

**Financial Assistance Scheme**  
**Example calculations for a valuation for relevant FAS**  
**qualifying schemes**

**DRAFT VERSION 0.1**

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## 1 Introduction

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This note sets out some examples of how the asset share calculation might work for schemes transferring assets to FAS, based on the draft guidance on method and assumptions to use when undertaking a valuation for relevant FAS schemes. It first shows the relevant statutory priority order, and the basis on which the liabilities are calculated. It then runs through each of the members showing the value of the liabilities for the member and the total scheme and FAS entitlement. These amounts are then aggregated for the scheme.

Then the scheme is analysed based on four scenarios. In the first scenario, pensioners get most of their benefits covered but deferreds are only partly covered. In the second scenario, pensioners get all of their benefits and deferreds would have got scheme benefits close to the level of *Standard Assistance*. In the last two scenarios, the scheme is extremely poorly funded; there are no scheme overpayments in the third scenario, but significant overpayments in the fourth.

### Example scheme

All the examples are based on a single (very small) scheme which started wind-up on 1 January 2000 with an insolvent employer. Its *Commencement Date* is therefore 1 January 2000 and, in this case, the crystallisation date is also 1 January 2000. Its assets are transferred and the asset shares calculated on 1 January 2010. The scheme does not have any money purchase assets or liabilities.

There were only seven members in the scheme when it started to wind-up, but they reflect a typical profile of pensioners and deferreds. Two died during the wind-up process, one of whom left a widow. For the purposes of these examples, the scheme is able to pay arrears to or reclaim payments from these two members' estates, despite the long period since these member's deaths and, as a result, the two deceased members are included in the calculation.

The scheme pays indexation on all service, and dependant's pensions are 50% of the member's pension. The statutory priority order for this scheme, and the basis on which it is calculated, is shown on the next page. This over-rides the scheme priority order which allocates assets first to pensioners and then to deferred members. Members are classified in the scheme priority order as pensioners or deferreds in the same way as the statutory priority order does. Under the scheme priority order rules, the liabilities are calculated using a buy-out basis.

	<b>Liability</b>	<b>Basis</b>
a	any liability for pensions or other benefits which, in the opinion of the trustees, are derived from the payment by any member of the scheme of voluntary contributions	MFR
aa	where- (i) the trustees or managers of the scheme are entitled to benefits under a contract of insurance which was entered into before 6th April 1997 with a view to securing the whole or part of the scheme's liability for any pension or other benefit payable in respect of one particular person whose entitlement to payment of a pension or other benefit has arisen and for any benefit which will be payable in respect of that person on his death, and (ii) either that contract may not be surrendered or the amount payable on surrender does not exceed the liability secured by the contract (but excluding liability for increases to pensions), the liability so secured	MFR
b	in a case not falling within (aa), where a person's entitlement to payment of pension or other benefit has arisen, liability for that pension or benefit and for any pension or other benefit which will be payable in respect of that person on his death (but excluding increases to pensions)	MFR
c	any liability- (i) for equivalent pension benefits (within the meaning of section 57(1) of the National Insurance Act 1965), guaranteed minimum pensions, protected rights, section 9(2B) rights (within the meaning of regulation 1(2) of the Contracting-out (Transfer and Transfer Payment) Regulations 1996), or safeguarded rights (within the meaning of section 68A(1) of the Pension Schemes Act 1993) (but excluding increases to pensions), or (ii) in respect of members with less than two years pensionable service who are not entitled to accrued rights under the scheme, for the return of contributions	MFR
d	any liability for increases to pensions referred to in (aa) and (b)	MFR
e	any liability for increases to pensions referred to in (c)	MFR
f	so far as not included in (c) or (e), any liability for- (i) pensions or other benefits which have accrued to or in respect of any members of the scheme (including increases to pensions), or (ii) future pensions, or other future benefits, attributable (directly or indirectly) to pension credits (including increases to pensions)	MFR

## 2 Member details

The calculations of liabilities can be carried out before or after assessment of the scheme assets. In these examples, most of the member calculations are the same, so it is more convenient to carry them out first. As described in paragraphs 4.3 and 4.4, the liabilities for the members are calculated split by priority class as are payments that would have been made to the member had the scheme been fully funded. In practice, it is not necessary to calculate liabilities which have no asset coverage. For the purposes of these examples, however, all liabilities are calculated.

### Member 1 – relatively young pensioner aged 65 at start of wind-up and 75 now

#### Liability for future payments

Priority Class	Liability for purposes of calculating statutory asset share (£)	Buyout liability (£)
a) AVCs	nil	nil
aa) Pensions in payment secured by insurance policies	nil	nil
b) Pensions in payment excluding increases	31,862	39,480
d) Increases on pensions in payment	20,240	28,822
<b>Total liability</b>	<b>52,102</b>	<b>68,302</b>

#### Past Entitlement

	Rate at end of wind-up (£ pa)	Total amount, without interest (£)		
		1/1/2000 - 13/5/2004	14/5/2004 – 31/12/2009	Total
Scheme pension excluding increases	3,000	13,000	17,000	30,000
Increases on scheme pension	898	540	3,269	3,809
<b>Total Scheme pension</b>	<b>3,898</b>	<b>13,540</b>	<b>20,269</b>	<b>33,809</b>
Non-indexed FAS	2,700	N/A	15,300	15,300
Indexed FAS	nil	N/A	nil	nil
<b>Total FAS</b>	<b>2,700</b>	<b>N/A</b>	<b>15,300</b>	<b>15,300</b>

Scheme entitlement is entitlement if scheme pays 100% of benefits. FAS entitlement shown is entitlement if scheme unable to pay any benefits.

The *Adjusted Liabilities* can then be calculated for each member as described in paragraph 4.5. The table below first shows non-zero statutory priority classes for this member, and continues on to show the priority classes that are effective if assets are

sufficient to cover all the statutory priority classes. The remaining scheme priority order liabilities are the difference between the buy-out liability and the statutory priority order liability.

