

## How to calculate a scheme's levy

Established by the Pensions Act 2004, the Pension Protection Fund pays compensation to members of eligible occupational defined benefit pension schemes when there is a qualifying insolvency event in relation to the employer, and where there are insufficient assets in the pension scheme to cover Pension Protection Fund levels of compensation.

Compensation payments will be funded in part by an annual levy raised from eligible pension schemes.

### For 2006/07, the pension protection levy will be made up of two parts:

- **Scheme based levy (20%)** – based on the level of a scheme's Pension Protection Fund liabilities
- **Risk based levy (80%)** – based on scheme underfunding risk, and the insolvency risk of the sponsoring employer(s)

The risk based levy will be capped at 0.5% of a scheme's Pension Protection Fund liabilities. This will protect weaker schemes, and strikes an appropriate balance between the principles of fairness and proportionality.

No risk based levy will be payable for schemes that are more than 125% funded on a Pension Protection Fund basis (Either the section 179 or adapted MFR basis).

The following examples illustrate how to calculate a scheme's levy.

The total levy is the sum of a scheme based levy and a risk based levy.

The scheme based levy is equal to Pension Protection Fund liabilities multiplied by a factor, which for the 2006/07 levy is 0.014%.

The risk based levy is equal to underfunding risk x insolvency risk x 80% x levy scaling factor, where the underfunding risk is  $1.05 \times \text{liabilities} - \text{assets}$ , except where the assets exceed 104% of the Pension Protection Fund liabilities, when the formula is different, and the assets include allowance for any special contributions and contingent assets. The levy scaling factor is assumed to be 0.53.

## Example (a)

Scheme A has one participating employer, with a D&B failure score of 95, which corresponds to an insolvency risk of 0.3033%. It has Pension Protection Fund liabilities of £100 million and assets of £80 million, and so a Pension Protection Fund funding level of 80%.

**The scheme based levy = liabilities x 0.014% = £100m x 0.014% = £14,000**

# The Pension Protection Levy 2006/07

**Underfunding risk = 1.05 x liabilities – assets = 1.05 x £100m – £80m = £25m**

**The risk based levy = underfunding risk x insolvency risk x 80% x scaling factor = £25m x 0.3033% x 80% x 0.53 = £32,150**

The total levy is then the sum of the scheme based levy and the risk based levy

**= £14,000 + £32,150 = £46,150.**

## Example (b)

Scheme B has one participating employer with a D&B failure score of 87, which corresponds to a failure score of 0.6370%. It has Pension Protection Fund liabilities of £150 million and assets of £130 million. The employer has paid 'deficit repair' contributions of £10 million to the scheme and provided a contingent asset in the form of security over real estate valued at £14 million.

**The scheme based levy = liabilities x 0.014% = £150m x 0.014% = £21,000**

**Assets = scheme assets + special contributions + contingent assets**

**= £130m + £10m + £14m = £154m**

**Funding level = assets / liabilities x 100% = £154m / £150m x 100% = 102.7%**

The scheme's funding level is less than 104%, so the underfunding risk is calculated as:

**Underfunding risk = 1.05 x liabilities - assets = 1.05 x £150m - £154m = £3.5m**

**The risk based levy = underfunding risk x insolvency risk x 80% x scaling factor = £3.5m x 0.6370% x 80% x 0.53 = £9,453**

**Total levy = scheme based levy + risk based levy = £21,000 + £9,453 = £30,453**

## Example (c)

Scheme C has one participating employer. This employer has a D&B failure score of 22, corresponding to an insolvency risk of 2.5844%. The scheme has a guarantee from a UK parent company for the shortfall in the scheme relative to 105% of the Pension Protection Fund liability on a section 179 basis. This parent company has a D&B failure score of 100, which corresponds to an insolvency risk of 0.0740%. The scheme has Pension Protection Fund liabilities of £100 million and assets of £80 million, so the parent company is guaranteeing £25 million.

