The Sovereign Spread Compressing Effect of Fiscal Rules during Global Crises

2024-03-07

Data Availability Statement

- The data used in this study consists of a combination of data sources, most of which are publicly available. The trends in fiscal rule adoption and flagging of countries with and without fiscal rules over time come from the IMF Fiscal Rule Dataset, 1985-2021, as well as the IMF Fiscal Councils Dataset (https://www.imf.org/external/datamapper/fiscalrules/map/map.htm).
- Macroeconomic variables and variables related to fiscal space are sourced from the IMF World Economic Outlook Databases (https://www.imf.org/en/Publications/SPROLLs/world-economic-outlook-databases#sort=%40imfdate%20descending
- Fiscal Space data base from Cross-Country Database of Fiscal Space (https://www.worldbank.org/en/research/brief/fiscal-space)
- In our panel regressions, we use the Oxford COVID-19 Government Response Tracker Stringency Index, which is publicly available and can be accessed here: https://ourworldindata.org/covid-stringency-index.
- The measurement of government effectiveness used in our panel regressions is also publicly available, and can be accessed at https://info.worldbank.org/governance/wgi/.
- The spread data used in the main analysis is sourced from the J.P. Morgan Emerging Markets Bond Index Global (EMBI Global) and J.P Morgan CEMBI IG+ index. This is a paid data source, which was consulted using the World Bank Library. Registration must be done in the following link: https://imf.primo.exlibrisgroup.com/discovery/fulldisplay?vid=01TIMF_INST:Shared&tab=Everything&docid=alma991004368089703116&searchScope=All_Resources&context=L&lang=en

Directions for reproducibility and data preparation

This file contains directions needed to recreate each of the tables and figures in our paper using the scripts and data contained within this repository. Some of the data files are not included in the package due to access issues. We have details on how to get those files on the package in the Reproducibility Research Repository. Here are the details of data preparation for those files:

1. Fiscal_Rules_All_Countries_Flagged_0609_2022.csv (should be placed in folder "Files for Reproduction - Covid Spreads")

Var name in Fiscal_Rules_All_Countries_Flagged_0609_2022.csv	Var name in "Rules" sheet	how to calculate
Country #	Country #	

year	year	
Country name	Country name	
ER: Expenditure rule	ER: Expenditure rule	
RR: Revenue rule	RR: Revenue rule	
BBR: Budget balance rule	BBR: Budget balance rule	
DR: Debt rule	DR: Debt rule	
Any monitoring	CALCULATED	sum of columns X-AE
Any formal enforcement procedure	CALCULATED	sum of columns AF-AM
Escape Clause OR Suspension	CALCULATED	1 if either "Escape Clause" or "Suspension" equal 1
National Rule	CALCULATED	1 if any of columns H-K equal 1
Escape Clause	CALCULATED	max of columns BV-CC
Suspension	CALCULATED	max of columns CD-CG

2. IMF Fiscal Council Dataset - Base for Index.csv (should be placed in folder "Files for Reproduction - Fiscal Rule Index")

IMF Fiscal Council Dataset - Base for Index.csv	"Data" sheet
year_start	Start of activity (Year)
coverage	Coverage
council_monitoring	Monitoring of Fiscal Rules
independence_legal	Independence / Non-partisanship -- Legal
independence_operational	Independence / Non-partisanship -- Operational
council_monitoring	Monitoring of Fiscal Rules
independence_legal	Independence / Non-partisanship -- Legal
independence_operational	Independence / Non-partisanship -- Operational

3. IMF Fiscal Rule Dataset - Base for Index.csv (should be placed in folder "Files for Reproduction - Fiscal Rule Index")

IMF Fiscal Rule Dataset - Base for Index.csv	"Rules" sheet
year	year
country	Country #
country_number	Country name