*Adjusted Liabilities*

<b>Priority Class</b>	<b>(£)</b>
<b>Statutory Priority classes</b>	
b) Pensions in payment excluding increases	61,862
d) Increases on pensions in payment	24,049
<b>Total statutory priority order adjusted liability</b>	<b>85,911</b>
Remaining scheme priority order classes	
Pensioners	16,200
<b>Grand Total adjusted liability</b>	<b>102,111</b>

**Member 2 – elderly pensioner aged 75 at start of wind-up and 85 now**

## Liability for future payments

Priority Class	Liability for purposes of calculating statutory asset share (£)	Buyout liability (£)
a) AVCs	nil	nil
aa) Pensions in payment secured by insurance policies	nil	nil
b) Pensions in payment excluding increases	46,159	50,520
d) Increases on pensions in payment	24,846	34,483
<b>Total liability</b>	<b>71,005</b>	<b>85,003</b>

## Past Entitlement

	Rate at end of wind-up (£ pa)	Total amount, without interest (£)		
		1/1/2000 - 13/5/2004	14/5/2004 – 31/12/2009	Total
Scheme pension excluding increases	6,000	26,000	34,000	60,000
Increases on scheme pension	1,795	1,080	6,538	7,618
<b>Total Scheme pension</b>	<b>7,795</b>	<b>27,080</b>	<b>40,538</b>	<b>67,618</b>
Non-indexed FAS	5,400	N/A	30,600	30,600
Indexed FAS	nil	N/A	nil	nil
<b>Total FAS</b>	<b>5,400</b>	<b>N/A</b>	<b>30,600</b>	<b>30,600</b>

Scheme entitlement is entitlement if scheme pays 100% of benefits. FAS entitlement shown is entitlement if scheme unable to pay any benefits.

*Adjusted Liabilities*

Priority Class	(£)
Statutory Priority classes	
b) Pensions in payment excluding increases	106,159
d) Increases on pensions in payment	32,464
<b>Total statutory priority order adjusted liability</b>	<b>138,623</b>
Remaining scheme priority order classes	
Pensioners	13,998
<b>Grand Total adjusted liability</b>	<b>152,621</b>

**Member 3a – pensioner died at the end of 2005 – no spouse**

## Liability for future payments

Priority Class	Liability for purposes of calculating statutory asset share (£)	Buyout liability (£)
a) AVCs	nil	nil
aa) Pensions in payment secured by insurance policies	nil	nil
b) Pensions in payment excluding increases	nil	nil
d) Increases on pensions in payment	nil	nil
<b>Total liability</b>	<b>nil</b>	<b>nil</b>

## Past Entitlement

	Rate at date of death (£ pa)	Total amount, without interest (£)		
		1/1/2000 - 13/5/2004	14/5/2004 – 31/12/2009	Total
Scheme pension excluding increases	3,000	13,000	5,000	18,000
Increases on scheme pension	381	540	573	1,113
<b>Total Scheme pension</b>	<b>3,381</b>	<b>13,540</b>	<b>5,573</b>	<b>19,113</b>
Non-indexed FAS	2,700	N/A	4,500	4,500
Indexed FAS	Nil	N/A	nil	Nil
<b>Total FAS</b>	<b>2,700</b>	<b>N/A</b>	<b>4,500</b>	<b>4,500</b>

Scheme entitlement is entitlement if scheme pays 100% of benefits. FAS entitlement shown is entitlement if scheme unable to pay any benefits.

*Adjusted Liabilities*

Priority Class	(£)
Statutory Priority classes	
b) Pensions in payment excluding increases	18,000
d) Increases on pensions in payment	1,113
<b>Total statutory priority order adjusted liability</b>	<b>19,113</b>
<b>Grand Total adjusted liability</b>	<b>19,113</b>

**Member 3b – pensioner age 75 at start of wind-up died at the end of 2005 – left widow of same age**

## Liability for future payments

Priority Class	Liability for purposes of calculating statutory asset share (£)	Buyout liability (£)
a) AVCs	nil	nil
aa) Pensions in payment secured by insurance policies	nil	nil
b) Pensions in payment excluding increases	nil	nil
d) Increases on pensions in payment	nil	nil
<b>Total liability</b>	<b>nil</b>	<b>nil</b>

## Past Entitlement

	Rate at date of death (£ pa)	Total amount, without interest (£)		
		1/1/2000 - 13/5/2004	14/5/2004 – 31/12/2009	Total
Scheme pension excluding increases	3,000	13,000	5,000	18,000
Increases on scheme pension	381	540	573	1,113
<b>Total Scheme pension</b>	<b>3,381</b>	<b>13,540</b>	<b>5,573</b>	<b>19,113</b>
Non-indexed FAS	2,700	N/A	4,500	4,500
Indexed FAS	Nil	N/A	nil	Nil
<b>Total FAS</b>	<b>2,700</b>	<b>N/A</b>	<b>4,500</b>	<b>4,500</b>

Scheme entitlement is entitlement if scheme pays 100% of benefits. FAS entitlement shown is entitlement if scheme unable to pay any benefits.

