CQSs 4 to 6 assume the cap remains unchanged. The MA cap does not apply to the sub-investment grade assets moving from CQS 3. The purpose of this simplification is to avoid introducing additional complexity into firms' modelling, as a specific CQS 3 asset may, after downgrade, have an MA higher than that for a similar CQS 3 asset. Participants should assume that the market value of the bonds is unaffected (ie the stress should be a change in the liability value only). Similarly, the calibration of the Fundamental Spreads by sector, rating and term should be assumed to be unchanged. For assets which are at CQS 6 pre-stress, it should be assumed that the whole asset defaults, with a recovery rate of the current market value. Participants may assume rebalancing actions for the MA portfolio, which are credible and practical to be implemented in a post-stress environment, for the calculation of the technical provisions (TP). Internal model participants should use their existing methods of rebalancing the MA portfolio within the SCR calculation, provided these have not been exhausted by the TP calculation post-stress. They should also ~~explain their approach~~ provide details of the management actions taken and clear justification of their ability to continue to support the level of MA assumed in stress. Standard formula firms need not rebalance their MA portfolio.
	Sensitivity 8)	An increase in the market implied real interest rates over the nominal interest rates by a uniform 50 bps across the curve.
	Sensitivity 9)	GBP exchange rates fall by 25% (against all other currencies). The stress should be interpreted as increasing the value of assets held in currencies other than GBP by 33% in GBP terms.
Section 3:	For each sensitivity (as listed in Section 2), please give the estimated impact of a TMTP recalculation to the 'Balance sheet C'.	
Section 4: Management actions	In the separate document for the scenarios specified in Section 2, please provide a narrative description of the following: (a) Potential management actions of the form identified in paragraph 3.5 of the PRA Supervisory Statement (SS) 7/16 'Solvency II: Data collection	

	of market risk sensitivities'.[1] Please provide the level of stress at which the action is initiated and the estimated beneficial impact on solvency. Please also comment as to whether such management actions could be implemented irrespective of market conditions, or whether financial markets are assumed to function in an orderly way. Firms should give consideration to whether the planned management actions in response to stressed scenarios are realistic, credible, consistent with regulatory expectations, and achievable. (b) Any material changes to the previously described range of management actions (not of the type identified in paragraph 3.5 of the supervisory statement).
Notes:	The PRA expects the calculation basis of the information to be consistent with Solvency II data reported to the PRA as far as practicable. Please allow the size of volatility adjustment to change for the best estimate liabilities calculation following the sensitivity (in particular for the credit spread sensitivity (sensitivity 6)). For the purpose of calculating the change in volatility adjustment following the sensitivity, please assume that the reference portfolio remains the same as the reference portfolio as at the valuation date. For example, as at 31 December 2019, following the credit spread sensitivity the increase in VA would be:

	[A]	[B]	[A] x [B]
Composition of the currency representative portfolio of assets other than central government and central banks bonds.	GBP	Increase in credit spread (bps)	Weighted credit spread (bps)
Finan_0	12%	125	15.00
Finan_1	13%	175	22.75
Finan_2	27%	250	67.50
Finan_3	15%	300	45.00
Finan_4	2%	400	8.00
Finan_5	0%	400	0.00
Finan_6	0%	400	0.00
Nonfinan_0	3%	125	3.75
Nonfinan_1	4%	175	7.00
Nonfinan_2	11%	250	27.50
Nonfinan_3	12%	300	36.00
Nonfinan_4	1%	400	4.00
Nonfinan_5	0%	400	0.00
Nonfinan_6	0%	400	0.00
Total	**100%**	**N/A**	**236.50**

Weighted average credit spread	236.50	*See above table*
Currency weights for "other assets"	28.1%	

1 October 2017: www.bankofengland.co.uk/pra/Pages/publications/ss/2017/ss717.aspx

Multiplicative factor as set out in Article 77d of the Solvency II Directive	65%
Increase in VA (bps)	**43**

Please explain in narrative form how approximations (eg to estimate changes to the risk margin) have been performed.

Please include an explanation for significant changes in Own Funds and SCR since the previous submission. Please also explain reasons for any significant changes in the sensitivities of the Own Funds and SCR to different stresses since the previous submission.

Sensitivities 2, 3, 4, 5, 6, 7 and 8 are described in more detail below:

- Sensitivity 2 tests the impact of a fall in property and other financial instruments with underlying property exposure (such as social housing loans, and mortgages). Please provide supplementary information explaining how the impact on any financial instruments with underlying property exposure has been included in the property sensitivity.
- Sensitivity 3 tests the impact of a rise in the EIOPA risk free interest rate only. To facilitate this, the other rates (eg government bond yield, corporate bond yield) also rise with this interest rate and hence spreads are unchanged.
- Sensitivity 4 tests the impact of a fall in the EIOPA risk free interest rate only. To facilitate this, the other rates (eg government bond yield, corporate bond yield) also fall with this interest rate and hence spreads are unchanged.
- Sensitivity 5 is similar to sensitivity 3 and 4, but here the government bond yields are assumed to rise whilst the EIOPA risk free rates are unchanged. Corporate bond yields (and the yield on other assets) are assumed to remain unchanged to ensure the corporate spread with respect to the EIOPA risk free rate is unchanged.
- Sensitivity 6 involves a widening of credit spreads while keeping the EIOPA risk free rate and government bond yield unchanged. This sensitivity is intended primarily to capture corporate bond exposures, but results based on other definitions of spread exposure are also acceptable. Firms should explain and provide detail where an alternative stress has been used which represents equal severity to the stress specified. Provide further information that is available, for example, significant supranational exposures which may materially affect the impact of the sensitivity.
- Sensitivity 7 involves downgrade of all assets. In the supplementary note, please provide a high-level summary of the impact of rebalancing actions for the MA portfolio, which are assumed for the technical provisions calculation.
- Sensitivity 8 tests the impact of a rise in implied inflation. To facilitate this, the fixed income government bond yield remains unchanged and the real yield for inflation-linked bonds fall. Likewise, the fixed income corporate bond yield remains unchanged and the real yield for inflation-linked corporates bond fall.

The full list of sensitivities can be summarised as per the table on the following

	page. ‘No change’ indicates keeping the same position as in the base scenario.

Sensitivity	Equity prices	Property prices	EIOPA risk free rate	Government bond yield	Government bond yield less EIOPA risk free rate	Corporate bond yield	Credit downgrade	Implied inflation	GBP exchange rate
1 (Equity)	Fall	No change	No change	No change	No change	No change	No change	No change	No change
2 (Property)	No change	Fall	No change	No change	No change	No change	No change	No change	No change
3 (IR up)	No change	No change	Rise	Rise	No change	Rise	No change	No change	No change
4 (IR down)	No change	No change	Fall	Fall	No change	Fall	No change	No change	No change
5 (GSS)	No change	No change	No change	Rise	Rise	No change	No change	No change	No change
6 (Credit Spread)	No change	No change	No change	No change	No change	Rise	No change	No change	No change
7 (Downgrade)	No change	No change	No change	No change	No change	No change	Downgrade of bonds	No change	No change
8 (Implied inflation)	No change	No change	No change	No change to fixed rate bonds Real yield for inflation-linked bonds falls.	No change to fixed rate bonds Real spread for inflation-linked bonds goes falls.	No change to fixed rate bonds Real yield for inflation-linked bonds falls.	No change	Rise	No change
9 (FX)	No change	No change	No change	No change	No change	No change	No change	No change	Fall

30 November 2020