



## *The Sovereign Spread Compressing Effect of Fiscal Rules During Global Crises*

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PRWP Reproducibility Verification: RR\_WLD\_2024\_84-v03

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This review verifies the reproducibility of the exhibits included in the paper “*The Sovereign Spread Compressing Effect of Fiscal Rules During Global Crises*”.

### **Contents in this review:**

1. Main findings
2. Reproducibility assessment
3. List of exhibits and reproducibility status

### *Main findings*

- The code was successfully executed on a new computer after:
  1. Changing the file paths.
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.
- The code takes approximately 6 minutes to run.
- The paper was found reproducible with the provided package.

### *Reproducibility assessment*

- Paper exhibits were attempted to be reproduced in a computer with the following specifications:
  - OS: Windows 11 Enterprise
  - Processor: Intel(R) Core(TM) i5-1145G7 CPU @ 2.60GHz
  - Memory available: 15.7 GB
  - Software version: Stata version 18

We utilized the paper “*The Sovereign Spread Compressing Effect of Fiscal Rules During Global Crises*” (filename: *islamaj\_samano\_sommers\_0222\_2024.pdf*) from the reproducibility package provided by the authors. We then compared the code results with the exhibits in the paper to ascertain their reproducibility.

### • Reproducibility Summary:

- **Data:** Some data cannot be republished and are not included in the package.
- **Code:** All code files are included in the package.
- **Outputs:** All outputs are generated by code included in the reproducibility package.
- **Reproducibility verification:** Reviewers used data provided directly by the authors to conduct the reproducibility verification, and some of this is not included in the package.

### List of exhibits and reproducibility status

### Results in the Main Section of the Paper

- **Figure 1A Reproduced**
- **Figure 1B Reproduced**
- **Table 1 Reproduced**
- **Figure 2 Reproduced**
- **Figure 3 Reproduced**
- **Table 2 Reproduced**
- **Table 3 Reproduced** Code output does not have "Month Fixed Effects", but we consider this does not jeopardize reproducibility. See details below:

**Code**

Table 3. Difference-in-Difference Estimates of Fiscal Rule Impact in Post-Covid Period

	(1)	(2)	(3)	(4)	(5)
Fiscal Rule	-0.745*** (-29.01)	-0.626*** (-25.22)	-0.711*** (-28.31)	-0.709*** (-27.26)	-0.709*** (-27.27)
Post Covid	0.337*** (61.88)	0.238*** (42.20)	0.261*** (48.16)	0.253*** (44.68)	0.254*** (44.72)
Fiscal Rule#Post Covid	-0.228*** (-42.38)	-0.174*** (-33.32)	-0.176*** (-35.33)	-0.174*** (-34.31)	-0.174*** (-34.30)
Global/Regional/Corporate Factors	Yes	Yes	Yes	Yes	Yes
Policy-Related Controls	No	No	No	No	Yes
Total External Debt Stocks	No	Yes	No	Yes	Yes
Primary Balance	No	Yes	No	Yes	Yes
GDP Per Capita Growth	No	No	Yes	Yes	Yes
Inflation	No	No	Yes	Yes	Yes
Government Effectiveness	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	48956	46675	45887	44320	44320
R <sup>2</sup>	0.9195	0.9252	0.9115	0.9136	0.9136

*t* statistics in parentheses  
\* p<0.10, \*\* p<0.05, \*\*\* p<0.010

**Paper**

Table 3. Difference-in-Difference Estimates of Fiscal Rule Impact in Post-Covid Time Period

	Dependent Variable Log Spread (Daily)				
	(1)	(2)	(3)	(4)	(5)
Fiscal Rule	-0.745*** (-29.01)	-0.626*** (-25.22)	-0.711*** (-28.31)	-0.709*** (-27.26)	-0.709*** (-27.27)
Post Covid	0.337*** (61.88)	0.238*** (42.20)	0.261*** (48.16)	0.253*** (44.68)	0.254*** (44.72)
Fiscal Rule#Post Covid	-0.228*** (-42.38)	-0.174*** (-33.32)	-0.176*** (-35.33)	-0.174*** (-34.31)	-0.174*** (-34.30)
Global/Regional/Corporate Factors	Yes	Yes	Yes	Yes	Yes
Policy-Related Controls	No	No	No	No	Yes
Total External Debt Stocks	No	Yes	No	Yes	Yes
Primary Balance	No	Yes	No	Yes	Yes
GDP Per Capita Growth	No	No	Yes	Yes	Yes
Inflation	No	No	Yes	Yes	Yes
Government Effectiveness	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes
Month Fixed Effects	No	No	No	No	No
Observations	48956	46675	45887	44320	44320
R <sup>2</sup>	0.9195	0.9252	0.9115	0.9136	0.9136

*t* statistics in parentheses  
\* p<0.10, \*\* p<0.05, \*\*\* p<0.010

- **Figure 4** Reproduced
- **Table 4** Reproduced
- **Figure 5** Reproduced

**Results in the Annex**

- **Figure A1** Reproduced
- **Table A1** Does not apply
- **Table A2** Does not apply
- **Table A3** Does not apply
- **Table A4** Reproduced
- **Table A5** Reproduced
- **Table A6** Reproduced
- **Table A7** Reproduced
- **Table A8** Reproduced
- **Table A9** Reproduced
- **Table A10** Reproduced
- **Table A11** Reproduced
- **Table A12** Reproduced
- **Table A13** Reproduced
- **Table A14** Does not apply
- **Table A15** Reproduced