*Adjusted Liabilities*

Priority Class	(£)
<b>Statutory Priority classes</b>	
b) Pensions in payment excluding increases	18,000
d) Increases on pensions in payment	1,113
<b>Total statutory priority order adjusted liability</b>	<b>19,113</b>
<b>Grand Total adjusted liability</b>	<b>19,113</b>

**Member 3c – Widow of member 3b. Same age as member 3b and widowed at the end of 2005.**

Liability for future payments

Priority Class	Liability for purposes of calculating statutory asset share (£)	Buyout liability (£)
a) AVCs	nil	nil
aa) Pensions in payment secured by insurance policies	nil	nil
b) Pensions in payment excluding increases	11,080	11,835
d) Increases on pensions in payment	5,862	8,132
<b>Total liability</b>	<b>16,942</b>	<b>19,967</b>

Past Entitlement

	Rate at end of wind-up (£ pa)	Total amount, without interest (£)		
		1/1/2000 - 13/5/2004	14/5/2004 – 31/12/2009	Total
Scheme pension excluding increases	1,500	nil	6,000	6,000
Increases on scheme pension	449	nil	1,349	1,349
<b>Total Scheme pension</b>	<b>1,949</b>	<b>nil</b>	<b>7,349</b>	<b>7,349</b>
Non-indexed FAS	1,350	N/A	5,400	5,400
Indexed FAS	Nil	N/A	Nil	Nil
<b>Total FAS</b>	<b>1,350</b>	<b>N/A</b>	<b>5,400</b>	<b>5,400</b>

Scheme entitlement is entitlement if scheme pays 100% of benefits. FAS entitlement shown is entitlement if scheme unable to pay any benefits.

*Adjusted Liabilities*

Priority Class	(£)
<b>Statutory Priority classes</b>	
b) Pensions in payment excluding increases	17,080
d) Increases on pensions in payment	7,211
<b>Total statutory priority order adjusted liability</b>	<b>24,291</b>
Remaining scheme priority order classes	
Pensioners	3,025
<b>Grand Total adjusted liability</b>	<b>27,316</b>

**Member 4 – Young deferred member aged 40 at start of wind-up, age 50 now**

Priority Class	Liability for purposes of calculating asset share (£)	Buyout liability (£)
a) AVCs	nil	nil
c) (Deferred) contracted-out liabilities excluding increases and returns of contributions	10,061	43,890
e) Increases on (deferred) contracted-out liabilities	2,871	19,740
f) Other liabilities (i.e. non contracted-out deferred benefits)	8,621	42,420
<b>Total liability</b>	<b>21,553</b>	<b>106,050</b>

**Past Entitlement**

	Rate at end of wind-up (£ pa)	Total amount, without interest (£)		
		1/1/2000 - 13/5/2004	14/5/2004 – 31/12/2009	Total
a) AVCs	nil	nil	nil	nil
c) (Deferred) contracted-out liabilities excluding increases and returns of contributions	3,000	nil	nil	nil
e) Increases on (deferred) contracted-out liabilities	nil	nil	nil	nil
f) Other liabilities (i.e. non contracted-out deferred benefits)	2,000	nil	nil	nil
<b>Total Scheme pension</b>	<b>5,000</b>	<b>nil</b>	<b>nil</b>	<b>nil</b>
Non-indexed FAS	2,250	N/A	nil	nil
Indexed FAS	2,250	N/A	nil	nil
<b>Total FAS</b>	<b>4,500</b>	<b>N/A</b>	<b>nil</b>	<b>nil</b>

*Adjusted Liabilities*

<b>Priority Class</b>	<b>(£)</b>
<b>Statutory Priority classes</b>	
c) (Deferred) contracted-out liabilities excluding increases and returns of contributions	10,061
e) Increases on (deferred) contracted-out liabilities	2,871
f) Other liabilities (i.e. non contracted-out deferred benefits)	8,621
<b>Total statutory priority order adjusted liability</b>	<b>21,553</b>
<b>Remaining scheme priority order classes</b>	
Deferreds	84,497
<b>Grand Total adjusted liability</b>	<b>106,050</b>

**Member 5 – Deferred member retires at Scheme Normal Pension Age during wind-up aged 60 at start of wind-up, age 70 now**

<b>Priority Class</b>	<b>Liability for purposes of calculating asset share (£)</b>	<b>Buyout liability (£)</b>
a) AVCs	nil	nil
c) (Deferred) contracted-out liabilities excluding increases and returns of contributions	5,031	22,980
e) Increases on (deferred) contracted-out liabilities	2,424	13,555
f) Other liabilities (i.e. non contracted-out deferred benefits)	2,485	12,178
<b>Total liability</b>	<b>9,940</b>	<b>48,713</b>
Flat part of (f)	1,677	7,660
Indexed part of (f)	808	4,518

**Past Entitlement**

	<b>Rate at end of wind-up (£ pa)</b>	<b>Total amount, without interest (£)</b>		
		<b>1/1/2000 - 13/5/2004</b>	<b>14/5/2004 – 31/12/2009</b>	<b>Total</b>
a) AVCs	nil	nil	nil	nil
c) (Deferred) contracted-out liabilities excluding increases and returns of contributions	1,500	nil	7,500	7,500
e) Increases on (deferred) contracted-out liabilities	229	nil	521	521
f) Other liabilities (i.e. non contracted-out deferred benefits)	576	nil	2,674	2,674
<b>Total Scheme pension</b>	<b>2,306</b>	<b>nil</b>	<b>10,695</b>	<b>10,695</b>
Flat part of category (f)	500	nil	2,500	2,500
Indexed part	76	nil	174	174
Non-indexed FAS	900	N/A	4,500	4,500
Indexed FAS	993	N/A	4,731	4,731
<b>Total FAS</b>	<b>1,893</b>	<b>N/A</b>	<b>9,231</b>	<b>9,231</b>

*Adjusted Liabilities*

<b>Priority Class</b>	<b>(£)</b>
<b>Statutory Priority classes</b>	
c) (Deferred) contracted-out liabilities excluding increases and returns of contributions	12,531
e) Increases on (deferred) contracted-out liabilities	2,945
f) Other liabilities (i.e. non contracted-out deferred benefits)	5,159
<b>Total statutory priority order adjusted liability</b>	<b>20,635</b>
<b>Remaining scheme priority order classes</b>	
Deferreds	38,773
<b>Grand Total adjusted liability</b>	<b>59,408</b>

The non-contracted-out deferred benefits are split into flat pension and increases here to ease the calculation of *Notional Annuities*.

