

# Alternative Covenant Scheme Appendix

## 1. Summary

This is the Alternative Covenant Scheme Appendix to the Board's determination under Section 175(5) of the Act in respect of the 2023/24 Levy Year. Unless defined in this Appendix (whether in section 12 of this Appendix or otherwise), expressions defined in the Rules shall have the same meanings as set out therein.

This Appendix applies to an Alternative Covenant Scheme as defined in the Rules and provides the formulae for calculating the RBL for such schemes. Rule C5 sets out the two-part definition of an Alternative Covenant Scheme – i.e. a scheme satisfying any one of the criteria in Rule C5.1(2), and where the Board considers under Rule C5.1(1) the Alternative Covenant Scheme methodology to be more appropriate than the Rules that would otherwise apply.

Subject to any adjustments made pursuant to Rule C5 of the Rules, the RBL for an Alternative Covenant Scheme is the higher of  $RBL_0$  and POP, where:

- a)  $RBL_0$  is the RBL calculated as if the provisions of this Appendix did not apply, with the exception of those provisions applicable to Recognised Buffer Arrangements that are required for the purposes of this calculation of  $RBL_0$ , but based on:
- a single employer structure, with the employer placed in Levy Band 10;
  - no application of the RBL cap or the SSA;
  - assets including any Recognised Buffer Arrangement;
  - asset breakdown and risk factor stress impacts, covering assets including any Recognised Buffer Arrangement and Submitted in accordance with the provisions of the relevant Exchange user-guide, with the scheme deemed to be subject to the requirements of Tier 3 (as defined in Exchange) for this purpose<sup>1</sup>; and
  - no allowance for voluntary certifications.

$RBL_0$  does not allow for any of the scheme-specific parameters set out in section 2 below, any adjustment to reflect understatement of risk for older valuation submissions set out in section 3 below, or any deduction from the scheme assets to reflect potential ongoing capital extraction set out in section 8 below.

- b) POP is the value of a one year European put option calculated using the Garman-Kohlhagen formula, where:
- the strike price is the value of the scheme's Protected Liabilities on an adjusted basis, rolled forward or backward to the Output Date; and
  - the spot price of the underlying asset is the market value of the scheme's assets plus the market value of any Recognised Buffer Arrangement, with the total rolled forward or backward to the Output Date, but reduced by an allowance to reflect potential ongoing capital extraction where this facility is available to the Alternative Covenant Scheme.

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<sup>1</sup> Where separate asset breakdowns and risk factor stress impacts are Submitted in respect of the scheme and any Recognised Buffer Arrangement, they must be carried out at the same effective date.

Any deduction from the assets to reflect potential ongoing capital extraction will be determined as the value of a one-year European call option calculated using the Garman-Kohlhagen formula, where:

- the strike price is the threshold above which the Alternative Covenant Scheme is able to extract capital, expressed as a percentage of the value of the scheme's Protected Liabilities on an adjusted basis, rolled forward or backward to the Output Date; and
- the spot price of the underlying asset is the market value of the scheme's assets plus the market value of any Recognised Buffer Arrangement, with the total rolled forward or backward to the Output Date.

Because POP is assumed to be paid from the scheme's assets, it is technically an input to the put option formula as well as the output of that formula. This is allowed for by calculating POP using an iterative approach. The output of the  $n$ th iteration,  $POP_n$ , is deemed to reduce the scheme's assets used for input to the  $(n+1)$ th iteration, until the difference between  $POP_{(n+1)}$  and  $POP_n$  has converged below a specified threshold.

## 2. Inputs

Where information is required by the Board as specified in this Appendix and/or as the Board requires (whether in accordance with any Ongoing Governance Arrangement or otherwise) in order to calculate  $RBL_0$  and POP in accordance with this Appendix, and such information is Submitted in accordance with Rules A2.2(5) and A2.3(5) of the Rules in a form and on terms acceptable to the Board, that information will be used for the purposes of that calculation. In the absence of one or more items of such information, whether due to the absence of an Ongoing Governance Arrangement or otherwise, Rule B1 will apply.