er_rule_in_place	Type of fiscal rule in place -- ER: Expenditure rule
rr_rule_in_place	Type of fiscal rule in place -- RR: Revenue rule
bbr_rule_in_place	Type of fiscal rule in place -- BBR: Budget balance rule
dr_rule_in_place	Type of fiscal rule in place -- DR: Debt rule
er_supranational	National (0), supranational (1), both (2) -- ER: Expenditure rule
rr_supranational	National (0), supranational (1), both (2) -- RR: Revenue rule
bbr_supranational	National (0), supranational (1), both (2) -- BBR: Budget balance rule
dr_supranational	Year of implementation 1/ -- DR: Debt rule
er_year_implementation	Year of implementation 1/ -- ER: Expenditure rule
rr_year_implementation	Year of implementation 1/ -- RR: Revenue rule
bbr_year_implementation	Year of implementation 1/ -- BBR: Budget balance rule
dr_year_implementation	Year of implementation 1/ -- DR: Debt rule
er_national_monitoring	Monitoring of compliance outside government 2/ -- National rules -- ER
rr_national_monitoring	Monitoring of compliance outside government 2/ -- National rules -- RR
bbr_national_monitoring	Monitoring of compliance outside government 2/ -- National rules -- BBR
dr_national_monitoring	Monitoring of compliance outside government 2/ -- National rules -- DR
er_supranational_monitoring	Monitoring of compliance outside government 2/ -- Supernational -- ER
rr_supranational_monitoring	Monitoring of compliance outside government 2/ -- Supernational -- RR
bbr_supranational_monitoring	Monitoring of compliance outside government 2/ -- Supernational -- BBR
dr_supranational_monitoring	Monitoring of compliance outside government 2/ -- Supernational -- DR
er_national_enforcement	Formal enforcement procedure -- National rules -- ER
rr_national_enforcement	Formal enforcement procedure -- National rules -- RR
bbr_national_enforcement	Formal enforcement procedure -- National rules -- BBR
dr_national_enforcement	Formal enforcement procedure -- National rules -- DR
er_supranational_enforcement	Formal enforcement procedure -- Supernational -- ER
rr_supranational_enforcement	Formal enforcement procedure -- Supernational -- RR
bbr_supranational_enforcement	Formal enforcement procedure -- Supernational -- BBR
dr_supranational_enforcement	Formal enforcement procedure -- Supernational -- DR
er_national_legal_basis	Legal basis (highest norm) 4/ -- National rules -- ER
rr_national_legal_basis	Legal basis (highest norm) 4/ -- National rules -- RR
bbr_national_legal_basis	Legal basis (highest norm) 4/ -- National rules -- BBR
dr_national_legal_basis	Legal basis (highest norm) 4/ -- National rules -- DR
er_supranational_legal_basis	Legal basis (highest norm) 4/ -- Supernational -- ER
rr_supranational_legal_basis	Legal basis (highest norm) 4/ -- Supernational -- RR

bbr_supranational_legal_basis	Legal basis (highest norm) 4/ -- Supernational -- BBR
dr_supranational_legal_basis	Legal basis (highest norm) 4/ -- Supernational -- DR
er_national_escape_clause	Escape clause -- National rules -- ER
rr_national_escape_clause	Escape clause -- National rules -- RR
bbr_national_escape_clause	Escape clause -- National rules -- BBR
dr_national_escape_clause	Escape clause -- National rules -- DR
er_supranational_escape_clause	Escape clause -- Supernational -- ER
rr_supranational_escape_clause	Escape clause -- Supernational -- RR
bbr_supranational_escape_clause	Escape clause -- Supernational -- BBR
dr_supranational_escape_clause	Escape clause -- Supernational -- DR
independent_body_assumptions	Independent body sets budget assumptions
independent_body_implementation	Independent body monitors implementation
bbr_national_cyclically_adjusted	BB target in cyclically-adjusted/structural terms or over the cycle -- National rules
bbr_supranational_cyclically_adjusted	BB target in cyclically-adjusted/structural terms or over the cycle -- Supranational rules

Figures and Tables:

Some of our figures and tables are output directly from Stata, while others are created in Microsoft Excel. The total run time of the main script, "master_script.do" is less than 10 minutes. The directions to recreate our figures will follow the order in which they appear in the paper:

-Figures 1a, 1b, and 2 are created entirely within the "Excel_Figures_1_2.xlsx" file. Raw data (IMF's Fiscal Councils Dataset, 2021 Update) is input into the "RAW DATA" tab, and all of the charts automatically populate into the first three tabs of the workbook.

- In section 2.1 of the paper, the following statistic is referenced regarding years 2020-2021: "...countries with fiscal rules have slightly larger structural deficit-to-GDP ratios (4.59%), on average, than those without (4.35%)." Additionally, a one-sided t-test for the difference in means os referemced. Both of these can be referenced at the end of the script "\Figures_and_Calcs_Section_2_1\Table_1_and_Calculations_From_Section_2_1.do".

-Table 1, regression output (Tables A4-A13) is created within "master_script.do", with output populating in the "Output" folder of this repository.

- Figures 3 and A1 can be created after running "master_script.do", which provides outputs "Figure 3 Chart Input.csv" and "Figure A1 Chart Input.csv". These should be pasted into the "RAW" tab of "Excel_Figure_3.xlsx" and "Excel_Figure_3.xlsx", and the time trends seen in the paper will auto-populate.

- Similarly, "master_script.do" provides the output file "regweekly.xls", whose contents should be pasted into the raw data tab of "Excel_Figure_4.xlsx", which then generates Figure 4 seen in the paper. Figure 5 and Table A15 output is also generated from "master_script.do".