### Member 6 – Young Deferred member aged 40 at start of wind-up

Priority Class	Liability for purposes of calculating asset share (£)	Buyout liability (£)
a) AVCs	nil	nil
c) (Deferred) contracted-out liabilities excluding increases and returns of contributions	10,061	43,890
e) Increases on (deferred) contracted-out liabilities	2,871	19,740
f) Other liabilities (i.e. non contracted-out deferred benefits)	8,621	42,420
<b>Total liability</b>	<b>21,553</b>	<b>106,050</b>

### Past Entitlement

	Rate at end of wind-up (£ pa)	Total amount, without interest (£)		
		1/1/2000 - 13/5/2004	14/5/2004 – 31/12/2009	Total
a) AVCs	nil	nil	nil	nil
c) (Deferred) contracted-out liabilities excluding increases and returns of contributions	3,000	nil	nil	nil
e) Increases on (deferred) contracted-out liabilities	nil	nil	nil	nil
f) Other liabilities (i.e. non contracted-out deferred benefits)	2,000	nil	nil	nil
<b>Total Scheme pension</b>	<b>5,500</b>	<b>nil</b>	<b>nil</b>	<b>nil</b>
Non-indexed FAS	2,250	N/A	nil	nil
Indexed FAS	2,250	N/A	nil	nil
<b>Total FAS</b>	<b>4,950</b>	<b>N/A</b>	<b>nil</b>	<b>nil</b>

*Adjusted Liabilities*

<b>Priority Class</b>	<b>(£)</b>
<b>Statutory Priority classes</b>	
c) (Deferred) contracted-out liabilities excluding increases and returns of contributions	10,061
e) Increases on (deferred) contracted-out liabilities	2,871
f) Other liabilities (i.e. non contracted-out deferred benefits)	8,621
<b>Total statutory priority order adjusted liability</b>	<b>21,553</b>
<b>Remaining scheme priority order classes</b>	
Deferreds	84,497
<b>Grand Total adjusted liability</b>	<b>106,050</b>

Note: this member is identical to member 4.

Once the *Adjusted Liabilities* for individual members are calculated, the actuary then sums them over each priority class as required by paragraph 4.6 of the guidance. The liabilities calculated at that date, split into the statutory priority classes required for insolvent wind-ups that commenced from 6/4/1997 to 9/5/2004 are:

*Adjusted Liabilities*

<b>Priority Class</b>	<b>(£)</b>
<b>Statutory Priority classes</b>	
b) Pensions in payment excluding increases	221,101
c) (Deferred) contracted-out liabilities excluding increases and returns of contributions	32,653
d) Increases on pensions in payment	65,949
e) Increases on (deferred) contracted-out liabilities	8,687
f) Other liabilities (i.e. non contracted-out deferred benefits)	22,401
<b>Total statutory priority order adjusted liability</b>	<b>350,791</b>
<b>Remaining scheme priority order classes</b>	
Pensioners	33,223
Deferreds	207,768
<b>Total remaining scheme priority order classes</b>	<b>240,991</b>
<b>Grand Total adjusted liability</b>	<b>591,782</b>

This is the priority order in force for wind-ups commencing 6 April 1997 to 9 May 2004 inclusive. Wind-up commenced before 19 March 2002, so the MFR liability is used for calculating all of the statutory priority classes.

Expenses to be incurred in transferring assets to FAS will be £20,000.

For completeness, the total unadjusted liabilities and amounts due are shown below:

Future payments

<b>Priority Class</b>	<b>Liability for purposes of calculating asset share (£)</b>	<b>Buyout liability (£)</b>	<b>Total amount, without interest 1/1/2000-31/12/2009 (£)</b>
a) AVCs	nil	nil	nil
aa) Pensions in payment secured by insurance policies	nil	nil	nil
b) Pensions in payment excluding increases	89,101	101,835	132,000
c) (Deferred) contracted-out liabilities excluding increases and returns of contributions	25,153	110,760	7,500
d) Increases on pensions in payment	50,948	71,437	15,001
e) Increases on (deferred) contracted-out liabilities	8,166	53,036	521
f) Other liabilities (i.e. non contracted-out deferred benefits)	19,728	97,019	2,674
<b>Total liability</b>	<b>193,095</b>	<b>434,086</b>	<b>157,696</b>

### 3 Scenario 1 – Poorly funded (assets £190,000) – scheme cut back benefits below expected funding level

In this case, the scheme actuary estimated that the assets would be used up in the priority class of d) increases on pensions in payment. The trustees therefore decided to cut back by not paying any increases and when a deferred pension came into payment only paying 50% of the contracted-out part (since the assets allocated here are the MFR value, which is less than the buyout value). The total amount of interim pensions paid is therefore £135,750. FAS initial payments commenced with effect from 14 May 2004. Pensioners did not receive any initial payments since the scheme was paying 100% of pensions excluding increases. Deferred members would have received some of their benefits in the form of initial payments.

