

SCHEDULE

Regulation 4(3)

EXAMPLES ILLUSTRATING USE OF FORMULA FOR CALCULATING REBATE

**Example 1—medium term, medium value loan**

A loan of £5,000 is repayable by 48 monthly instalments of £134.57, starting one month after the relevant date. The monthly repayments include interest and all other charges included in the total charge for credit. Thus the total amount repayable = £134.57 x 48 = £6,459.36. The total charge for credit = £6,459.36 – £5,000 = £1,459.36.

The creditor receives notice from the debtor requesting early settlement immediately after payment of the 12th instalment (i.e. after one year).

Assuming that no charges are excluded from the calculation of the rebate under regulation 3(2), the APR on the loan required for the calculation of the rebate is 14% per annum.

The creditor opts to calculate the rebate using periods of one month, giving a period rate equivalent of the APR =  $(1.14^{(1/12)} - 1) \times 100 = 1.0979\%$  per month. Hence, for the purposes of the formula in regulation 4(1)—

$$A_1 = 5,000$$

$$B_1 = 134.57 = B_2 = \dots = B_{48}$$

$$r = 1.0979/100 = 0.010979$$

$$m = 1$$

$$n = 12$$

$$a_1 = 12 \text{ (working in periods of 1 month)}$$

$$b_1 = 11$$

$$b_2 = 10$$

$$b_3 = 9$$

:

$$b_{11} = 1$$

$$b_{12} = 0$$

Then the loan outstanding immediately after payment of the 12th instalment as calculated by the formula in regulation 4(1) is—

$$\begin{aligned} & 5,000 \times (1.010979)^{12} - (134.57 \times 1.010979^{11} + 134.57 \times 1.010979^{10} + \dots + 134.57 \times 1.010979^1 + 134.57 \\ & \times 1.010979^0) \\ & = 5,700.01 - (151.74 + 150.10 + 148.47 + 146.85 + 145.26 + 143.68 + 142.12 + 140.58 + 139.05 \\ & + 137.54 + 136.05 + 134.57) \\ & = 5,700.01 - 1,716.01 = \text{£}3,984.00. \end{aligned}$$

If regulation 5(a) applies (making the settlement date 28 days after the debtor's notice is received) no further payments will be due; thus the amount outstanding at the settlement date is—

$$\text{£}3,984.00 \times 1.010979^{(28/30)} = \text{£}4,024.81.$$

(this assumes that there are 30 days between the date for the 12th instalment and the 13th instalment; for months of 31 days, the amount outstanding would be

$$\text{£}3,984.00 \times 1.010979^{(28/31)} = \text{£}4,023.49.)$$

If the creditor elects to defer the settlement date by a further month under regulation 6, this makes the date for calculating the rebate the 28th day after the payment date for the 13th instalment.

For the calculation using the formula in regulation 4(1)—

$$n = 13$$

$$a_1 = 13 \text{ (working in periods of 1 month)}$$

$$b_1 = 12$$

$$b_2 = 11$$

$$b_3 = 10$$

:

$$b_{12} = 1$$

$$b_{13} = 0$$

Then the loan outstanding to be repaid immediately after payment of the 13th instalment as calculated by the formula in regulation 4(1) is—

$$\begin{aligned} & 5,000 \times (1.010979)^{13} - (134.57 \times 1.010979^{12} + 134.57 \times 1.010979^{11} + \dots + 134.57 \times 1.010979^1 + 134.57 \\ & \times 1.010979^0) \\ & = 5,762.59 - (153.41 + 151.74 + 150.10 + 148.47 + 146.85 + 145.26 + 143.68 + 142.12 + 140.58 \\ & = 139.05 + 137.54 + 136.05 + 134.57) \\ & = 5,762.59 - 1,869.42 = \text{£}3,893.17. \end{aligned}$$

The formula gives an amount outstanding after payment of the 13th instalment of £3,893.17. The amount outstanding at the settlement date is  $\text{£}3,893.17 \times 1.010979^{(28/30)} = \text{£}3,933.05$  (assuming that the period between the 13th and 14th instalment dates is 30 days).

