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# Annex 1

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## Design of SWESTR

### 1. Underlying market

The underlying market for SWESTR is the overnight market in Swedish kronor. SWESTR shall reflect the activity on this market.

### 2. Transaction dataset

The data forming the basis for the calculation of SWESTR is comprised of the transaction reporting submitted by the Riksbank's monetary policy counterparties in accordance with the Riksbank's *Terms and Conditions for RIX and Monetary Policy Instruments*.

When calculating SWESTR, use shall be made of information on transactions that:

- lead to unsecured deposits with the monetary policy counterparty,
- have an overnight maturity, and
- are executed between the monetary policy counterparty and an actor belonging to one of the following counterparty categories:
  - banks and financial institutions,
  - non-financial companies or
  - the Swedish National Debt Office.

### 3. Data processing ahead of calculation

#### 3.1. Validation routines

To ensure the quality of the reported data forming the basis for the calculation of SWESTR, automatic checks shall be applied with the aim of identifying transactions suspected of being unintentionally and/or intentionally incorrectly reported. If a transaction is identified as potentially incorrect, it shall only be used in the calculation of SWESTR if the reporter in question confirms (validates) that the transaction has been correctly reported.

## 3.2. Trimming

In accordance with international practice, AFM shall trim the transaction dataset before the calculation of SWESTR to reduce the effect of extreme values.

A total of 25 per cent of the transaction volume shall be excluded from further calculations, allocated thus:

- 12.5 per cent of the transaction volume with the lowest interest rates
- 12.5 per cent of the transaction volume with the highest interest rates

## 4. Requirements for robustness and calculation method

### 4.1 Requirements for robustness and choice of calculation method

To ensure that the transaction dataset is robust and to reduce the risk of manipulation, the following requirements for robustness shall be applied before trimming is carried out:

- the total transaction volume shall be at least SEK 6 billion,
- at least three of the Riksbank's reporters shall have reported transactions to the transaction dataset,
- no single reporter shall have reported more than 75 per cent of the total transaction volume.

If all requirements for robustness are fulfilled, SWESTR is calculated using the normal calculation method, according to section 4.2. If any of the requirements for robustness are not fulfilled or if the transaction dataset is not available, for example due to technical error, alternative calculation methods, according to 4.3, shall be used.

### 4.2 Normal calculation method

Normal calculation method refers to a volume-weighted average of the interest rates in the trimmed dataset, according to the following formula:

$$\sum_{k=1}^N \frac{v_k}{V_{tot}} r_k$$

in which:

$N$  = Number of transactions

$r_k$  = Interest rate of transaction  $k$

$v_k$  = Volume of transaction  $k$

$V_{tot}$  = Total transaction volume

## 4.3 Alternative calculation methods

### 4.3.1 Technical error

If the relevant transaction dataset is not available, for example in the event of technical error, the following formula will be used for the alternative calculation of SWESTR:

$$repo_t + \frac{1}{2} \sum_{k=1}^2 (r_{t-k} - repo_{t-k})$$

in which:

$r_t$  = determined SWESTR rate for the banking day  $t$

$repo_t$  = The Riksbank's repo rate for the banking day  $t$

### 4.3.2 Transaction dataset does not meet all robustness requirements

If the relevant transaction dataset is available, but does not comply with all requirements for robustness, the following formula for the calculation of SWESTR is used:

$$repo_t + \frac{1}{3} \sum_{k=0}^2 (r_{t-k} - repo_{t-k})$$

in which:

$r_t$  = SWESTR calculated according to the normal calculation method for  $t$  is equal to the current banking day and determined SWESTR rate for banking days preceding the current banking day

$repo_t$  = The Riksbank's repo rate for the banking day  $t$

## 5. Rounding

Any rounding of the calculated value of SWESTR is made as late as possible before publication and complies with established mathematical principles for rounding.