### **Scheme-specific parameters**

The scheme-specific parameters specified in the table below will apply when an Alternative Covenant Scheme has an Ongoing Governance Arrangement and where either:

- (a) the Board has agreed to them in the relevant Ongoing Governance Arrangement; or
- (b) they have been Submitted, together with such supporting evidence as the Board requires, by the Scheme trustees, and agreed in writing by the Board; or
- (c) they are specified by the Board.

<ul style="list-style-type: none"> <li>• Effective date of the asset and liability valuations required for output</li> </ul>	OutputDate
<ul style="list-style-type: none"> <li>• Factors to apply to liability valuations, to reflect scheme-specific assumptions in respect of:</li> </ul>	
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>○ pensions in payment</li> </ul> </li> </ul>	SSFacPen
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>○ deferred members</li> </ul> </li> </ul>	SSFacDef
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>○ active members</li> </ul> </li> </ul>	SSFacAct
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>○ wind-up costs (excluding benefit installation/ payment)</li> </ul> </li> </ul>	SSFacWUExp
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>○ benefit installation/payment expenses</li> </ul> </li> </ul>	SSFacPayExp

### Liability data

The Section 179 Valuation results which have been Submitted for use in this calculation, rolled forward or backward to the Output Date without smoothing or stressing in accordance with the Transformation Appendix<sup>2</sup>. If the Output Date specified under this Appendix differs from the Output Date under the Transformation Appendix (31 March 2023), the Transformation Appendix should be applied as if the Output Date were the same as specified under this Appendix.

In addition, if the Submitted Section 179 Valuation results were prepared in accordance with a future version of the Section 179 assumptions, the results are not converted to A10.<sup>3</sup>

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<sup>2</sup> Paragraph 4.8 of the Transformation Appendix sets out the process for calculating smoothed but unstressed liability values. Unsmoothed, unstressed liability values are calculated by applying these provisions and also taking each Smoothed Yield (A(ii), B(ii), C(i), C(iii), D(i) or D(ii)) at the Output Date (as set out in paragraph 4.3 of the Transformation Appendix) to be equal to the corresponding unsmoothed yield.

<sup>3</sup> In these circumstances, the various assumptions underlying the annuity factors '@OutputDate' and '@S179Input Date' set out in paragraph 4.3.3 of the Transformation Appendix should be set to be consistent with such future version of the Section 179 assumptions guidance as applies, together with the rollforward rates 'i' and 'j' set out in paragraph 4.4.1 of the Transformation Appendix.

• Liabilities in respect of pensions in payment	S179PL
• Liabilities in respect of deferred members	S179DL
• Liabilities in respect of active members	S179AL
• Estimated wind-up costs (excluding benefit installation/payment)	S179WUExp
• Estimated expenses of benefit installation/payment	S179PayExp
• External liabilities	S179ExLiab
• Total value of Protected Liabilities	S179TL

The Section 179 Valuation results which have been Submitted for use in this calculation, rolled forward or backward to the Output Date with stressing but without smoothing in accordance with the Transformation Appendix<sup>4</sup>. If the Output Date specified under this Appendix differs from the Output Date under the Transformation Appendix (31 March 2023), the Transformation Appendix should be applied as if the Output Date were the same as specified under this Appendix.

In addition, if the Submitted Section 179 Valuation results were prepared in accordance with a future version of the Section 179 assumptions, the results are not converted to A10.<sup>3</sup>

• Stressed liabilities in respect of pensions in payment	S179PLStressed
• Stressed liabilities in respect of deferred members	S179DLStressed
• Stressed liabilities in respect of active members	S179ALStressed

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<sup>4</sup> Stressed but unsmoothed liability values are calculated by applying the provisions of footnote 2 above and also applying the liability stress factors at the values shown in paragraph 4.2 of the Transformation Appendix, rather than zero.

## Asset data

Combined asset information for the Scheme and any Recognised Buffer Arrangement Submitted for use in this calculation and rolled forward or backward to the Output Date without smoothing or stressing in accordance with the Transformation Appendix<sup>5</sup>. If the Output Date specified under this Appendix differs from the Output Date under the Transformation Appendix (31 March 2023), the Transformation Appendix should be applied as if the Output Date were the same as specified under this Appendix.