When the asset share is calculated, the assets of the scheme are adjusted as described in paragraph 4.2 to remove future expenses (£20,000) but to include the total amount of the interim payments actually made (i.e. £190,000 less £20,000 plus £135,750 equals £305,750). This figure is the *Adjusted Assets*. The liabilities are adjusted by summing liabilities for payments during wind-up and following the end of wind-up. The *Adjusted Assets* are allocated to the *Adjusted Liabilities* as described in paragraph 4.7 of the guidance as follows (showing statutory priority classes only):

Priority Class	Adjusted Liabilities (£)	Allocated Adjusted Assets (£)	Proportion of priority class covered
a) AVCs	nil	nil	100%
aa) Pensions in payment secured by insurance policies	nil	nil	100%
b) Pensions in payment excluding increases	221,101	221,101	100%
c) (Deferred) contracted-out liabilities excluding increases and returns of contributions	32,653	32,653	100%
d) Increases on pensions in payment	65,949	51,996	78.84%
e) Increases on (deferred) contracted-out liabilities	8,687	nil	0%
f) Other liabilities (i.e. non contracted-out deferred benefits)	22,401	nil	0%
<b>Total liability</b>	<b>350,791</b>	<b>305,750</b>	

Each member therefore has an *Asset Share* calculated according to paragraph 4.10 of the guidance of:

- > Total amount of past entitlement to AVCs *plus*
- > MFR value of their future entitlement to AVCs *plus*
- > Total amount of past entitlement to benefits secured via insurance policies *plus*
- > MFR value of future entitlement to benefits secured via insurance policies *plus*
- > Total amount of past entitlement to pensions in payment excluding increases *plus*
- > MFR value of future entitlement to pensions in payment excluding increases *plus*
- > Total amount of past entitlement to contracted-out liabilities *plus*
- > MFR value of future entitlement to deferred contracted-out liabilities *plus*
- > 78.84% of total amount of past entitlement to increases of pensions in payment *plus*
- > 78.84% of MFR value of future entitlement to increases of pensions in payment **less**
- > Total amount of actual interim payments received

The sum of all these *Asset Shares* will be £170,000, the actual level of assets in the scheme less the £20,000 in expenses. Individual *Asset Shares* can now be calculated. The *Asset Share* will be positive or zero for all members since the trustees cut back benefits below the level afforded by the *Asset Share*.

### Scenario 1 Member 1

Member 1 would have received £30,000 interim payments which would reflect all their pension excluding increases and so their *Adjusted Asset Share* will be:  
 $(£31,862 + £30,000) + 0.7884 \times (£3,809 + £20,240) = £80,823$

We then deduct interim payments received (£30,000) to get the *Asset Share* of **£50,823** (paragraph 4.11 of the guidance).

When calculating *Notional Annuities*, the buyout value of the pension increases needs to be taken into account, not the MFR value.

The *Notional Annuity* for each member is the benefit that could have been paid to the member had the final funding situation been known at the start of wind-up. These benefits are constructed in order, starting with pension excluding increases (see paragraph 5.4 of the guidance, although note that this is subject to change since this area is still subject to policy development). For this calculation, the *Annuitised Asset Share* is used which is equal to the *Asset Share* plus interim payments received as described in paragraph 5.2 of the guidance. In most cases, this amount is equal to

the share of the *Adjusted Assets* (but see example 4 where this is not the case.) Pensions excluding increases take up £69,480 of the *Annuitised Asset Share*. The remaining £11,343 can cover 34.76% of the £32,631 cost of increases during (£3,809) and after (£28,822) wind-up, on a buy-out basis.

The total amount of interim payments that should have been paid (based on the order in which the *Notional Annuity* is constructed) is  $£30,000 + 0.3476 \times £3,809 = £31,324$  so a scheme underpayment calculated according to paragraph 55 of the guidance has been made of  $£31,324 - £30,000 = \mathbf{£1,324}$ . Pre-2004 payments should have been  $£13,000 + 0.3476 \times 540 = £13,188$ , implying an underpayment of £188. Post-2004 payments should have been  $£17,000 + 0.3476 \times £3,269 = £18,136$ , implying an underpayment of £1,136.

Ongoing, the scheme can afford a *Notional Annuity* paying £3,000 a year flat pension plus 34.76% of the increases. The full rate of increases when assets transfer is £898 pa, so the total rate in payment at that point would be  $£3,000 + 0.3476 \times £898 = \mathbf{£3,312 \text{ pa}}$

Note that paying 34.76% of increases is equivalent to saying that the indexed pension is based on 34.76% of the base. i.e.  $0.3476 \times £3,000 = £1,043$  is indexed, and  $£3,000 - £1,043 = £1,957$  is flat as at the start of wind-up. At the calculation date, the flat component remains at £1,957. However, the indexed component has increased to £1,355.

#### Scenario 1 Member 4

The young deferred member will have an *Asset Share* of £10,061 equal to the MFR value of contracted-out rights excluding increases. There are no over or under payments. This is used to purchase a FAS-shaped benefit. Half of the member's service is post-97, so half of the FAS-shaped benefit will be indexed. The asset share is sufficient to provide an income of £561 a year revalued to the date of asset transfer. £281 a year is flat and £281 a year is indexed at 2.5% LPI.

The *Asset Share* will be used when calculating the maximum lump sum available to this member.

#### Scenario 1 Member 5

The deferred member who retired during wind-up received some scheme benefits. The *Asset Share* is equal to the MFR value of future contracted-out payments plus the total amount of previous contracted-out payments that would have been paid (each without increases) less interim payments actually received (50% of £7,500). This is  $£7,500 + £5,031 - £3,750 = \mathbf{£8,781}$ .

This member retired before the coming into force date of the new regs, so we calculate a "scheme-shaped" *Notional Annuity*, again constructing the benefit in order (although note that this is subject to change since this area is still subject to policy development). The scheme should pay the member a proportion of pension excluding increases. The proportion that can be afforded is 41.11% ( $£8,781 +$

£3,750) / (£22,980 + £7,500). This is the *Asset Share* plus interim payments received divided by the buyout value of this priority class and the full entitlement to interim payments in this class. In this case, interim payments should have been  $41.11\% \times £7,500 = £3,083$  so there has been a scheme overpayment of £667. All payments were post-04. The rate of notional annuity is  $0.4111 \times £1,500 = \mathbf{£617 \text{ pa}}$ .

