## Calculation of the Annual Percentage Rate of Charge

1. The annual percentage rate of charge ("APR") is calculated by means of the equation in paragraph 2 which equates, on an annual basis, the total present value of drawdowns with the total present value of repayments and payments of charges.
2. The equation referred to in paragraph 1 is-

$$
\sum_{k=1}^{m} C_{\mathrm{k}}(1+\mathrm{X})^{-t_{k}}=\sum_{l=1}^{m^{\prime}} D_{l}(1+\mathrm{X})^{-S_{l}}
$$

where
X is the APR;
$m$ is the number of the last drawdown;
k is the number of a drawdown, thus $1 \leq \mathrm{k} \leq \mathrm{m}$;
$C_{\mathrm{k}}$ is the amount of drawdown k ;
$t_{k}$ is the interval, expressed in years and fractions of a year, between the date of the first drawdown and the date of each subsequent drawdown, thus $t_{l}=0$;
$m$ ' is the number of the last repayment or payment of charges;
$l$ is the number of a repayment or payment of charges;
$D_{l}$ is the amount of a repayment or payment of charges;
$S_{l}$ is the interval, expressed in years and fractions of a year, between the date of the first drawdown and the date of each repayment or payment of charges.
3. For the purposes of paragraph 2-
(a) the amounts paid by both parties at different times shall not necessarily be equal and shall not necessarily be paid at equal intervals;
(b) the starting date shall be that of the first drawdown;
(c) intervals between dates used in the calculations shall be expressed in years or in fractions of a year;
(d) a year is assumed to have 365 days ( 366 days for leap years), 52 weeks or 12 equal months;
(e) an equal month is assumed to have 30.41666 days ( $365 / 12$ ) regardless of whether or not it is a leap year;
(f) the result of the calculation shall be expressed with an accuracy of at least one decimal place; if the figure at the following decimal place is greater than or equal to 5 , the figure at that particular decimal place shall be increased by one;
(g) the equation can be rewritten as set out in sub-paragraph (h) using a single sum and the concept of flows $\left(A_{k}\right)$, which will be positive or negative, either paid or received during periods 1 to $n$, expressed in years;
(h) the equation referred to in sub-paragraph (g) is-

$$
S=\sum_{k=1}^{n} A_{\mathrm{k}}(1+\mathrm{X})^{-t_{k}}
$$

$S$ being the present balance of flows; if the aim is to maintain the equivalence of flows, the value will be zero.

