

# SOURCES AND METHODS

## FOREIGN EXCHANGE AND MONEY MARKET STATISTICS

Statistics

1 October 2023

*The foreign exchange and money market statistics help Danmarks Nationalbank to oversee financial stability and monetary policy transmission.*

### **FOREIGN EXCHANGE AND MONEY MARKET STATISTICS**

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### **0 Administrative information about the statistical product**

#### **0.1 Name**

The foreign exchange and money market statistics include transactions involving Danish kroner:

- Foreign exchange transactions in Danish kroner against foreign currency
- FX swaps in Danish kroner against foreign currency
- Interest rate swaps in Danish kroner
- Secured money market in Danish kroner
- Unsecured money market in Danish kroner

## **0.2 Subject group**

The foreign exchange and money market.

## **0.3 Responsible authority, office, person etc.**

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## **0.4 Purpose and history**

The purpose of the statistics is to shed light on the Danish foreign exchange and money market in order to oversee financial stability and monetary policy transmission.

Data have been collected since January 2023, with the first publication of statistics for April 2023.

## **0.5 Users and areas of application**

The statistics are intended for users who have an interest in the Danish foreign exchange and money market. The users are Danmarks Nationalbank, banks and mortgage credit institutions, insurance and pension companies, investment funds, non-financial corporations, universities, ministries, NGOs, households etc.

## **0.6 Sources**

The statistics cover the Danish foreign exchange and money market, i.e. transactions where at least one party is a bank located in Denmark. The statistics are based on the daily reporting of transactions in Danish kroner from nine banks located in Denmark, which are the largest banks in the Danish foreign exchange and money market:

- Aktieselskabet Arbejdernes Landsbank – CVR no.: 31467012
- Danske Bank A/S – CVR no.: 61126228
- Jyske Bank A/S – CVR no.: 17616617
- Nordea Denmark, a branch of Nordea Bank Abp, Finland – CVR no.: 25992180

- Nykredit Bank A/S – CVR no.: 10519608
- Skandinaviska Enskilda Banken, Denmark, a branch of Skandinaviska Enskilda Banken Ab (publ), Sweden – CVR no.: 19956075
- Spar Nord Bank A/S – CVR no.: 13737584
- Sparekassen Kronjylland – CVR no.: 17912828
- Sydbank A/S – CVR no.: 12626509

## **0.7 Legal authority**

In accordance with section 14a of the Danmarks Nationalbank Act (*Nationalbankloven*) pursuant to Act no. 1163 of 8 June 2021, Danmarks Nationalbank collects the information that is necessary for the performance of Danmarks Nationalbank's tasks, cf. the bank's objectives in section 1. This is particularly relevant for Danmarks Nationalbank's work to ensure financial stability and the planning of monetary and foreign exchange policy as well as preparing statistics within its field of competence.

## **0.8 Respondent burden**

The respondent burden is imposed on the largest banks in the Danish foreign exchange and money market. They can choose to let a third party, for example a data centre, carry out the reporting on their behalf.

## **1 Contents**

### **1.1 Contents description**

The statistics are a monthly statement of turnover broken down by various dimensions in the following foreign exchange and money market segments:

- Foreign exchange transactions
  - Foreign exchange transactions are the exchange of two currencies at an exchange rate agreed on the trading day. The currencies are exchanged for cash settlement at a specified time in the future. The statistics include foreign exchange transactions where Danish kroner are bought or sold against foreign currency with all maturities.

