

Balance Sheet Database and Figure 2

This is the documentation to compile the information on balance sheets and construct Figure 2 of “Quantitative Tightening Around the Globe: What Have We Learned?” by Du, Forbes, and Luzzetti. Last updated with data through Sept. 2024 (with the data available on update on May 27, 2026).

Instructions for Constructing Database and Replicating Figure 2

- Make sure you have Stata installed. This code was produced on a Mac running Stata 19.
- Open 00_run_all.do in the code folder. Change the global \$dir to the location of the replication package. If you are running a different operating system, you may need to reformat the global variables.
- Run 00_run_all.do to produce SummStats.xls in the output folder. SummStats.xls contains the raw data plotted in Figure 2.
- Open MS2024311-3Fig2.xlsx in the output folder. When prompted, click “Don’t Update” links. Figure 2 is replicated in the “QT Progress” tab.
- If you need to relink MS2024311-3Fig2.xlsx to SummStats.xls, go to Manage Workbook Links and click Refresh all. If that doesn't work, click the three dots > Open workbook.
- If the links break in MS2024311-3Fig2.xlsx, you need to fix the references in the “Data” tab so that they reference SummStats.xls. Cells values should have the format (example)

='[SummStats.xls]summ_stats'!B3

SummStats.xls Data Dictionary

aggsec_GDP_ch_QT – Change in ratio of central bank holdings of aggregate securities to country GDP from peak ratio to ratio in September 2024, expressed as a decimal.

govsec_GDP_ch_QT – Change in ratio of central bank holdings of government securities to country GDP from peak ratio to ratio in September 2024, expressed as a decimal.

govsec_mkt_ch_QT – Change in ratio of central bank holdings of government securities to size of government securities market from peak ratio to ratio in September 2024, expressed as a decimal.

Raw Data Documentation

There are four series needed for each country: SIZE OF CENTRAL BANK BALANCE SHEET, SIZE OF GOVERNMENT SECURITIES MARKET, GDP DATA, CENTRAL BANK HOLDINGS OF GOVERNMENT BONDS. We document the sources of these series.

1. SIZE OF CENTRAL BANK BALANCE SHEET

data/cbbs/USD/fed_balance_sheet.xlsx

- Source: <https://fred.stlouisfed.org/graph/?g=1DVoB>
- You can get all the time series in one Excel file by using the add line feature in FRED

data/cbbs/EUR/ecb_balance_sheet.xlsx

- Source: <https://data.ecb.europa.eu/data/data-categories/ecbeurosystem-policy-and-exchange-rates/eurosystem-balance-sheet/eurosystem-consolidated-statement>
- Display the maximum number of items per page, select all, and download as XLSX wide

data/cbbs/GBP/BOE_TFS.xlsx

- Source:
<https://www.bankofengland.co.uk/boeapps/database/index.asp?Travel=NlxSTxTBx&levels=2&XNotes=Y&A80961XNode80961.x=14&A80961XNode80961.y=17&Nodes=X42569X80967X85643X85645X81006X80966X42570&SectionRequired=B&HideNums=-1&ExtraInfo=false#BM>
- Fastest way to find the right series: in the "Search our data..." box at the top right, search for "Term Funding Scheme"
- Select the YWWZJ5N code
- Export data as Excel

data/cbbs/GBP/boe_balance_sheet.xlsx

- Source:
<https://www.bankofengland.co.uk/boeapps/database/index.asp?Travel=NlxSTxTBx&levels=2&XNotes=Y&E80964XNode80961.x=68&E80964XNode80961.y=11&Nodes=X42569X80967X85643X85645X81006X80966X42570X80961X80964&SectionRequired=B&HideNums=-1&ExtraInfo=false#BM>
- Need these codes RPWB55A, RPWB56A, RPWB59A, RPWB66A, RPWB69A, RPWB72A, RPWB9R6, RPWZ4TL, RPWZ4TM, RPWZ4TN, RPWZO8Q, RPWZOI7, RPWZOQ3, RPWZOQ4
- Fastest way to get them all is to click "select all" next to "Bank of England Weekly Report," then deselecting the subcategories of short-term operations and long-term operation. You should have 14 series at the end.

data/cbbs/CAD/BOC_BS.csv

- Source: <https://www.bankofcanada.ca/rates/banking-and-financial-statistics/bank-of-canada-assets-and-liabilities-weekly-formerly-b2/>

- Click "CSV" to download under the "Weekly Series" heading.

