Annex 2

The design of average rates and index based on SWESTR

Each banking day, the Riksbank provides backward-looking compounded average rates and an index based on determined values for SWESTR. The average rates and the index are cumulative and reflect a continuous accrual of SWESTR.

Average rates based on SWESTR are provided for the time periods of 1 week and 1, 2, 3 and 6 months. The average rate for a single period of time is not provided if the starting date for the period falls before 1 September 2021.

The index is provided because it allows an easy calculation of the average rate of SWESTR over a period between any two banking days.

1 Method of calculation and market conventions

The 360-day convention is applied for the calculation of the average interest rates and index.

1.1 Average interest rates

The periods for average rates are determined backward-looking on the basis of the period's end date and the date of publication of the average rate. In the event that the calculated starting date is not a banking day:

- for the period 1 week, the adjustment principle (standard) *preceding business day* is applied, i.e. the starting date is brought forward to the immediately preceding banking day,
- for other time periods, the adjustment principle *modified preceding business day* is applied, i.e. the starting date is brought forward to the immediately preceding banking day, as long as this does not mean that the starting date is in another month, in which case the starting date is instead postponed.

The average rate with value date *i* is calculated using the following formula:

$$\left[\prod_{t=1}^{d_b} \left(1 + \frac{r_t \times n_t}{N} \right) - 1 \right] \times \frac{N}{d_c}$$

in which:

r_t = SWESTR rate published on banking day t, i.e. the SWESTR rate with the value date of the previous banking day

n_t = the number of calendar days for which interest r_t is applicable

N = number of days in the year, according to convention 360

d_c = number of calendar days in the interest period

d_b = number of banking days in the interest period between banking day t and banking day i

n_t is generally 1, except for Fridays when it is 3, to take account of accrual over the weekend, or where adjustments are needed to take account of non-banking days

1.2 Index

Index for SWESTR with value date i is calculated using the following formula:

$$\begin{cases} 100, & om\ i = 0 \\ 100 \times \prod_{t=1}^{i} \left(1 + \frac{r_t \times n_t}{N} \right), & om\ i > 0 \end{cases}$$

in which:

r_t = SWESTR rate published on banking day t

n_t = the number of calendar days for which interest r_t is applicable

N = number of days in the year, according to convention 360

$t = 0$ refers to 1 September 2021

n_t is generally 1, except for Fridays when it is 3, to take account of accrual over the weekend, or where adjustments are needed to take account of non-banking days

The average rate between any banking days x and y, can be calculated using index values:

$$\left(\frac{\text{Swestr index}_y}{\text{Swestr index}_x} - 1 \right) \times \frac{N}{d_c}$$

in which:

N = number of days in the year, according to convention 360

d_c = the number of calendar days in the interest period, i.e. , y - x

$$\text{Swestr index}_i = \text{SWESTR index with value date } i$$

2. Rounding

Any rounding shall be done as late as possible before publication and shall follow established mathematical principles for rounding.