- FX swaps
  - FX swaps are foreign exchange transactions comprising a foreign exchange transaction for cash settlement at a specified time in the future (short legs) combined with an offsetting foreign exchange transaction for cash settlement at a specified time further in the future (long legs). FX swaps can be regarded as secured loans in one currency, with collateral pledged in the other currency. The statistics include FX swaps where Danish kroner are bought or sold against foreign currency with all maturities.
- Interest rate swaps
  - Interest rate swaps are transactions under which it is agreed to exchange payments of a fixed rate against payments of a variable rate over an agreed period of time. The statistics include interest rate swaps denominated in Danish kroner with all maturities.
- Secured money market
  - Repurchase agreements (repo and reverse repo as well as buy/sell-back and sell/buy-back) are agreements under which money is borrowed against collateral in the form of security, typically bonds. The term repurchase agreements means that the seller of the bond (the recipient of the liquidity) at the time of the conclusion of the agreement also undertakes to buy back the securities at a future date at a price agreed at the time of the conclusion of the transaction. The statistics include repurchase agreements in Danish kroner with a maturity of up to and including one year.
- Unsecured money market
  - Unsecured money market loans denominated in Danish kroner (deposits) with a maturity of up to and including one year as well as the issue of short-term securities with a remaining maturity of up to and including one year.

For the statistics, foreign exchange transactions with a transaction size above kr. 500,000 are reported, while for the other segments, transactions with a transaction size above kr. 5,000,000 are reported.

Moreover, transactions with households and with Danmarks Nationalbank as counterparty are not included in the statistics publication. In addition, intra-bank transactions are not included –

however, intra-group transactions must be reported if the LEI code<sup>1</sup> of the intra-group counterparty differs from the LEI code of the reporting bank. Likewise, transactions for the reporting banks are included regardless of where in the world they are booked and if they are so-called cleared transactions or transactions in connection with clearing broker activity.

## 1.2 Statistical concepts

Below is a description of the dimensions for each of the market segments included in the publication.

In general, in the choice of dimensions, account is taken of data confidentiality. This means, for example, that the outcomes for foreign currency, counterparty sector and maturity are limited to main foreign currencies, large counterparty sectors and wider maturity intervals. Read more about confidentiality in section '1.3 Confidentiality'. The exact dimensions are stated below.

### Foreign exchange transactions

Table name in the StatBank: DNFx – Banks' purchase and sale of DKK divided on foreign currency, counterparty sector or maturity.

- Turnover is broken down into the banks' purchases and sales of Danish kroner
- Turnover is broken down into the banks' purchases and sales of Danish kroner against foreign currency
  - The 'Foreign currency' dimension is broken down as follows:
    - EUR
    - USD
    - Other (all currencies other than EUR and USD)
- Turnover is broken down into the banks' purchases and sales of Danish kroner and counterparty sector
  - The 'Counterparty sector' dimension is broken down as follows:
    - Domestic banks (S.1221 Banks, S.1210 Central banks<sup>2</sup>)

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<sup>1</sup> An LEI code (Legal Entity Identifier) is a global unique identification code which is used to identify legal entities participating, for example, in transactions on the financial markets.

<sup>2</sup> Nordea Danmark, a branch of Nordea Bank Abp, Finland, and Skandinaviska Enskilda Banken, Denmark, a branch of Skandinaviska Enskilda Banken Ab (publ), Sweden, are categorised as banks located in Denmark.

- Other domestic financial corporations (S.1222 Mortgage banks, S.1223 Other credit institutions, S.1224 Electronic money institutions, S.1230 Money market funds, S.1240 Investment funds, S.1251 Financial vehicle corporations, S.1252 Central counterparties, S.1259 Other financial intermediaries, S.1260 Financial auxiliaries, S.1270 Captive financial institutions and money lenders, S.1280 Insurance corporations, S.1290 Pension funds)
- Other domestic (S.1110 Public non-financial corporations, S.1120 Private non-financial corporations, S.13 Central government, State government, Local government, Social security funds, S.15 Non-profit institutions serving households)
- Foreign (all foreign counterparties)

The national accounts by sector follows the ESA 2010 guidelines for sectoral breakdown (European National Accounts System). The designations in brackets state the accompanying sector codes and descriptions.

