Aggregate Data codebook

This codebook describes the aggregate time series used in the empirical part of the paper and the aggregates exported from restricted data. All files listed as included are in the replication package. Revised November 2026; the changes are listed in the last section.

National Accounts, quarterly

Description: Quarterly aggregate series from the national accounts, used for the quarterly moments of Table 5 (output, consumption, investment) in analysis/macro_data.do.

Source: Statistics Denmark, table VNKN1, http://statbank.dk/20515. In the input mask, select version "2022Q3, Revised" (published December 2022), price unit "2010-prices, chained values, (bill. DKK)", seasonal adjustment "Seasonally adjusted", period "1990Q1 - 2022Q3". Chained values are not available for 1990, so the series start in 1991Q1.

Included as: prepare/0_macrodata/in/macrodata_quarterly.csv, columns *A* (quarter, e.g. 1991Q1), *GDP*, *C*, *G*, *I*, *X*, *IMP*.

Variables used:

B.1*g Gross domestic product (*GDP*)
P.31 Private consumption (*C*)
P.3 Government consumption expenditure (*G*)
P.5g Gross capital formation (*I*)
P.6 Exports of goods and services (*X*)
P.7 Imports of goods and services (*IMP*)

GDP deflator, quarterly

Description: Implicit GDP deflator, nominal over real seasonally adjusted GDP, used in analysis/macro_data.do to deflate the credit series.

Source: Statistics Denmark, table VNKN1, version "2022Q4" (published February 2023), variable "B.1*g Gross domestic product", seasonal adjustment "Seasonally adjusted", price units "Current prices, (bill. DKK)" and "2010-prices, chained values, (bill. DKK)", period 1990Q1 - 2022Q4. The deflator is the ratio of the first to the second.

Included as: prepare/0_macrodata/in/deflator_quarterly.csv, no header, columns quarter and deflator.

National Accounts, annual

Description: Annual per capita series, used in analysis/macro_data.do for the DCDY row of Table 5 (output) and for Figure 1 and the cyclical MPC figure (consumption).

Source: Statistics Denmark, table VNAN1, http://statbank.dk/VNAN1. Select version "June version 2019-2021" (published June 2022), price unit "Pr. capita. 2010-prices, chained values, (1000 DKK.)", period 1991 - 2021.

Included as: prepare/0_macrodata/in/consumption_gdp.csv, columns *year*, *gdp*, *privcons*, *hhcons*.

Variables used:

B.1*g Gross domestic product (*gdp*)
P.31 Private consumption (*privcons*)
P.31 Household consumption expenditure (*hhcons*, included for reference, not used by the code)

Lending from banks to households

Description: Monthly bank lending to households from Danmarks Nationalbank, used for the credit moments of Table 5 in analysis/macro_data.do. Two tables are spliced. The series is total bank lending to households; mortgage loans are issued by mortgage credit institutions in Denmark and are not part of it.

DNUDL2, *Banks lending to domestic households by purpose and maturity*: go to nationalbanken.statbank.dk/DNUDL2, select sector "1400: Households (All maturities only)", data type "Stock", maturity "All maturities/unspecified". Used from 1991M01 to 2013M09.

DNPUDDK1, *Domestic loans from banks to households and businesses*: go to nationalbanken.statbank.dk/DNPUDDK1, select instrument "Loans in total", data type "Outstanding amounts (DKK million)", sector "1400: Households", maturity "All maturities", interest rate fixation "All", purpose "All purposes". Used from 2013M10.

Splice: the series equals DNUDL2 through September 2013 and, from October 2013, DNPUDDK1 scaled by the ratio of DNUDL2 to DNPUDDK1 in September 2013 (0.9577). Units are DKK million, end of month. The data were accessed in spring 2023; the last observation is 2023M02. The code keeps the March, June, September and December values as quarterly observations and deflates them with the GDP deflator above.