In summary, asset shares are:

Member	Adjusted Asset Share =Annuitised Asset Share	Less interim payments	Asset Share
1	80,823	30,000	50,823
2	131,754	60,000	71,754
3a	18,877	18,000	877
3b	18,877	18,000	877
3c	22,765	6,000	16,765
4	10,061	nil	10,061
5	12,531	3,750	8,781
6	10,061	nil	10,061
<b>Total</b>	<b>305,750</b>	<b>135,750</b>	<b>170,000</b>

Amounts due from the scheme based on the *Notional Annuity* are:

Member	Pre-04	Post-04	Total
1	13,188	18,136	31,324
2	26,545	37,298	63,842
3a	13,426	5,452	18,877
3b	13,426	5,452	18,877
3c	0	6,702	6,702
4	nil	nil	nil
5	0	3,083	3,083
6	nil	nil	Nil
<b>Total</b>	<b>66,583</b>	<b>76,122</b>	<b>142,706</b>

Arrears (overpayments) due to (from) members in respect of scheme payments:

Member	Pre-04	Post-04	Total
1	188	1,136	1,324
2	545	3,298	3,842
3a	426	452	877
3b	426	452	877
3c	0	702	702
4	nil	Nil	nil
5	0	(667)	(677)
6	nil	nil	nil
<b>Total</b>	<b>1,583</b>	<b>5,372</b>	<b>6,956</b>

Financial Assistance Scheme

Example calculations for a valuation for relevant FAS qualifying schemes

DRAFT Version 0.1

April 2009

The rates of *Notional Annuities* in payment at the calculation date are:

<b>Member</b>	<b>Flat Notional Annuity</b>	<b>Indexed Notional Annuity</b>	<b>Total Notional Annuity</b>
1	1,957	1,355	3,312
2	2,974	3,932	6,906
3c	720	1,014	1,734
5	617	0	617

The rates of deferred *Notional Annuities* at the calculation date are

<b>Member</b>	<b>Flat Notional Annuity</b>	<b>Indexed Notional Annuity</b>	<b>Total Notional Annuity</b>
4	281	281	561
6	281	281	561

Members 3a and 3b died before the calculation date, so a *Notional Annuity* is not in payment to them at the calculation date.

#### **4 Scenario 2 – Reasonably funded (assets £400,000) – scheme cut back benefits below expected funding level**

In this case, the scheme actuary estimated that the assets would be sufficient to cover all the priority classes using the statutory basis, but would not be sufficient to cover the buyout liability. The trustees therefore decided to cut back by paying half of any deferred benefits and half of increases on pensions in payment. The total amount of interim pensions actually paid is therefore £144,848. FAS initial payments commenced with effect from 14 May 2004. Pensioners did not receive any initial payments since the scheme was paying 100% of pensions excluding increases. Deferred members would have received some of their benefits in the form of initial payments.

When the asset share is calculated, the assets used in the calculation are adjusted to exclude expenses but include the total amount of the interim payments actually made (i.e. £400,000 less £20,000 plus £144,848 equals £524,848). These adjusted assets are allocated in the statutory priority order as follows:

<b>Priority Class</b>	<b>Adjusted Liabilities (£)</b>	<b>Allocated Adjusted Assets (£)</b>	<b>Proportion of priority class covered</b>
a) AVCs	nil	nil	100%
aa) Pensions in payment secured by insurance policies	nil	nil	100%
b) Pensions in payment excluding increases	221,101	221,101	100%
c) (Deferred) contracted-out liabilities excluding increases and returns of contributions	32,653	32,653	100%
d) Increases on pensions in payment	65,949	65,949	100%
e) Increases on (deferred) contracted-out liabilities	8,687	8,687	100%
f) Other liabilities (i.e. non contracted-out deferred benefits)	22,401	22,401	100%
<b>Total liability</b>	<b>350,791</b>	<b>350,791</b>	

There are still *Adjusted Assets* of £174,057 (£524,848 minus £350,791) left after this procedure. The trustees have to allocate these according to the scheme rules. In addition to this amount, it would require a further £66,934 to fund to buyout levels, so the scheme will still be underfunded at the end.

After this procedure, the allocation of the remaining assets is:

<b>Priority Class</b>	<b>Future buyout liability less future statutory priority order liability (£)</b>	<b>Allocated Adjusted Assets (£)</b>	<b>Proportion of priority class covered</b>
1 Pensions	33,223	33,223	100%
2 Deferrands	207,768	140,834	67.784%
<b>Total liability</b>	<b>240,991</b>	<b>174,057</b>	

Therefore, all benefits for pensioners are covered up to buy-out. However, deferred members do not get a full scheme entitlement.

Each member therefore has an *asset share* of:

- > Total amount of past entitlement to pensions in payment (b and d) *plus*
- > Buyout value of their future entitlement to pensions in payment (b, d and 3) *plus*
- > Total amount of past entitlement to deferred pensions (c, e, f) *plus*
- > MFR value of future entitlement to deferred pensions (c,e,f) *plus*
- > 67.784% of the difference between buy-out and MFR value of future entitlement to deferred pensions (4) **less**
- > Total amount of actual interim payments received

The sum of all these *Asset Shares* will be the *Adjusted Assets* of £380,000, the actual level of assets in the scheme less expenses. Individual *Asset Shares* can now be calculated. The *Asset Share* will be positive or zero for all members since the trustees cut back benefits below the level afforded by the *Asset Share*.

### **Scenario 2 Member 1**

Member 1 would have received £31,904 interim payments which would reflect all their pension excluding increases and half of the increases so their *Asset Share* will be:

$$£39,480 + £28,822 + £30,000 + £3,809 - £31,904 = £70,206$$

(note the buyout value of liabilities used in the calculation now since it is based on scheme priority order)

### **Scenario 2 Member 4**

The young deferred member will have an *Asset Share* of £21,553 + 0.67784 x (£106,050 - £21,553) = £78,829. There are no over or under payments. Note that the asset share is only sufficient to purchase 74.33% of the buyout value of all benefits (£106,050). The *Asset Share* will be used when calculating the maximum lump sum available to this member.