- Turnover is broken down into the banks' purchases and sales of Danish kroner and maturity
  - The 'Maturity' dimension for foreign exchange transactions is defined as the difference between trade date and settlement date and is broken down as follows:
    - Up to and including one banking day
    - More than one banking day up to and including two banking days
    - More than two banking days up to and including 20 banking days
    - More than 20 banking days

Maturity in days is defined as banking days. For all reported currency pairs, bank closing days in Denmark and the US are taken into account when calculating maturity, while specifically for the currency pair EUR/DKK, bank closing days in the euro area (TARGET closing days) are also taken into account when calculating maturity.

## FX swaps

Table name in the StatBank: DNFxSWAP – Banks' purchase and sale of FX swaps in DKK divided on foreign currency, counterparty sector or maturity.

- Turnover is broken down into the banks' purchases and sales of Danish kroner (short leg)
- Turnover is broken down into the banks' purchases and sales of Danish kroner (short leg) against foreign currency
  - The 'Foreign currency' dimension is broken down as follows:
    - EUR
    - USD
    - Other (all currencies other than EUR and USD)
- Turnover is broken down into the banks' purchases and sales of Danish kroner (short leg) and counterparty sector
  - The 'Counterparty sector' dimension is broken down as follows:
    - Domestic banks (S.1221 Banks, S.1210 Central banks)
    - Other domestic financial corporations (S.1222 Mortgage banks, S.1223 Other credit institutions, S.1224 Electronic money institutions, S.1230 Money market funds, S.1240 Investment funds, S.1251 Financial vehicle corporations, S.1252 Central counterparties, S.1259 Other financial intermediaries, S.1260 Financial auxiliaries, S.1270 Captive financial institutions and money lenders, S.1280 Insurance corporations, S.1290 Pension funds)
    - Other domestic (S.1110 Public non-financial corporations, S.1120 Private non-financial corporations, S.13 Central government, State government, Local government, Social security funds, S.15 Non-profit institutions serving households)
    - Foreign (all foreign counterparties)

The national accounts by sector follows the ESA 2010 guidelines for sectoral breakdown (European National Accounts System). The designations in brackets state the accompanying sector codes and descriptions.

- Turnover is broken down into the banks' purchases and sales of Danish kroner (short leg) and maturity
  - The 'Maturity' dimension for FX swaps is defined as the difference between settlement date and maturity date and is broken down as follows:
    - Up to and including five banking days
    - More than five banking days up to and including 20 banking days
    - More than 20 banking days up to and including 60 banking days
    - More than 60 banking days

Maturity in days is defined as banking days. For all reported currency pairs, bank closing days in Denmark and the US are taken into account when calculating maturity, while specifically for the currency pair EUR/DKK, bank closing days in the euro area (TARGET closing days) are also taken into account when calculating maturity.

### **Interest rate swaps**

Table name in the StatBank: DNIRS – Banks' payment and receipt of fixed interest rate in DKK interest rate swaps divided on foreign currency, maturity or reference rate.

- Turnover is broken down by the banks' payment and receipt of fixed interest
- Turnover is broken down by the banks' payment and receipt of fixed interest and counterparty sector
  - The 'Counterparty sector' dimension is broken down as follows:
    - Central counterparties (CCP) (defined as the counterparties Nasdaq Clearing 54930002A8LR1AAUCU78 and LCH Limited F226TOH6YD6XJB17KS62)
    - Other (all other domestic and foreign counterparties)
- Turnover is broken down by the banks' payment and receipt of fixed interest and maturity
  - The 'Maturity' dimension for interest rate swaps is defined as the difference between the settlement date and the maturity date and is broken down as follows:



- Up to and including 480 banking days
- More than 480 banking days up to and including 1,200 banking days
- More than 1,200 banking days

Maturity in days is defined as banking days. For all reported interest rate swaps, bank closing days in Denmark are taken into account when calculating maturity.