• Assets	S179Ass
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Combined asset information for the Scheme and any Recognised Buffer Arrangement Submitted for use in this calculation<sup>1</sup>:

• UK quoted equities	AS1
• Overseas developed market quoted equities	AS2
• Overseas emerging market quoted equities	AS3
• Unquoted/private equity	AS4
• Property	AS5
• Diversified Growth Funds	AS6
• Absolute Return Funds	AS7
• Fixed interest UK Government bonds – short maturity	AS8
• Fixed interest UK Government bonds – medium maturity	AS9
• Fixed interest UK Government bonds – long maturity	AS10
• UK Government inflation-linked bonds – short maturity <sup>6</sup>	AS11
• UK Government inflation-linked bonds – medium maturity <sup>6</sup>	AS12
• UK Government inflation-linked bonds – long maturity <sup>6</sup>	AS13
• Fixed-interest UK investment grade quoted bonds (other than UK Government bonds) – short and medium dated	AS14
• Fixed-interest UK investment grade quoted bonds (other than UK Government bonds) – long-dated	AS15
• Fixed-interest overseas investment grade quoted bonds – short and medium dated	AS16
• Fixed-interest overseas investment grade quoted bonds – long-dated	AS17
• Fixed-interest bonds – quoted sub-investment grade	AS18
• Fixed-interest bonds – private debt	AS19
• Cash and net current assets	AS20
• Annuities	AS21
• Other	AS22

<sup>5</sup> Paragraph 4.8 of the Transformation Appendix sets out the process for calculating smoothed but unstressed asset values. Unsmoothed, unstressed asset values are calculated by applying these provisions and also disapplying the smoothing of index values set out in paragraph 4.4.3 where Date2 is specified as the Output Date.

<sup>6</sup> Inflation-linked UK Government bonds are categorised separately, with other inflation-linked bonds being allocated to their corresponding fixed interest sub-class.

Interest rate and inflation rate risk factor stress impacts, each combined to relate to the derivative holdings of the Scheme and any Recognised Buffer Arrangement, as Submitted for use in this calculation<sup>1</sup>:

• Interest rate risk factor stress impact	IRRFSI
• Inflation rate risk factor stress impact	InfRFSI

### 3. Parameters

**Factors to convert liabilities to the adjusted basis, where an Acceptable Wind-Up Trigger applies, or where the Alternative Covenant Scheme has an Ongoing Governance Arrangement:**

Factors to convert liabilities in respect of:		
• Pensions in payment	ConvFacPen	1.00
• Deferred pensioners and active members	ConvFacNonPen	0.88
• Estimated wind-up costs (excluding benefit installation/payment)	ConvFacWUExp	1.00
• Estimated expenses of benefit installation/payment	ConvFacPayExp	0.50
• External liabilities	ConvFacExLiab	1.00

For the avoidance of doubt, if the Alternative Covenant Scheme has neither an Ongoing Governance Arrangement nor an Acceptable Wind-Up Trigger, ConvFacPen, ConvFacNonPen, ConvFacWUExp, ConvFacPayExp and ConvFacExLiab are all 1.00.

**Factors to reflect understatement of risk for older valuation submissions**

Adjustment to total liabilities	LiabAdjFac	0% if the effective date of the Section 179 Valuation Submitted for use in this calculation is on or after 1 January 2022, and 5% in all other circumstances.
Applicable time period	TimePeriod	The period from the effective date of the Section 179 Valuation Submitted for use in this calculation, to 31 March 2023, measured in years and complete months.

### Asset stress factors

		<b>Positive stresses (<math>Str_i^+</math>)</b>	<b>Negative stresses (<math>Str_i^-</math>)</b>
UK quoted equities	Str1	0%	-16%
Overseas developed market quoted equities	Str2	0%	-16%
Overseas emerging market quoted equities	Str3	0%	-16%
Unquoted/private equity	Str4	0%	-19%
Property	Str5	0%	-4%
Diversified Growth Funds	Str6	0%	-10%
Absolute Return Funds	Str7	0%	-5%
Fixed interest UK Government bonds – short maturity	Str8	+2%	0%
Fixed interest UK Government bonds – medium maturity	Str9	+6%	0%
Fixed interest UK Government bonds – long maturity	Str10	+17%	0%
UK Government inflation-linked bonds – short maturity <sup>6</sup>	Str11	+1%	0%
UK Government inflation-linked bonds – medium maturity <sup>6</sup>	Str12	+6%	0%
UK Government inflation-linked government bonds – long maturity <sup>6</sup>	Str13	+20%	0%
Fixed-interest UK investment grade quoted bonds (other than UK Government bonds) – short and medium dated	Str14	+4%	-2%

