

Conditionality in Official Lending: Compliance through strategic assessment*

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FR-DE Fiscal Policy Seminar, Paris, 9-10 November 2021

*These are our own views and should not be attributed to the CBI or the IMF staff, Management or Executive Board.

Motivation

- ▶ Outstanding loans from official-sector lenders were over \$2 trillion in 2019; substantial rise during pandemic
- ▶ Countries must comply with conditions to receive these loans, but **little evidence of compliance determinants**
- ▶ **Recovery and Resilience Facility** will provide loans and grants to support reform and investment in EU member states; EC to assess national plans and monitor implementation

Contribution

- ▶ **Assess drivers of compliance** with official loan conditions using a **unique database** with condition-level information from EA financial assistance programmes
- ▶ Analyse **strategic interaction** between creditors' decision to assess and debtors' decision to comply
- ▶ Do **not** assess whether the conditions are *useful* (i.e. whether they helped improve macro-financial outcomes)

Results

- ▶ **Most conditions of little relevance**, as loans disbursed in full despite majority not complied with
- ▶ Compliance with a **small subset** of conditions, such as those with **explicit numerical targets**, was sufficient
- ▶ Contrary to emphasis in programme documents, **stabilisation given priority over structural reforms**
- ▶ Strategic behaviour evident, with **creditors timing assessments to make compliance more likely**

Literature

- ▶ **Mourmouras et al. (2003)**: no evidence extent \ structure of conditionality materially influences programme prospects
- ▶ **Dreher (2009)**: implementation of conditions is weak; analysis using MONA database
- ▶ **IMF Review(s) of Conditionality (2005, 2011, 2018)**:
 - ▶ Change in conditionality rules improved programme completion
 - ▶ Need to streamline structural conditionality and enhance country ownership
- ▶ **Reinsberg et al. (2021)**: Higher number of conditions - less likely implementation

Data - EFSF \ ESM programme database

▶ **Content**

- ▶ Lending information: Disbursements, principal repayments, past interest, fee payments
- ▶ Programme monitoring: Loan conditionality, economic and financial indicators incl. real-time nowcasts \ forecasts
- ▶ **Cross section:** Six programmes in five countries (CY, **ES**, IE, GR, PT); 2,279 unique loan conditions
- ▶ **Time series:** Dec 2010 - Aug 2018; repeated observations of loan conditions - 8,152 observations
- ▶ **Constructing database suitable for empirical analysis**
 - ▶ Matching information on individual conditions
 - ▶ Frequency transformation; applicable due dates
 - ▶ Treatment of multiple sub-conditions

Data structure

| | IE | PT | GR (EFSF) | CY | GR (ESM) |
|--------|-----------|-----------|--------------|----------|-------------|
| 2010Q3 | | | | | |
| 2010Q4 | M00 | | | | |
| 2011Q1 | | | | | |
| 2011Q2 | CA1, M01 | M00 | | | |
| 2011Q3 | CA3, M02 | CA1, M01 | | | |
| 2011Q4 | CA4, M03 | CA2, M02 | M05 | | |
| 2012Q1 | CA5, M04 | CA3, M03 | CA0, M06 | | |
| 2012Q2 | CA6, M05 | CA4, M04 | | | |
| 2012Q3 | CA7, M06 | CA5, M05 | | | |
| 2012Q4 | CA8, M07 | CA6, M06 | CA1, M07 | | |
| 2013Q1 | CA9, M08 | | | | |
| 2013Q2 | CA10, M09 | CA7, M07 | CA2, M08 | M00 | |
| 2013Q3 | CA11, M10 | CA8, M08 | CA3, M09 | CA1, M01 | |
| 2013Q4 | CA12 | CA10, M09 | | CA2, M02 | |
| 2014Q1 | | CA11 | | CA3, M03 | |
| 2014Q2 | | | CA4, M10 | CA4, M04 | |
| 2014Q3 | | | CA4b | CA5, M05 | |
| 2014Q4 | | | | | |