- Turnover is broken down by the banks' payment and receipt of fixed interest and reference rate
  - The 'Reference rate' dimension is broken down as follows:
    - CIBOR3M
    - CIBOR6M
    - DESTTR
    - Other (all reference rates other than CIBOR3M, CIBOR6M and DESTTR)

### **Secured money market**

Table name in the StatBank: DNSEMM – Banks' secured borrowing and lending in DKK divided on counterparty sector, maturity or collateral.

- Turnover is broken down by the banks' secured deposits and loans in Danish kroner
- Turnover is broken down by the banks' secured deposits and loans in Danish kroner and counterparty sector
  - The 'Counterparty sector' dimension is broken down as follows:
    - Domestic banks (S.1221 Banks, S.1210 Central banks)
    - Central counterparties (CCP) (defined as the counterparties Nasdaq Clearing 54930002A8LR1AAUCU78 and LCH Limited F226TOH6YD6XJB17KS62)
    - Other (all domestic and foreign sectors other than banks and CCPs)

The national accounts by sector follows the ESA 2010 guidelines for sectoral breakdown (European National Accounts System). The designations in brackets state the accompanying sector codes and descriptions.

- Turnover is broken down by the banks' secured deposits and loans in Danish kroner and maturity
  - The 'Maturity' dimension for the secured money market is defined as the difference between the settlement date and the maturity date and is broken down as follows:
    - Up to and including one banking day
    - More than one banking day up to and including five banking days
    - More than five banking days up to and including 20 banking days
    - More than 20 banking days

Maturity in days is defined as banking days. For all reported secured money market transactions, bank closing days in Denmark are taken into account when calculating maturity.

- Turnover is broken down by the banks' secured deposits and loans in Danish kroner and collateral
  - The 'Collateral' dimension is broken down as follows:
    - Danish mortgage bonds
    - Danish government bonds
    - Other (all securities other than Danish mortgage bonds and Danish government bonds)

### **Unsecured money market**

Table name in the StatBank: DNUNMM – Banks' unsecured borrowing and lending in DKK divided on counterparty sector or maturity.

For lending in the unsecured money market, the data collection only covers the banks' transactions with financial counterparties. This means that the turnover for the banks' lending on the unsecured money market is not broken down by counterparty sector and maturity, but is only published as total turnover. For deposits in the unsecured money market, the data collection covers the banks' transactions with all counterparties, and the turnover for deposits is therefore broken down by both counterparty sector and maturity.

- Turnover is broken down by the banks' unsecured deposits and loans in Danish kroner
- Turnover is broken down by the banks' unsecured deposits in Danish kroner and counterparty sector

- The 'Counterparty sector' dimension is broken down as follows:
  - Domestic financial corporations (S.1221 Banks, S.1210 Central banks, S.1222 Mortgage banks, S.1223 Other credit institutions, S.1224 Electronic money institutions, S.1230 Money market funds, S.1240 Investment funds, S.1251 Financial vehicle corporations, S.1252 Central counterparties, S.1259 Other financial intermediaries, S.1260 Financial auxiliaries, S.1270 Captive financial institutions and money lenders, S.1280 Insurance corporations, S.1290 Pension funds)
  - Other domestic (S.1110 Public non-financial corporations, S.1120 Private non-financial corporations, S.13 Central government, State government, Local government, Social security funds, S.15 Non-profit institutions serving households)
  - Foreign (all foreign counterparties)

The national accounts by sector follows the ESA 2010 guidelines for sectoral breakdown (European National Accounts System). The designations in brackets state the accompanying sector codes and descriptions.

- Turnover is broken down by the banks' unsecured deposits in Danish kroner and maturity
  - The 'Maturity' dimension for the unsecured money market is defined as the difference between the settlement date and the maturity date and is broken down as follows:
    - Up to and including one banking day
    - More than one banking day

Maturity in days is defined as banking days. For all reported unsecured money market transactions, bank closing days in Denmark are taken into account when calculating maturity.

### **1.3 Confidentiality**

A description of the criteria for handling confidential information in connection with the publication can be found here. The criteria are based on Statistics Denmark's confidentiality criteria for the Research Service and Danmarks Nationalbank's own confidentiality criteria in other statistical areas.