Fixed-interest UK investment grade quoted bonds (other than UK Government bonds) - long-dated	Str15	+10%	-5%
Fixed-interest overseas investment grade quoted bonds – short and medium dated	Str16	+3%	-2%
Fixed-interest overseas investment grade quoted bonds –long-dated	Str17	+9%	-5%
Fixed-interest bonds – quoted sub-investment grade	Str18	+2%	-8%
Fixed-interest bonds – private debt	Str19	0%	-9%
Cash and net current assets	Str20	0%	0%
Annuities	Str21	+16%	0%
Other	Str22	0%	-19%

### Other parameters

Longevity volatility	LongVol	2.5%
Volatility adjustment	VolAdj	2.6%
Risk-free rate of return on assets	rA	Bank of England 12-month Overnight Index Swap (OIS) spot rate at 30 November 2022, i.e. 4.27%.
Risk-free rate of return on liabilities	rL	rA
Convergence threshold for successive iterations of POP	T	£1



#### 4. Calculation of the standard Risk-Based Levy with adjustments (***RBL<sub>0</sub>***)

*RBL<sub>0</sub>* is the RBL calculated in accordance with the provisions of the Rules (except Rules C5 and C6) and the Appendices (except the provisions of this Appendix that are not applicable to Recognised Buffer Arrangements and are accordingly not required for the purposes of this calculation of *RBL<sub>0</sub>*), but using the information Submitted in accordance with Rules A2.2(5) and/or A2.3(5) of the Rules (or in accordance with any discretion exercised by the Board pursuant to Rule C6 of the Rules), and based on the following assumptions:

- the Scheme has a single Employer;
- the LR of the Employer is the LR of Levy Band 10 and, for the avoidance of doubt, that LR will not be treated as an Appealable Score;
- Rules C2.3 (Small Scheme Adjustment) and C3.1 (RBL cap) are dis-applied;
- assets include any Recognised Buffer Arrangement;
- the Scheme has Submitted the asset breakdown information and risk factor stress impacts in accordance with the provisions of the relevant Exchange user guide, covering assets including any Recognised Buffer Arrangement and with the scheme deemed to be subject to the requirements of Tier 3 (as defined in Exchange) for this purpose<sup>1</sup>; and
- Parts F, G and H of the Rules are dis-applied.

For the avoidance of doubt, *RBL<sub>0</sub>* does not allow for any of the scheme-specific parameters set out in section 2 of this Appendix, any adjustment to reflect understatement of risk for older valuation submissions set out in section 3 of this Appendix, or any deduction from the scheme assets to reflect potential ongoing capital extraction set out in section 8 of this Appendix.

#### 5. Calculation of Call Option Strike Price (COSP)

If the Alternative Covenant Scheme has a Section 179 Capital Extraction Threshold, denoted for the purposes of this Appendix as *S179CET%*:

$$COSP = S179CET\% \times S179TL$$

If the Alternative Covenant Scheme does not have a Section 179 Capital Extraction Threshold but does have a Non-Section 179 Capital Extraction Threshold, the Board shall calculate the Levies pursuant to Rule B1.

For the purposes of this section 5:

“Section 179 Capital Extraction Threshold” is the funding level contained in any Ongoing Governance Arrangement, in respect of which the terms of operation of an Alternative Covenant Scheme provide for payment of a return at or above such funding level (other than to Members by way of defined benefit pension payments, and other than the ordinary expenses of an occupational pension scheme) during the 2023/24 Levy Year and before any buyout of liabilities, provided:

- (a) such funding level is determined by reference to assets which include any Recognised Buffer Arrangement;
- (b) such funding level is ascertainable by the Board by reference to a Section 179 funding level; and
- (c) S179Ass specified in section 2 of this Appendix (under “Asset data”) has not been reduced to allow for the payment of any such return.

If the Alternative Covenant Scheme satisfies the requirements for a Section 179 Capital Extraction Threshold save for the requirement set out in paragraph (c) above, the Board may determine that such requirement should be waived.