The debtor will also have to pay the instalment due between the date of request for early settlement and the settlement date assumed for calculating the rebate (i.e. the 13th repayment of £134.57).

Hence the total amount to be paid at the settlement date (which is 58 days after the date of request for early settlement) is £4,067.62.

For this example, the rebate would be £776.90; this is calculated by deducting the early settlement figure of £3,933.05 from the total payments outstanding after the date assumed for calculating the rebate, which is £4,709.95 (= 35 x £134.57).

(N.B. If the period between the 13th and 14th instalments were 31 days, the amount outstanding would be  $\text{£}3,893.17 \times 1.010979^{(28/31)} = \text{£}3,931.76$  and the total amount still to be repaid would be £4,066.33. Other adjustments may be appropriate where the lender opted to choose the period of deferment as 30 days. In this case the settlement date for calculating the rebate would be 58 days after the date on which notice was received).

### Example 2—longer term, high value loan

A loan of £10,000 is repayable by 180 monthly instalments of £139.51 starting one month after the relevant date. The monthly repayments include interest and all other charges included in the total charge for credit.

Thus total amount repayable =  $\text{£}139.51 \times 180 = \text{£}25,111.80$ . The total charge for credit =  $\text{£}25,111.80 - \text{£}10,000 = \text{£}15,111.80$ .

The creditor receives notice from the borrower requesting early settlement immediately after payment of the 72nd instalment (i.e. after six years).

Assuming that no charges are excluded from the calculation of the rebate under regulation 3(2), the APR on the loan required for the calculation of the rebate is 16% per annum.

The creditor opts to calculate the rebate using periods of one month, giving a period rate equivalent of the APR =  $(1.16^{(1/12)} - 1) \times 100 = 1.2445\%$  per month. The creditor also opts to defer the settlement date for 30 days under regulation 6, so that the settlement date for the purposes of calculating the rebate is the 28th day after the payment date of the 73rd instalment. Hence, for the purposes of the formula in regulation 4(1)—

$$A_1 = 10,000$$

$$B_1 = 139.51 = B_2 = \dots = B_{180}$$

$$r = 1.2445/100 = 0.012445$$

$$m = 1$$

$$n = 73$$

$$a_1 = 73 \text{ (working in periods of 1 month)}$$

$$b_1 = 72$$

$$b_2 = 71$$

$$b_3 = 70$$

:

$$b_{71} = 1$$

$$b_{72} = 0$$

Then the loan outstanding to be repaid immediately after payment of the 73rd instalment as calculated by the formula in regulation 4(1) is—

$$10,000 \times (1.012445)^{73} - (139.51 \times 1.012445^{72} + 139.51 \times 1.012445^{71} + \dots + 139.51 \times 1.012445^1 + 139.51 \times 1.012445^0)$$

$$= 24,363.72 - (339.90 + 335.72 + \dots + 141.25 + 139.51)$$

$$= 24,666.93 - 16,441.81 = \text{£}8,225.12$$

The amount outstanding at the settlement date is then—

$$\text{£}8,225.12 \times 1.012445^{(28/30)} = \text{£}8,320.62$$

(assuming that the period between the 72nd and 73rd instalments is 30 days or the creditor has opted for an additional deferment period of 30 days). The debtor will also have to pay the instalment due between the date of request for early repayment and the settlement date assumed for calculating the rebate (i.e. the 73rd repayment of £139.51).

Hence the total amount to be paid at the settlement date (which is 28 days after the date of request for early repayment) is £8,460.13.

(N.B. If the period between the 72nd and 73rd instalments were not 30 days, the amount outstanding would be slightly different.)

For this example, the rebate is £6,606.95; this is calculated by deducting the early settlement figure of £8,320.62 from the total payments outstanding after the date assumed for calculating the rebate which is £14,927.57 (= 107 x £139.51).