In essence, it must not be possible to identify/obtain knowledge of individual reporting institutions through external publications. Data must be adequately aggregated, and the following confidentiality criteria serve as guidelines for disclosure:

- Individual/number criterion: A minimum of three institutions are required for a given dimension.
- Domain criterion: The two largest reporters must not account for more than 85 per cent of the dimension.

Danmarks Nationalbank continuously oversees compliance with the above-mentioned confidentiality criteria in connection with the publication of data. Danmarks Nationalbank reserves the right to cease publishing a data series if the confidentiality criteria are compromised.

Overall, the confidentiality criteria limit the possible level of detail of statistics that can be published.

## **2 Time**

### **2.1 Reference time**

The statistics are compiled on a monthly basis.

### **2.2 Publication time**

The statistics are published monthly on the 15<sup>th</sup> business day after month-end. In selected months, statistical news is also published.

### **2.3 Punctuality**

The statistics are normally published without delay relative to the announced time.

### **2.4 Frequency**

The statistics are published monthly.

### **3 Reliability and uncertainty**

#### **3.1 Overall reliability**

The statistics are based on information collected from the largest banks in the Danish foreign exchange and money market (nine reporting banks as of 1 April 2023), i.e. covering transactions where at least one party is a bank located in Denmark. The degree of cover is close to 100 per cent, which is why reliability primarily depends on the individual banks' reporting and, in particular, on the quality of the reporting by the largest reporting banks.

It is not only banks located in Denmark that trade in Danish kroner. Foreign banks thus account for a large part of the global turnover in Danish kroner, cf. the BIS survey ([LINK](#)) which is not included in these statistics.

#### **3.2 Sources of uncertainty**

As the statistics have a high degree of cover, uncertainty is primarily linked to the quality of the reports. Danmarks Nationalbank lays down the guidelines for reporting by the banks, but there is a risk that the banks interpret the guidelines incorrectly or report incorrect information. As the make-up of the reporting institutions seldom changes, the likelihood of the guidelines being misinterpreted is deemed insignificant. Of course, the likelihood of erroneous information being reported is always present, but there is also a high probability of such errors being detected by means of internal controls.

#### **3.3 Uncertainty figures**

No uncertainty calculations are available.

### **4 Comparability**

#### **4.1 Comparability over time**

The statistics are comparable over time. Uncertainties may arise in connection with changes to reporting guidelines or population.

Danmarks Nationalbank lowered the threshold for the reporting of foreign currency transactions from kr. 5,000,000 to kr. 500,000. The banks

implemented the change in their reporting between May 2023 and August 2023.

#### **4.2 Comparability with other statistics**

The statistics use cut-off points comparable to the money market survey ([LINK](#)) which was phased out in connection with the phasing-in of the foreign exchange and money market statistics.

Every three years, Danmarks Nationalbank also collects data on foreign currency and derivatives transactions from banks located in Denmark in connection with an international survey coordinated by the Bank for International Settlements (BIS). Read more here ([LINK](#)).

#### **4.3 Relationship between preliminary and final figures**

The statistics are normally revised two months back in time when the figures for the current month are published; see also Danmarks Nationalbank's revision policy for financial statistics ([LINK](#)) with accompanying revision cycle ([LINK](#)).

### **5 Availability**

#### **5.1 Distribution channels**

Published monthly via:

[www.nationalbanken.dk](http://www.nationalbanken.dk)

<http://nationalbanken.statistikbank.dk>

[www.statistikbanken.dk](http://www.statistikbanken.dk)

#### **5.2 Basic material: Storage and applications**

Data material is received electronically and is stored for further processing.

#### **5.3 Documentation**

Reporting guidelines and other technical material are available on the Danmarks Nationalbank website ([LINK](#)).

#### **5.4 Other information**

No other information is available.

#### **6 Supplementary documentation**

None.