“Non-Section 179 Capital Extraction Threshold” is the funding level contained in any Ongoing Governance Arrangement, in respect of which the terms of operation of an Alternative Covenant Scheme provide for payment of a return at or above such funding level (other than to Members by way of defined benefit pension payments, and other than the ordinary expenses of an occupational pension scheme) during the 2023/24 Levy Year, and before any buyout of liabilities, provided:

- (d) such funding level is determined by reference to assets which include any Recognised Buffer Arrangement;
- (e) such funding level is not ascertainable by the Board by reference to a Section 179 funding level; and
- (f) S179Ass specified in section 2 of this Appendix (under “Asset data”) has not been reduced to allow for the payment of any such return.

If the Alternative Covenant Scheme satisfies the requirements for a Non-Section 179 Capital Extraction Threshold save for the requirement set out in paragraph (f) above, the Board may determine that such requirement should be waived.

## 6. Calculation of aggregate stresses

### 6.1. Calculation of Asset and Liability Stresses ( $AS_+$ , $AS_-$ , $LbS$ )

#### Positive asset stress ( $AS_+$ )

$AS_+$  is obtained by applying all the positive stresses  $Str_i^+$  (as shown in the third column of the asset stress factors table in section 3 of this Appendix) to the corresponding assets of the Scheme including any Recognised Buffer Arrangement, and then adding the interest rate and inflation rate risk factor stress impacts which relate to the derivative holdings of the Scheme and any Recognised Buffer Arrangement.<sup>7</sup>

$$AS_+ = \sum_{i=1}^{22} (AS_i \times Str_i^+) + (IRRFSI) + (InfRFSI)$$

<sup>7</sup> Overall interest rate and inflation rate risk factor stress impacts may be used for an LDI portfolio which consists of physical gilt holdings and derivatives. Where an Alternative Covenant Scheme has adopted this approach, the gilts within the LDI portfolio should be excluded from entries AS8 to AS13 inclusive in the summation within the formula above.

$AS_+$  is expected to be positive other than for exceptional cases (for example with significant negative asset allocations within the summation).

#### Negative asset stress ( $AS_-$ )

$AS_-$  is obtained by applying all the negative stresses  $Str_i^-$  (as shown in the fourth column of the asset stress factors table in section 3 of this Appendix) to the absolute (or modulus) value of the corresponding assets of the Scheme including any Recognised Buffer Arrangement.

$$AS_- = \sum_{i=1}^{22} (|AS_i| \times Str_i^-)$$

By construction  $AS_-$  is a negative number.

#### Liability Stress ( $LbS$ )

$LbS$  is obtained by applying the interest rate and inflation stresses to the liability value (excluding expenses and external liabilities) on an adjusted basis. It is calculated by taking the difference between the stressed and unstressed values after roll forward or backward to the Output Date and then adjusting this difference to reflect any scheme-specific parameters from section 2 of this Appendix, as well as the relevant conversion factors and any adjustment in respect of understatement of risk for older valuation submissions as set out in section 3 of this Appendix.

$$\begin{aligned} LiabAdj &= [ S179PL \times ConvFacPen \times SSFacPen \\ &+ (S179DL \times SSFacDef + S179AL \times SSFacAct) \times ConvFacNonPen \\ &+ S179WUExp \times ConvFacWUExp \times SSFacWUExp \\ &+ S179PayExp \times ConvFacPayExp \times SSFacPayExp \\ &+ S179ExLiab \times ConvFacExLiab ] \times (1 + LiabAdjFac)^{TimePeriod} \end{aligned}$$

$$\begin{aligned} LbS &= \{ (S179PLStressed - S179PL) \times ConvFacPen \times SSFacPen \\ &+ [ (S179DLStressed - S179DL) \times SSFacDef + (S179ALStressed - \\ &S179AL) \times SSFacAct ] \\ &\times ConvFacNonPen \} \times (1 + LiabAdjFac)^{TimePeriod} \end{aligned}$$

By construction  $LbS$  is a positive number.

## 6.2. Calculation of first level aggregate stress including risk due to over-hedging or under-hedging interest rates ( $X_1$ )

The first level aggregate stress is given by the formula:

$$X_1 = \sqrt{AS_-^2 + \text{Max}(0, AS_+ - LbS)^2} - \text{Min}(0, AS_+ - LbS)$$

This can be simplified by deconstructing the formula to differentiate between schemes which are over-hedged on the adjusted basis (liability stress smaller than the overall positive asset stress) and under-hedged on the adjusted basis (liability stress greater than the overall positive asset stress).