Included as: prepare/0_macrodata/in/credit_monthly.csv, columns *A* (month, e.g. 1991M01) and *credit_total* (spliced series).

Balance sheet of the MFI sector

Description: Monthly assets and deposits of banks, used for the banking leverage target in Table 3.

Source: Danmarks Nationalbank, table DNBALA, nationalbanken.statistikbank.dk/DNBALA. Select "Assets in total" and "Deposits", data type "Outstanding amounts (DKK million)", reporting institutions "of which banks", period 2003M01 - 2022M12. Accessed in 2023. Leverage is assets divided by assets minus deposits, computed month by month and averaged over January 2005 to December 2022.

Included as: DN.xlsx (sheets DNBALA and Leverage).

Consumer price index, annual

Description: Annual CPI inflation, used in prepare/0_macrodata/inflation.do to express the household register data in 2003 prices. This step runs only on the Statistics Denmark server as part of the data preparation; no number in the paper is computed from this file outside the server.

Source: Statistics Denmark, table PRIS9, "00 Consumer price index, total", unit "Percentage change compared to previous year", period 1997 - 2018, saved as dst_PRIS9.xlsx (years in column A, inflation in column B, rows 4 to 25). Not included.

Series exported from restricted data

The following files are computed from household register data at Statistics Denmark or from bank-level interest rate data at Danmarks Nationalbank, which cannot be shared. The aggregates were exported and are included in the package. The code that produces them is included as well, but runs only where the underlying data are.

exported/averagempc.dta, variables *year*, *a*, *b*, 2006 - 2018. *a* and *b* are the averages over households, by year, of the wealth-bin coefficients on log income and on log income x spread from the consumption regression of Figure 4, panel A (analysis/analysis.do, estimates model_web). analysis.do writes the file to analysis/temp/averagempc.dta. macro_data.do uses it as mpc3 = a + b x spread for the DCDY row of Table 5 and the cyclical MPC figure.

exported/spread.dta, variables *year*, *spread_bnk_avg*, 2003 - 2018. Annual average over banks of the effective loan rate minus the deposit rate for sector 1430 (households), from the MFI interest rate statistics (bank_data_year.dta, built in prepare/2_prepare_spreads_irte_urte), divided by 100. Built at the start of analysis/macro_data.do on the server. Used for mpc3, for Figure 1 and for the annual spread moments that the code still prints (these were reported in an earlier draft; Table 5 uses the quarterly series below).

exported/spread_quarterly.dta, variables *tq*, *spread*, *c_spread*, 2003Q1 - 2018Q4. *spread* is log(1 + loan rate - deposit rate) for sector 1430, averaged over banks by quarter; *c_spread* is its HP(1600) cyclical component. Built by prepare/2_prepare_spreads_irte_urte/gen_quarterly_spread.do from bank-level MFI data at Danmarks Nationalbank. Used by analysis/quarterly_spread_cyclicality.do for the spread row of Table 5, which reports the standard deviation of *c_spread* relative to that of the output cycle and the correlation of *spread* with the output cycle.

income-process/moments_diff_resid_ypre.csv, variables *aar*, *m1*, *m2*, *m3*, 2005 - 2018. With Dy the first difference of residual log pre-tax earnings (log_ypre_res from the data preparation), *m1* is the mean of Dy x L.Dy, *m2* the mean of Dy x L2.Dy and *m3* the mean of Dy squared, by year. Written by income-process/gen_moments.do and read by income-process/estimate_data.py, which estimates the income process of Table 2.

Revisions, November 2026

The previous version of this codebook gave the vintage of the quarterly national accounts as "2024Q1" and the period as starting in 1990Q1. The data used for the paper are the "2022Q3, Revised" vintage, and chained values start in 1991Q1.

Entries were added for the GDP deflator, the annual national accounts, the MFI balance sheet, the consumer price index and the series exported from restricted data, none of which were documented before. The input files are now included in the package at the locations given above.