



Statistics on Interest rates applied by banks and mortgage-credit institutes

Additional predefined tables

Additional tables that are not included in the Tables supplement are available on www.nationalbanken.dk under Statistics > Predefined publications downloads > Download. These contain interest rates and business volumes for the MFI sector's and the banks' new business and outstanding amounts with households and non-financial corporations broken down by instrument and fixed-interest period/maturity.

Coverage

The published interest rates solely concern lending and deposits vis-à-vis Danish residents. According to Danmarks Nationalbank's reporting guidelines for the balance of payments as well as external assets and liabilities Danish residents are persons domiciled in Denmark, as well as business enterprises and institutions that are domiciled in Denmark.

Unless otherwise stated in the Tables, the published interest rates are for lending and deposits denominated in Danish kroner.

Sources

Information on interest-rates is collected from the 30 largest banks and all mortgage-credit institutes in Denmark that are full-reporting institutions in Statistics on balance sheets and flows of the MFI sector. The reporting population comprises Danish banks and mortgage-credit institutes' principal activity in Denmark, as well as branches in Denmark of foreign banks and mortgage-credit institutes.

New business/outstanding amounts

The statistics contain information on both new business and outstanding amounts.

New business comprises lending and deposit agreements concluded during a given month. The concept reflects newly established accounts, as well as existing accounts for which the terms in force so far are amended by agreement with the customer. An interest-rate adjustment for a loan or deposit at a floating interest rate is not new business if the adjustment is in accordance with the original agreement.

The definition of new business can be applied directly to the banks' activities where increases in gross balances and extensions to existing lending and deposits are also defined as new business.

For mortgage-credit institutes an interest-rate adjustment in connection with refinancing of adjustable-rate loans is *not* new business. Newly established loan agreements, restructuring of existing loans to new coupon rates, maturities or currencies, restructuring between fixed-rate loans and floating-rate loans, and changes in interest-rate adjustment profile – i.e. the fre-

quency of interest-rate adjustment and the proportion of the loan subject to interest-rate adjustment – are, on the other hand, defined as new business.

Outstanding amounts comprise all existing lending and deposit agreements that are outstanding at the time of compilation. For banks, outstanding amounts are compiled as a day-to-day average of the balance during the month. Mortgage-credit institutes' outstanding amounts are compiled as the balance at month-end.

Interest-rate margin The interest-rate margin is calculated on the basis of the effective interest rates for banks' outstanding amounts and is given as the spread between the interest rates for respectively lending and deposits.

Concept of interest rate applied Unless otherwise stated, the concept of interest rate is the effective rate of interest per annum, taking account of the number of times that interest is accrued per annum.

- effective rates of interest For *banks*, the effective rates of interest are calculated as average interest rates, i.e. as the month's income from interest (expenditure) in per cent per annum of the month's average lending (deposits). The calculation is based on the actual number of days in the current month (calendar days). When compiled on a monthly basis the average interest rate for lending is calculated as follows, assuming that interest on lending is accrued on a quarterly basis:

$$r_u(m) = \left[\left(1 + \frac{q}{m} * \frac{R_u(m)}{U(m) - N(m)} \right)^{365/q} - 1 \right] * 100$$

where $R_u(m)$ = the month's income from interest on lending, $U(m)$ = the month's day-to-day average outstanding lending, $N(m)$ = lending at zero interest, end-month, m = number of days in the month, and q = number of days in the quarter.

The month's average interest rate for deposits is calculated as follows, assuming that interest on deposits is accrued on an annual basis:

$$r_i(m) = \frac{R_i(m)}{I(m)} * 365/m * 100$$

where $R_i(m)$ = the month's interest expenditure on deposits, $I(m)$ = the month's day-to-day average of outstanding deposits, and m = number of days in the month.

Interest rates for lending regarding outstanding amounts are compiled including overdraft facilities, while interest rates for lending regarding new business are compiled excluding overdraft facilities. Interest rates on deposits regarding both outstanding amounts and new business are compiled excluding pool schemes, where the deposit is placed in securities.

For *mortgage-credit institutes* the effective rate of interest covers the interest rate on the cash value of the loan and the administration fee. The interest rate on the cash value of the loan comprises coupon interest and the capital loss (capital gain) on issue of the underlying bonds. The calculation

is based on the assumption that the loan is held until maturity, and thus does not take account of the conversion right.

- total percentage
lending costs

Both banks and mortgage-credit institutes report a measure of the borrower's total percentage lending costs. The starting point is the annual costs in per cent, where the costs are already calculated in accordance with current legislation. For other new business, where the borrowing costs in connection with establishment of the loan are assumed to be limited, the effective rate of interest is used.

Interest payments

Interest payments of households and non-financial corporations to banks and mortgage-credit institutes are estimated on the basis of reported data. The interest payments are calculated for both loans in Danish kroner and loans in all currencies.

The interest payments to *banks* are reported directly to the statistics on interest rates. However, the population solely comprises the 30 largest banks, and the reported average outstanding business volumes cover approximately 80 per cent of the lending to households and approximately 95 per cent of the lending to non-financial corporations (in June 2006). An adjustment factor is used to calculate the total interest payments to the banks and the adjustment factor is updated on an ongoing basis in step with the change in the full-reporting banks' share of the total lending.

In respect of *mortgage-credit institutes*, the interest payments are calculated on the basis of the business volume at the end of the month (outstanding value of the bonds) and the effective interest rates (interest rate on the cash value of the loan). Since mortgage-credit bonds are typically issued below par, this method will tend to overestimate the interest actually paid since the capital loss is included in the effective interest rate, but is not deducted from the outstanding value of the bonds.