If  $LbS < AS_+$ :

$$X_1 = \sqrt{AS_-^2 + (AS_+ - LbS)^2}$$

Else:

$$X_1 = |AS_-| - AS_+ + LbS$$

### 6.3. Calculation of second level aggregate stress including longevity risk ( $X_2$ )

This calculation aggregates the effect of the investment risk factor stresses with a longevity shock (*LongShock*). It assumes that longevity risk and investment risk are independent.

$$LongShock = LongVol \times LiabAdj$$

$$X_2 = \sqrt{X_1^2 + LongShock^2}$$

### 7. Calculation of volatility estimate (**VolEst**)

$$VolEst = \frac{X_2}{S179Ass} + VolAdj$$

### 8. Calculation of the call option price (**COP**)

First calculate the volatility adjusted distances to the call option strike price ( $d_{1C}$  and  $d_{2C}$ ).

$$d_{1C} = \frac{\ln\left(\frac{S179Ass}{COSP}\right) + (rA - rL + VolEst^2/2)}{VolEst}$$

$$d_{2C} = d_{1C} - VolEst$$

The price of the call option (*COP*) is given by the formula:

$$COP = S179Ass \times e^{-rL} \times N(d_{1C}) - COSP \times e^{-rA} \times N(d_{2C})$$

where:

"*e*" is Euler's number, a mathematical constant<sup>8</sup>;

" $\ln(x)$ " denotes the natural logarithm of  $x$ , i.e. the power to which  $e$  would have to be raised to equal  $x$ ;

$N(\cdot)$  denotes the cumulative standard normal distribution function, given by the formula:

$$N(x) = \int_{-\infty}^x \frac{e^{-t^2/2}}{\sqrt{2\pi}} dt ; \text{ and}$$

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<sup>8</sup> For the purposes of information only, "e", to 10 decimal places is: 2.7182818285

" $\pi$ " is a mathematical constant, the ratio of a circle's circumference to its diameter.<sup>9</sup>

For the avoidance of doubt, if the Alternative Covenant Scheme has neither a Section 179 Capital Extraction Threshold nor a Non-Section 179 Capital Extraction Threshold,  $COP = 0$ .

## 9. Calculation of the first iteration of the put option price (**POP<sub>1</sub>**)

First calculate the spot price, which is the assets after deducting  $COP$ .

$$S179AssAdj = S179Ass - COP.$$

Repeat the calculations in sections 6 and 7 of this Appendix based on input assets and spot price of  $S179AssAdj$  rather than  $S179Ass$ . For this purpose, the assets are assumed to retain the same proportionate breakdown and the same interest rate and inflation rate risk factor stress impacts.

The outcome of this process is a revised value of  $VolEst$ ,  $VolEstAdj$ .

Next, calculate the volatility adjusted distances to the put option strike price ( $d_{1P}$  and  $d_{2P}$ ).

$$d_{1P} = \frac{\ln\left(\frac{S179AssAdj}{LiabAdj}\right) + (rA - rL + VolEstAdj^2 / 2)}{VolEstAdj}$$

$$d_{2P} = d_{1P} - VolEstAdj$$

The first iteration of the price of the put option ( $POP_1$ ) is given by the formula:

$$POP_1 = LiabAdj \times e^{-rA} \times N(-d_{2P}) - S179AssAdj \times e^{-rL} \times N(-d_{1P})$$

## 10. Calculation of successive iterations of the put option price (**POP<sub>n</sub>**)

The calculations in section 9 of this Appendix are repeated to calculate successive iterations of the put option price. For all values of  $n$  greater than or equal to two but less than or equal to 100, the  $n$ th iteration,  $POP_n$ , is calculated as  $POP_{n-1}$  but with the input assets and spot price,  $S179AssAdj_n$ , taken as the corresponding figure from the first iteration,  $S179AssAdj$ , reduced by  $POP_{n-1}$ . For this purpose the assets are assumed to retain the same proportionate breakdown and the same interest rate and inflation rate risk factor stress impacts in each successive iteration.

$$\partial n = |POP_n - POP_{n-1}|$$

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<sup>9</sup> For the purposes of information only, " $\pi$ ", to 10 decimal places is: 3.1415926536

For all values of n from 2 to 99 inclusive:

If:

- $\partial n \leq T$ ; and
- $POP_n < S179Ass - SBL$

$$POP = POP_n$$

Else if  $POP_n \geq S179Ass - SBL$

$$POP = S179Ass - SBL$$

Else proceed to the (n+1)th iteration.