**The scheme based levy = liabilities x 0.014% = £100m x 0.014% = £14,000**

# The Pension Protection Levy 2006/07

It has PPF liabilities of £100m and assets of £80m. So the amount of PPF underfunding at risk is  $1.05 \times £100m - £80m = £25m$ .

**The risk based levy = underfunding risk x insolvency risk x 80% x scaling factor**

Where the underfunding risk is reduced by the parent guarantee of £25m adjusted by

(1-insolvency risk of guarantor/insolvency risk of participating employer) i.e. the underfunding risk is reduced by  $(1 - 0.0740\%/2.5844\%) \times £25m$   
 $= (1-0.0286333) \times £25m = 24.28417$

**Risk based levy =  $(1.05 \times £100m - £80m - 24.28417) \times 2.5844\% \times 80\% \times 0.53$**

**=  $(£25m - £24.28417m) \times 2.5844\% \times 80\% \times 0.53$**

**= £7,844**

**Total levy = scheme based levy + risk based levy = £14,000 + £7,844 = £21,844**

## Example (d)

Scheme D has three participating employers, all part of the same company group. The scheme cannot be partially wound up on the insolvency of any one employer. The scheme has provided information to the Pension Protection Fund on the structure of the multi-employer arrangement to be taken into consideration when calculating the insolvency risk for the scheme. The scheme has Pension Protection Fund liabilities of £150 million and assets of £140 million.

**The scheme based levy = liabilities x 0.014% = £150m x 0.014% = £21,000**

**Underfunding risk = 1.05 x liabilities – assets = 1.05 x £150m – £140m = £17.5m**

The information available for the three participating employers is as follows:

- Employer 1 has a failure score of 80 which corresponds to an assumed insolvency probability of 0.9047% (q1). Employer 1 has 250 employees.
- Employer 2 has a failure score of 95 which corresponds to an assumed insolvency probability of 0.3033% (q2) and has 100 employees.
- Employer 3 has a failure score of 85 which corresponds to an assumed insolvency probability of 0.7241% (q3) and has 50 employees.

**Total number of employees = 250 + 100 + 50 = 400**

# The Pension Protection Levy 2006/07

As the scheme has provided information on the structure of the multi-employer arrangement, the Pension Protection Fund will carry out two calculations (calculation A and calculation B) for insolvency risk and use the lower of these two values to determine the levy payable.

Calculation A is the assumed insolvency probability of the largest employer. This is 0.9047%.

Calculation B takes the insolvency risk of each participating employer, and calculates the weighted average insolvency risk for each employer, labelled q1, q2 and q3, above.

The weights used are the ratios of employees for each participating employer divided by the total number of employees (the scheme did not provide information on its number of members, otherwise that would have been used in the calculation). These weights are calculated as follows:

**Weight for Employer 1 = w1**  
**= 250 / 400 = 0.625**

**Weight for Employer 2 = w2**  
**= 100 / 400 = 0.25**

**Weight for Employer 3 = w3**  
**= 50 / 400 = 0.125**

**The weighted average insolvency risk is then: w1 x q1 + w2 x q2 + w3 x q3**

**= 0.625 x 0.9047% + 0.25 x 0.3033%  
+ 0.125 x 0.7241% = 0.7318%**

Once we have calculated the weighted average insolvency risk, we multiply this number by a factor which reflects the reduced insolvency risk for a particular type of multi-employer arrangement. As the employers are in the same company group, we use a factor of 0.9.

**Calculation B = weighted average  
insolvency risk x 0.9 = 0.7318%  
x 0.9 = 0.6586%**

**As B is less than A, Calculation B  
is used as the insolvency risk for  
the levy calculation.**

**Risk based levy = underfunding  
risk x Insolvency risk x 80% x levy  
scaling factor**

**= £17.5m x 0.6586% x 80%  
x 0.53 = £48,868**

The risk based levy cap of 0.5% of liabilities, i.e. £750,000, does not bite in this example.

**Total levy = scheme based levy + risk  
based levy = £21,000 + £48,868 = £69,868**

**For further information  
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