data/cbbs/SEK/time-series-weekly-report.xlsx

- Source: <https://www.riksbank.se/en-gb/markets/riksbanks-balance-sheet/the-riksbanks-assets-and-liabilities-the-weekly-report/>

- Click "TIME SERIES WEEKLY REPORT" under "Show all."

data/cbbs/AUD/rba_bs.xlsx

- Source: <https://www.rba.gov.au/statistics/tables/>

- Download "RBA Balance Sheet – A1" XLSX file

data/cbbs/NZD/rbnz_balance_sheet.xlsx

- Source: <https://www.rbnz.govt.nz/statistics/series/reserve-bank/our-balance-sheet>

- Download "Reserve Bank balance sheet - R1 (2011-current)"

2. SIZE OF GOVERNMENT SECURITIES MARKET

data/FED/security_mkt_size_2025_02_14.csv

- Source: <https://fiscaldata.treasury.gov/datasets/monthly-statement-public-debt/detail-of-marketable-treasury-securities-outstanding>
- Date range All using chart format. Pivot view by security class. Pivot value outstanding amount. Download CSV file.

data/BOC/security_mkt_size_2025_02_14.csv

- Source: <https://www.bankofcanada.ca/rates/banking-and-financial-statistics/government-of-canada-direct-securities-and-loans-classified-by-remaining-term-to-maturity-and-type-of-asset-formerly-g6/#graph>
- To get full time series, scroll down to "Data available as" and click "CSV"

data/BOE/security_mkt_size_2025_02_14.csv

- Source:
<https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicsectorfinance/timeseries/bkpw/pusf>
- Alternatively, search for "CG: Total central government gross debt: £m CPNSA" on ONS website

data/ECB/security_mkt_size_2025_02_14.xlsx

- Source:
https://ec.europa.eu/eurostat/databrowser/view/gov_10q_ggdebt__custom_15384381/default/table?lang=en
- Alternative: search for Eurostat Quarterly government debt (online data code "gov_10q_ggdebt")
- Want Euro area 20, debt issued by central government, debt securities

data/Riksbank/security_mkt_size_2025_02_14.csv

- Source:
https://www.statistikdatabasen.scb.se/pxweb/en/ssd/START__OE__OE0202__OE0202A/Statsskuld/
- Alternative: search for "The Swedish central government debt by item (not updated). Month 1970M01 - 2024M09"

data/RBA/security_mkt_size_2025_02_14.xlsx

- Source: <https://www.aofm.gov.au/data-hub>

- Click "End of Month Positions," then download the "Portfolio Aggregate" spreadsheet using the "Dealt Basis."

data/RBNZ/security_mkt_size_2025_02_14.xlsx

- Source: <https://www.rbnz.govt.nz/statistics/series/new-zealand-debt-securities/holdings-of-central-government-debt-securities>
- Alternative: search for "Holdings of central government debt securities (D30)" on RBNZ website
- Download the file called "Holdings of central government debt securities - D30 (July 2015 - current)"

3. GDP DATA

data/FED/GDP.csv

- Source: <https://fred.stlouisfed.org/series/GDP>

data/BOC/GDP.csv

- Source:
<https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610010401&pickMembers%5B0%5D=2.2&pickMembers%5B1%5D=3.1&cubeTimeFrame.startMonth=01&cubeTimeFrame.startYear=1961&cubeTimeFrame.endMonth=10&cubeTimeFrame.endYear=2024&referencePeriods=19610101%2C20241001>
- Alternatively: Gross domestic product, expenditure-based, Canada, quarterly (x 1,000,000) from Statistics Canada
- Filter table to show only "Gross domestic product at market prices"
- Click "Download options" then "CSV; download as displayed"

data/BOE/GDP.csv

- Source:
<https://www.ons.gov.uk/economy/grossdomesticproductgdp/timeseries/ybha/ukea>
- Scroll to bottom of page to download

data/ECB/GDP.tsv

- Source: Eurostat GDP series
- Direct link:
https://ec.europa.eu/eurostat/databrowser/view/naidq_10_gdp__custom_15348773/default/line?lang=en
- Alternative: search for "GDP and main aggregates - international data cooperation quarterly data"

data/Riksbank/GDP.xlsx

- Source: <https://www.scb.se/en/finding-statistics/statistics-by-subject-area/national-accounts/national-accounts/national-accounts-quarterly-and-annual-estimates/pong/tables-and-graphs/tables/gdp-quarterly/>
- On Statistics Sweden GDP Quarterly webpage, click "GDP: expenditure approach (ENS 2010), seasonally adjusted (xlsx)"

data/RBA/GDP.xlsx

- Source: <https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-national-income-expenditure-and-product/latest-release#data-downloads>