The member's *Asset Share* is converted into a *Notional Annuity* reflecting the FAS benefit structure which is initially worth £4,399 a year.

### Scenario 2 Member 5

The deferred member who retired during wind-up received £5,347 scheme benefits (50% of the full entitlement of £10,695). The *Adjusted Asset Share* is equal to:  
 $£9,940 + £10,695 + 0.67784 \times (£48,713 - £9,940) = £46,917$   
 and therefore the *Asset Share* is  $£46,917 - £5,347 = £41,570$ .

This member retired before the coming-into-force date of the December regulations, so a *Notional Annuity* is purchased starting with a pension excluding increases, then increases on that (although note that this is subject to change since this area is still subject to policy development). For this member, the *Annuitised Asset Share* is the same as the *Adjusted Asset Share*. The cost of the £2,000 pension excluding increases, payable from retirement is £40,640, so the *Annuitised Asset Share* is sufficient to cover this, with £6,277 remaining to purchase increases. Increases cost £695 before and £18,073 after the calculation date, so 33.44% of these can be afforded.

The total amount of interim payments that should have been paid (based on the order in which the *Notional Annuity* is constructed) is  $£10,000 + 0.3344 \times £695 = £10,232$  so a scheme underpayment has been made of  $£10,232 - £5,347 = £4,885$ . This all relates to payments after May 2004.

Ongoing, the scheme can afford a *Notional Annuity* paying £2,000 a year flat pension plus 33.44% of the increases. The full rate of increases when assets transfer is £306 pa, so the total rate in payment at that point would be  
 $£2,000 + 0.3344 \times £306 = £2,102 \text{ pa}$

Note that paying 33.44% of increases is equivalent to saying that the indexed pension is based on 33.44% of the base. i.e.  $0.3344 \times £2,000 = £669$  is indexed, and  $£2,000 - £669 = £1,331$  is flat.

## **5 Scenario 3 – Extremely poorly funded (assets £15,000) – scheme cut back benefits below expected funding level**

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In this trivial case, the scheme actuary estimated that the scheme may not have sufficient assets to pay any benefits. The trustees therefore decided to stop paying any benefits until the wind-up was completed. FAS initial payments commenced on 14 May 2004.

When the asset share is calculated, the scheme has insufficient assets to pay its expenses. It gets money from FAS for the additional £5,000 required in order for it to transfer to FAS.

The *Adjusted Assets* for this scheme are minus £5,000. All members therefore have a nil *Asset Share* and a nil *Annuitised Asset Share*. The *Notional Annuity* will also be nil.

There will be no arrears or back-payments from the scheme.

## **6 Scenario 4 – Extremely poorly funded (assets £15,000) – scheme did not cut back benefits**

In this case, the trustees decided not to cut back benefits. There were no FAS initial payments as a result.

The scheme does not have enough assets to pay the expenses of the wind-up. Therefore it gets a payment from FAS of the extra £5,000 required. Its assets are now £20,000. When the *Asset Share* is calculated, the assets used in the calculation are adjusted to include the total amount of the interim payments actually made (i.e. actual assets of £20,000 plus interim payments of £157,696 equals £177,696). The expenses due (£20,000) and the FAS payment (£5,000) are deducted from this to give *Adjusted Assets* of £152,696. These *Adjusted Assets* are allocated as follows:

<b>Priority Class</b>	<b>Adjusted Liabilities (£)</b>	<b>Allocated Adjusted Assets (£)</b>	<b>Proportion of priority class covered</b>
a) AVCs	nil	nil	100%
aa) Pensions in payment secured by insurance policies	nil	nil	100%
b) Pensions in payment excluding increases	221,101	152,696	69.06%
c) (Deferred) contracted-out liabilities excluding increases and returns of contributions	32,653	nil	0%
d) Increases on pensions in payment	65,949	nil	0%
e) Increases on (deferred) contracted-out liabilities	8,687	nil	0%
f) Other liabilities (i.e. non contracted-out deferred benefits)	22,401	nil	0%
<b>Total liability</b>	<b>350,791</b>	<b>152,696</b>	

Each member therefore has an asset share of:

- > Total amount of past entitlement to AVCs *plus*
- > MFR value of their future entitlement to AVCs *plus*
- > Total amount of past entitlement to benefits secured via insurance policies *plus*
- > MFR value of future entitlement to benefits secured via insurance policies *plus*

- > 69.06% of total amount of past entitlement to pensions in payment excluding increases *plus*
- > 69.06% of MFR value of future entitlement to pensions in payment excluding increases **less**
- > Total amount of actual interim payments received by that member

The sum of all these *Asset Shares* will be -£5,000, which is the actual assets of £20,000 that the scheme now has, less the expenses to be incurred and less the FAS payment. Individual *Asset Shares* can now be calculated. At this stage, the *Asset Share* for each member could be positive, negative or zero.