Ordinary repayments

The ordinary repayments on the mortgage-credit lending are calculated in Statistics on balance sheets and flows of the MFI sector by categories of real property and thereby not by sector. The ordinary repayments of households and non-financial corporations are approximated in respect of the following categories of real property:

- Households, etc.: owner-occupied dwellings and agriculture.
- Non-financial corporations: subsidised housing, trade, industry, offices, etc.

The statistics by real-property category entail underestimation of the ordinary repayments, so that the statistics cover only a little over 90 per cent for both sectors.

Sector distribution

The sector distribution in the statistics adheres to the guidelines of ENS95 (the European System of Accounts). The statistics are broken down into the following sectors:

- *Non-financial corporations*: companies whose principal activity is in non-financial sectors, etc.

- *Financial corporations*: MFIs, excluding Danmarks Nationalbank, other financial intermediaries, financial auxiliaries and insurance companies and pension funds. MFIs, excluding Danmarks Nationalbank, are banks and mortgage-credit institutes, other credit institutions and money-market funds. Other financial intermediaries are investment funds, investment companies, securities dealers trading for their own account, financial leasing companies, etc. Finally, financial auxiliaries are the Nordic Exchange, VP Securities Services, stockbroking companies trading for own account, etc.
- *General government*: central and local governments and social security funds.
- *Households, etc.*: ordinary households, sole proprietorships and non-profit institutions directed at households (associations, trade unions and charitable foundations). Households (excluding non-profit institutions) are also broken down as private individuals, etc. and self-employed individuals.

Distribution of instruments

Interest rates on lending to households, etc., are distributed by purpose. Outstanding amounts are broken down as lending for housing purposes and lending excluding lending for housing purposes, where lending for housing purposes comprises lending for purchase of or improvements to real property, regardless of the nature of the pledged collateral. For new business, lending exclusive of lending for housing purposes is also broken down as consumer credit and other lending. Lending to non-profit institutions is included in all purpose categories. All mortgage-credit loans are classified as lending for housing purposes, as they are held against mortgages on real property.

For outstanding amounts deposits are broken down as on-demand deposits, deposits at notice and time deposits. On-demand deposits comprise all deposits that are not subject to fixed maturity, notice of termination or similar. Deposits at notice comprise deposits where the savings/accumulated capital can only be withdrawn with a fixed term of notice, e.g. 3 months, or on a fixed annual date. Time deposits comprise all deposits subject to fixed maturity on their establishment, and special types of deposit, e.g. profit savings. New business solely comprises time deposits.

Maturity distribution

For outstanding amounts both lending and deposits are distributed by original maturity. The original maturity of a financial instrument is defined as the time from establishment until the agreed maturity date. For lending the period runs from the time that the loan is raised until the loan has been repaid. For new business interest rates for lending are distributed by fixed-interest period, while interest rates for deposits (time deposits) are distributed by original maturity. The fixed-interest period is defined as the period after the loan agreement is established during which the interest rate is fixed.

Interpretation

The interest rates applied by banks to new lending are sensitive to changes in the customer and product structure from one month to the next as banks have a wide range of products and customer relations, at varying interest

rates. This also holds for total percentage cost for outstanding amounts in interest rates will show greater stability vis-à-vis changes in customer and product structures.

For the interest rates applied by mortgage-credit institutes solely the administration fee may be customer-specific.

Interest rates for lending depend on the credit risk, which is determined particularly by the customer's credit standing, the maturity of the loan and the value of any collateral pledged. Variations in the interest rates of banks and mortgage-credit institutes must thus be viewed in the light of the fact that the banks' lending is not necessarily backed by collateral security. Differences in the banks' interest rates across sectors and purposes can likewise, besides historical loss risk, be due to differences in the underlying security.

Differing interest rates for loan products can also be attributed to differences in transaction scope (- costs).

On comparison of the interest payments to banks and mortgage-credit institutes it should be noted that the interest payments to banks are the actual accrued interest reported directly to the statistics on interest rates, while the interest payments to mortgage-credit institutes are estimated.

There is also some seasonal variation in the data for the quarterly payments on mortgage-credit lending of households and non-financial corporations, since the largest payments on mortgage-credit lending to e.g. the agricultural and business sectors fall due in June and December (as some loans have only one or two settlement periods).

Data before January
2003

The original statistics was called FISIM and are the basis for the publication of the interest rates applied by banks for 2002.

Information on the interest rates of banks prior to 2002 is available in the Danish Financial Supervisory Authority's statistics on average interest rates (please refer to Danmarks Nationalbank's website: [http://www.nationalbanken.dk/C1256BE2005737D3/side//C44DFA84EFAA9E71C1256CEC004F180B/\\$file/web_feb03.pdf](http://www.nationalbanken.dk/C1256BE2005737D3/side//C44DFA84EFAA9E71C1256CEC004F180B/$file/web_feb03.pdf)). However, it should be noted that there are method differences between the FISIM statistics and the Financial Supervisory Authority's statistics, leading to a data break. The data break primarily concerns the sectoral delineation.

Revision

The statistics are revised according to "Danmarks Nationalbank's revision policy for financial statistics". Times of revision and revision periods for the individual statistics appear from "Danmarks Nationalbank's revision cycle for financial statistics". Both documents can be found on Danmarks Nationalbank's website under Statistics – Revision policy.

Explanation of symbols

Details may not add because of rounding-off.

- Category not applicable.

... Data not available.