If  $POP_{100} < S179Ass - SBL$ ,

$$POP = POP_{100}$$

else

$$POP = S179Ass - SBL$$

## 11. Calculation of the Risk-Based Levy (**RBL**)

Subject to any adjustments made pursuant to Rule C5 of the Rules, RBL for an Alternative Covenant Scheme is the greater of:

- (a) the standard RBL calculated in accordance with the Rules and Appendices (except this Appendix), but using the information Submitted in accordance with Rules A2.2(5) and/or A2.3(5) of the Rules (or in accordance with any discretion exercised by the Board pursuant to Rule C6 of the Rules), and based on the assumptions described in section 4 of this Appendix; and
- (b) the put option price calculated in section 10 of this Appendix.

$$RBL = \text{Max}(RBL_0, POP)$$

## 12. Definitions

For the purposes of this Appendix:

A "Recognised Buffer Arrangement" means:

- (1) a buffer fund arrangement established in connection with an Alternative Covenant Scheme which provides for Buffer Assets to become available in whole or in part to the Scheme trustee for the purposes of the Scheme, in specified circumstances; or
- (2) such other arrangement as the Board considers to be designed to have substantially the same effect as (1) above,

(a "Buffer Fund");

and which in either case (i) in respect of which the Board has received such information, opinions or certifications as it considers appropriate, and (ii) in the opinion of the Board satisfies such conditions as the Board may from time to time specify in published guidance and having regard to any guidance published by TPR. Such guidance may require (without limitation):

- (a) appropriate mechanisms to preserve the value of the Buffer Fund prior to the trigger of any payment from the Buffer Fund to the Scheme, including appropriate provisions for payments into the Buffer Fund, management and control of risk, and for disposal of Buffer Assets;
- (b) an appropriate and enforceable mechanism for the transfer of funds from the Buffer Fund to the Scheme;
- (c) appropriate parameters for determining the asset allocation for the Buffer Fund and governance terms concerning the role of scheme trustees in relation to changes to the Buffer Fund asset allocation; and
- (d) appropriate terms providing for the governing law and jurisdiction that can apply to the Buffer Fund and in respect of the jurisdiction to determine disputes relating to the Buffer Fund;

but in respect of which, the Board's requirements under the Levy Rules for recognition of the arrangement as a Contingent Asset would not be met, were a submission relating to the arrangement to be made pursuant to Part G of the Levy Rules and the Contingent Asset Appendix and if Rule C6.4 was disregarded.

"Buffer Assets" – are assets, held within the Buffer Fund, that the Board is satisfied would, if those assets transferred to the Alternative Covenant Scheme:

- (1) be capable of inclusion in the Alternative Covenant Scheme's Section 179 Valuation by virtue of Regulations 3 and 5 of the Pension Protection Fund (Valuation) Regulations 2005 (SE 2005/672); and
- (2) are not assets representing the value of any rights in respect of money purchase benefits under the Scheme rules.

An "Acceptable Wind-Up Trigger" is an arrangement or arrangements in relation to an Alternative Covenant Scheme that the Board is satisfied meets the following criteria (having regard to any guidance issued by the Board and by TPR):

- (1) an appropriate percentage level of Scheme funding, on a Section 179 Valuation basis at which the events described in (2) below are intended to take place (the "Trigger Funding Level");

- (2) a legally enforceable arrangement is in place to provide that, as a direct result of the Trigger Funding Level being reached, an Insolvency Event (as defined in s121 of the 2004 Act) of the Employer will take place within a period deemed acceptable by the Board;
- (3) appropriate measures are in place for monitoring the funding level of the Scheme (and of any Buffer Fund) at appropriate times; and
- (4) any power to amend the relevant parts of the documentation that satisfy criteria (1) – (3) above is appropriately limited.