- Download "Table 3. Expenditure on Gross Domestic Product (GDP), Current prices"

data/RBNZ/GDP.xlsx

- Source: <https://www.rbnz.govt.nz/statistics/series/economic-indicators/gross-domestic-product>

- Download Excel file at top of page

4. CENTRAL BANK HOLDINGS OF GOVERNMENT BONDS

data/BOC/security_holdings_2025_02_04

- Source: <https://www.bankofcanada.ca/?p=194263>
- Click "download the latest weekly" or scroll down to "Weekly Series." Click "CSV."
- Notes: different from what A1 says the source is. Weird.

data/BOE/gilt-purchase-operational-results_2023_12_22.XLSX

data/BOE/gilt-sales-time-series_2025_02_07.XLSX

- Source: <https://www.bankofengland.co.uk/markets/bank-of-england-market-operations-guide/results-and-usage-data>
- Click "Gilt purchase operational results" and "Gilt sales operational results"
- Purchases didn't need to be updated (no purchases since 2022), but sales did

data/BOE/long-dated-uk-government-bond-purchase-time-series_2024_01_05.XLSX

data/BOE/index-linked-gilt-purchase-results_2024_01_05.XLSX

- Source: <https://www.bankofengland.co.uk/markets/bank-of-england-market-operations-guide/results-and-usage-data>
- Click "Long-dated Gilt purchase operational results" and "Index-linked gilt purchase operational results"
- These DO NOT need to be updated, because the purchases were limited to September-October 2022.

data/BOE/financial-stability-gilt-sales-time-series_2024_01_05

- Source: <https://www.bankofengland.co.uk/markets/bank-of-england-market-operations-guide/results-and-usage-data>
- Click "Financial stability gilt portfolio sales results"
- Did not need to be updated -- last transaction was in 2023

data/BOE/Bank of England Database.csv

- Source: <https://www.bankofengland.co.uk/markets/bank-of-england-market-operations-guide/results-and-usage-data>
- Scroll down to "Where do we provide APF data?" under "Asset Purchase Facility (APF) Data Explained"
- Under "The 'current stock of holdings' within the APF," click the link to gilts

- Alternatively, go straight to this URL for the same data
<https://www.bankofengland.co.uk/boeapps/database/fromshowcolumns.asp?Travel=NlXSTxTDxSUx&FromSeries=1&ToSeries=50&DAT=RNG&FD=1&FM=Jan&FY=2009&TD=31&TM=Dec&TY=2025&FNY=&CSVF=TT&html.x=96&html.y=61&C=JPZ&Filter=N>

data/BOE/Table for Website_2023_12_22.XLSX

- Source: <https://www.bankofengland.co.uk/markets/bank-of-england-market-operations-guide/results-and-usage-data>

- Click "Maturity profile of the stock of gilts held in the APF – Table." You need to use a service like the Wayback Machine to get the table as it appeared in late 2023.

data/BOE/ISIN_maturity.csv

- Source: Bloomberg.

data/ECB/APP_breakdown_history_2025_02_06

- PSPP Source:
<https://www.ecb.europa.eu/mopo/implement/app/html/index.en.html>

- Click "History of cumulative purchase breakdowns under the APP"

- Desired data is far right column, "Public sector purchase program"

data/ECB/PEPP_breakdown_history_2025_02_06

- PEPP Source:
<https://www.ecb.europa.eu/mopo/implement/pepp/html/index.en.html>

- Click "History of PEPP purchases broken down by asset category"

- Desired data is the "Holdings: Public Sector Securities" column

data/FED/security_holdings_2025_02_04

- Source: <https://fred.stlouisfed.org/series/TREAST>

- Click Max, then Download as CSV

data/RBA/security_holdings_2025_02_06

- Source: <https://www.rba.gov.au/statistics/tables/>

- Find and click the link to Table A3.1

data/Riksbank/security_holdings_2025_02_07

- Source: <https://www.riksbank.se/en-gb/markets/the-riksbanks-securities-holdings/government-bonds/>

- Find the first chart, which has the caption

"The diagram shows the Riksbank's total holdings of government bonds purchased, both Swedish nominal and real government bonds and the Swedish government's green bonds"

- Click the download button in the top right corner of the graph

data/RBNZ/security_holdings_2025_02_06.xlsx

- Source: <https://www.rbnz.govt.nz/statistics/series/new-zealand-debt-securities/holdings-of-central-government-debt-securities>

- Click "Holdings of central government debt securities – D30 (July 2015 – current)"