# Replication package for: “The Four R-stars: From Interest Rates to Inflation and Back” Anna Pilipentseva, Nicholas Tokay, and Ricardo Reis[[1]](#footnote-1) 2025

Data Availability and Provenance Statements

This paper uses publicly available data, references to which are given later in the “Data and Data Sources” section.

Statement about Rights

I certify that the author(s) of the manuscript have legitimate access to and permission to use the data used in this manuscript.

I certify that the author(s) of the manuscript have documented permission to redistribute/publish the data contained within this replication package. Appropriate permission are documented in the [LICENSE.txt](https://social-science-data-editors.github.io/template_README/LICENSE.txt) file.

Summary of Availability

All data can be made publicly available.

Data and Sources

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Data Name** | **Data Files** | **Location** | **Provided** | **Source** |
| UK Historical Data | uk\_historical.xlsx | Data/Raw Data | TRUE | "A millennium of macroeconomic data for the UK”  <https://www.bankofengland.co.uk/statistics/research-datasets> |
| US Data on Capital Stock, NOS, CPI, and GDP | ampf\_main.dta | Data/Raw Data | TRUE | Reis, Ricardo. *Which r-star, public bonds or private investment? Measurement and Policy Implications.* September 2022, London School of Economics. Working Paper. |
| US Historical Data : Labor and Capital Shares, NOS | us\_nos\_l\_share\_hist.xlsx | Data/Raw Data | TRUE | BEA Table 1.10, https://apps.bea.gov/iTable/?reqid=19&step=3&isuri=1&nipa\_table\_list=51&categories=survey |
| Annual Data for the US | rate\_values\_annual\_us.xlsx | Data/Raw Data | TRUE | w\_i - Net national wealth to Net National Income ratio World Inequality Database https://wid.world/  nom\_pot\_gdp - Nominal Potential GDP, CBO, June 2024  https://www.cbo.gov/data/budget-economic-data#6)  y\_ypot - Real GDP / Potential GDP ratio BEA (Real GDP) & CBO (Potential GDP)  tvar - Term Premium on 10-Year Zero Coupon Bond, FRED https://fred.stlouisfed.org/series/THREEFYTP10  all Michigan Inflation Expectations variables - Michigan Survey Data https://data.sca.isr.umich.edu/data-archive/mine.php  all SPF Inflation Expectations Variables Philadelphia Fed SPF https://www.philadelphiafed.org/surveys-and-data/cpi-spf  int\_rate\_r\_1y 1-Year Real Interest Rate  FRED https://fred.stlouisfed.org/series/REAINTRATREARAT1YE  dfii10 - 10-Year Treasury Yield, Inflation-Indexed  FRED https://fred.stlouisfed.org/series/DFII10  effr - Effective Federal Funds Rate (FEDFUNDS) FRED https://fred.stlouisfed.org/series/FEDFUNDS  tb\_3m - 3-Month Treasury Bill Rate (DTB3) FRED https://fred.stlouisfed.org/series/DTB3  h\_nr , h\_r- Private Non-Residential Fixed Assets and Residential Fixed Assets (Current-Cost Net Stock) BEA https://apps.bea.gov/iTable/?ReqID=10&step=2  corp\_profits, corp\_tax\_revenue - Corporate Profits BEA NIPA tables  aaa - AAA Corporate Bond Yield (Moody’s) FRED https://fred.stlouisfed.org/series/AAA  baa - BAA Corporate Bond Yield (Moody’s) FRED https://fred.stlouisfed.org/series/BAA    dep\_priv - Depreciation, Private (Consumption of Fixed Capital) BEA Table 1.7.5 |
| Net National Income (NNI) and Debt to GDP Ratio for the U.S. | nni\_debt.xlsx | Data/Raw Data | TRUE | NNI from BEA, Debt to GDP Ratio from FRED |
| Quarter rate values for the U.S. | r\_dataset\_quarterly.xlsx | Data/Raw Data | TRUE | FRED |
| WACC data for the U.S. | wacc.xlsx | Data/Raw Data | TRUE | e - *Total Market Value of Equity,* *Market capitalization of listed domestic companies World Bank* <https://data.worldbank.org/indicator/CM.MKT.LCAP.CD?locations=US> d - *Total Market Value of Debt,* *Nonfinancial corporate business; debt securities and loans; liability Z1 Account of the U.S* |
| Data for Chile on return on private capital | CHILEDATA.dta | Data/Raw Data | TRUE | Bank of Chile and Reis, Ricardo. *Which r-star, public bonds or private investment? Measurement and Policy Implications.* September 2022, London School of Economics. Working Paper. |
| Real return data for several major countries | RRG7.dta | Data/Raw Data | TRUE | Reis, Ricardo. *Which r-star, public bonds or private investment? Measurement and Policy Implications.* September 2022, London School of Economics. Working Paper. |
| GOS and NOS for the U.S. quarterly | GOS\_US.xlsx | Data/Raw Data | TRUE | BEA |

## Program Requirements

STATA: Stata SE 17

## Instruction to replicators

The order of steps within each section must be preserved. You also need to have all the folders already created as in the described structure

There are the following folders:

1. “Code”: All the code producing the Figures are located there.
2. “Data”: All data is located here. Inside the folder, there is “Raw Data” which contains original files mentioned above and “Intermediate Data”, which contains data produced during analysis.
3. “Figures”: contains output as figures.

### Description of “Code” folder:

1. “0\_Aux\_programs”: program folder

* trends.do – program to build trends in data

1. “1\_Dataset\_Creation”: folder for dataset creation codes

* datasets\_creation.do – creates datasets used in the paper from raw data

1. “2\_Plotting”: folder containing codes from which figures are built

- **1\_usbaseline.do – plots baseline data for US, produces graphs from Figure 1 in the paper**

**- 2\_usothers.do – plots additional descriptive graphs, produces graphs from Figure 2 in the paper**

**- 3\_us\_recent.do – plots the most recent data for the U.S. on quarterly frequency, Figure 5 in paper**

**- 4a\_ukus\_historical.do – plots historical UK and US data, produces part of Figure A1**

**- 4b\_g7\_my.do – plots return on capital and yield on government bond in G7 countries, produces part of Figure A1**

**- 4c\_chile\_m.do – plots return on capital for Chile, produces part of Figure A1**

You should run datasets\_creation.do first and then all the codes in “2\_Plotting” in any order.

1. Anna Pilipentseva and Nicholas Tokay credit for most of this package as superb research assistants to this project. All errors are the responsibility of Ricardo Reis. [↑](#footnote-ref-1)