In summary, asset shares are:

Member	Adjusted Asset Share	Less interim payments	Asset Share
1	42,723	33,809	8,914
2	73,315	67,618	5,697
3a	12,431	19,113	-6,682
3b	12,431	19,113	-6,682
3c	11,796	7,349	4,446
4	nil	nil	nil
5	nil	10,695	-10,695
6	nil	nil	nil
Total	152,696	157,696	-5,000

Initially, the *Asset Shares* for members 3a, 3b and 5 are negative. The trustees may decide to seek to recover overpayments from some members, and particularly these ones who appear to have been paid in excess of their asset share during wind-up. If money is recovered, then the asset share calculation should be repeated with the new asset figure. The remainder of this example assumes that recovery was not successful in which case the members with negative asset shares are excluded from the calculation which is then repeated. The *Adjusted Assets* are now the £108,776 of interim pensions paid to members 1 and 2 and 3c minus the £5,000 payment from FAS which leaves £103,776. The allocation of assets is now as follows (excluding priority classes with nil coverage):

Priority Class	Adjusted Liabilities (£)	Allocated Adjusted Assets (£)	Proportion of priority class covered
a) AVCs	nil	nil	100%
aa) Pensions in payment secured by insurance policies	nil	nil	100%
b) Pensions in payment excluding increases	185,101	103,776	56.06%

Asset shares are now:

Member	Adjusted asset share	Less interim payments	Asset share
1	34,683	33,809	874
2	59,517	67,618	-8,100
3a	excluded	excluded	nil
3b	excluded	excluded	nil
3c	9,576	7,349	2,227
4	nil	nil	nil
5	excluded	excluded	nil
6	nil	nil	nil
Total	103,776	108,776	-5,000

### Third round

In the second round of calculations, member 2 has a negative asset share so is excluded from the third round. *Adjusted Assets* are now the £41,158 paid to members 1 and 3c minus the £5,000 payment from FAS leaving £36,158. The allocation of *Adjusted Assets* is now:

Priority Class	Adjusted Liabilities (£)	Allocated Adjusted Assets (£)	Proportion of priority class covered
a) AVCs	nil	nil	100%
aa) Pensions in payment secured by insurance policies	nil	nil	100%
b) Pensions in payment excluding increases	78,942	36,158	45.80%

Asset shares are now:

Member	Adjusted asset share	Less interim payments	Asset share
1	28,335	33,809	-5,474
2	excluded	excluded	nil
3a	excluded	excluded	nil
3b	excluded	excluded	nil
3c	7,823	7,349	474
4	nil	nil	nil
5	excluded	excluded	nil
6	nil	nil	nil
Total	36,158	41,158	-5,000

### Fourth round

In the third round of calculations, member 1 has a negative asset share so is excluded from the fourth round. *Adjusted assets* are now the £7,349 paid to member

3c minus the £5,000 payment from FAS, leaving £2,349. The allocation of *Adjusted Assets* is now as below:

Priority Class	Future Liability for purposes of calculating asset share plus past entitlement (£)	Allocated <i>Adjusted Assets</i> (£)	Proportion of priority class covered
a) AVCs	nil	nil	100%
aa) Pensions in payment secured by insurance policies	nil	nil	100%
b) Pensions in payment excluding increases	17,080	2,349	13.75%

*Asset Shares* are now:

Member	Adjusted assets	Less interim payments	Asset share
1	excluded	excluded	nil
2	excluded	excluded	nil
3a	excluded	excluded	nil
3b	excluded	excluded	nil
3c	2,349	7,349	-5000
4	nil	nil	nil
5	excluded	excluded	nil
6	nil	nil	nil
Total	2,349	7,349	-5,000

### Fifth round

Member 3c is now removed from the calculation, leaving members 4 and 6 only. Adjusted assets are now minus £5,000 and because this is negative, all members are deemed to have a nil *Asset Share*.

This is an extreme example in which all members end up with a nil *Asset Share* and the end result is apparent without going through the iterations. However, if the scheme had had enough money to pay expenses without requiring a payment from FAS, then there would still be some members with a positive *Asset Share* by the end of the iterations.

### Overpayments made to excluded members

The rate of *Notional Annuity* that should have been paid, and the implied overpayments if the aim was to pay members a steady amount of pension with no jump up or down at the point when wind-up was completed should now be

completed. The *Annuitised Asset Shares* used for this calculated are equal to the *Asset Share* for each member (i.e. nil) plus the interim payments received.

Members retiring before effective date of regs are allocated a “scheme-shaped” *Notional Annuity* – i.e. allocate to benefits in statutory priority order.

#### Member 1

*Annuitised asset share* £33,809

A *Notional Annuity* is to be purchased in the order of flat pension first, then indexation (although note that this is subject to change for all the members shown on this page since this area is still subject to policy development).

Value of full flat pension of £3,000 pa: £30,000 during wind-up and £39,480 afterwards equals £69,480 total. Therefore the rate of *Notional Annuity* is  $\frac{£3,000 \times 33,809}{69,480} = £1,460$  each year. If we are to pay that in the future, then overpayments in the past would have been  $£33,809 - 10 \times £1,460 = £19,209$

#### Member 2

*Annuitised Asset Share* £67,618

Value of full flat pension of £6,000 pa: £60,000 during wind-up and £50,520 afterwards equals £110,520 total. Therefore the rate of *Notional Annuity* is  $\frac{£6,000 \times 67,618}{110,520} = £3,671$  each year. If we are to pay that in the future, then overpayments in the past would have been  $£67,618 - 10 \times 3,671 = £30,908$

#### Member 3a and 3b

These members died so no further payments are due. Setting the *Asset Share* to nil means that no overpayment occurred.

#### Member 3c

*Annuitised Asset Share* £7,349

Value of flat pension of £1,500 a year payable after her husband's death: £6,000 during wind-up and £11,835 afterwards equals £17,835 total. Therefore the rate of *Notional Annuity* for future payments is  $\frac{£1,500 \times 7,349}{17,835} = £618$  each year. If we are to pay that in the future, then overpayments in the past would have been  $£7,349 - 4 \times 618 = £4,877$

#### Member 5

*Annuitised Asset Share* £10,695

Value of full pension excluding increases of £2,000 pa: £10,000 during wind-up and £30,640 afterwards equals £40,640 total. Therefore the rate of *Notional Annuity* is  $\frac{£2,000 \times 10,695}{40,640} = £526$  each year. If we are to pay that in the future, then overpayments in the past would have been  $£10,695 - 5 \times £526 = £8,065$

All the overpayments calculated here are such that the actuarial value of future payments afforded equals the amount of the overpayments.