Data structure II

| | IE | PT | GR (EFSF) | CY | GR (ESM) |
|--------|----|----|--------------|----------|-----------------------|
| 2015Q1 | | | | | |
| 2015Q2 | | | | CA6, M06 | |
| 2015Q3 | | | | CA7 | M00, CA0ba, M01, CA0a |
| 2015Q4 | | | | | CA0d, M13, CA0e20 |
| 2016Q1 | | | | | |
| 2016Q2 | | | | | CA1, M02 |
| 2016Q3 | | | | | CA1a |
| 2016Q4 | | | | | CA1b |
| 2017Q1 | | | | | |
| 2017Q2 | | | | | CA2, M04 |
| 2017Q3 | | | | | |
| 2017Q4 | | | | | CA2a |
| 2018Q1 | | | | | CA3aa, M07 |
| 2018Q2 | | | | | CA4, M11 |

Condition: Establish a Portuguese Fiscal Council

| | | |
|--------------------|------------|--|
| M00 (May 2011) | MoU | 3.16. Adopt the Statutes of the Fiscal Council, based on the working group report of 6 April 2011. The Council will be operational in time for the 2012 budget. [Q3-2011] |
| CA1 (Sept 2011) | Compliance | No assessment |
| M01 (Sept 2011) | MoU | 3.16. Adopt the Statutes of the Fiscal Council. [Q3-2011] The Fiscal Council will be operational by [Q4-2011] . |
| CA2 (Dec 2011) | Compliance | Observed: The Statutes of the Fiscal Council were approved on 8 September and entered into force on 20 October (Law 54/2011 on 19 October). Fiscal Council will be operational by end of the year as stipulated by the MoU. |
| M02 (Dec 2011) | MoU | 3.14. The Fiscal Council will be operational by [Q4-2011]. |
| CA3 (Mar 2012) | Compliance | Broadly observed: The Fiscal Council was been established, its operation should start in March. |
| M03 (Mar 2012) | MoU | 3.9. The Fiscal Council was been established and will be operational by [Q1-2012] . |
| CA4 (Jun 2012) | Compliance | Observed |

Distribution of loan conditions

| | Financial | Fiscal | Fiscal- Structural | Structural Labour | Structural Product | Other | Total Obs |
|-------------------|--------------|--------|-----------------------|----------------------|-----------------------|-------|--------------|
| <i>a. Total</i> | | | | | | | |
| Cyprus | 0.537 | 0.077 | 0.186 | 0.082 | 0.094 | 0.025 | 1.000 |
| Greece | 0.080 | 0.022 | 0.567 | 0.041 | 0.260 | 0.030 | 1.000 |
| Ireland | 0.672 | 0.063 | 0.089 | 0.054 | 0.085 | 0.037 | 1.000 |
| Portugal | 0.108 | 0.151 | 0.415 | 0.050 | 0.276 | 0.000 | 1.000 |
| <i>b. Numeric</i> | | | | | | | |
| Cyprus | 0.412 | 0.368 | 0.059 | 0.074 | 0.015 | 0.074 | 0.168 |
| Greece | 0.051 | 0.101 | 0.595 | 0.034 | 0.186 | 0.034 | 0.131 |
| Ireland | 0.564 | 0.200 | 0.073 | 0.018 | 0.073 | 0.073 | 0.070 |
| Portugal | 0.068 | 0.531 | 0.372 | 0.017 | 0.011 | 0.000 | 0.199 |

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Distribution of **assessed** loan conditions

| | Total | Numeric | Continuous | Redrafted | Delayed |
|----------|--------------|----------------|-------------------|------------------|----------------|
| Cyprus | 0.728 | 0.779 | 0.652 | 0.763 | 0.112 |
| Greece | 0.546 | 0.570 | 0.443 | 0.531 | 0.299 |
| Ireland | 0.255 | 0.582 | 0.550 | 0.120 | 0.010 |
| Portugal | 0.325 | 0.088 | 0.077 | 0.413 | 0.163 |

Distribution of **fulfilled** loan conditions

| | Total | Numeric | Continuous | Redrafted | Delayed |
|----------|--------------|----------------|-------------------|------------------|----------------|
| Cyprus | 0.512 | 0.647 | 0.609 | 0.523 | 0.092 |
| Greece | 0.358 | 0.371 | 0.330 | 0.313 | 0.297 |
| Ireland | 0.186 | 0.545 | 0.500 | 0.056 | 0.007 |
| Portugal | 0.180 | 0.063 | 0.049 | 0.215 | 0.166 |

Empirical approach

- ▶ Simple model of compliance

$$s_j = \beta x_j + \epsilon_j$$

- ▶ However, can only determine compliance **if assessed**

$$d_j = \delta z_j + \nu_j$$

- ▶ If $E(s_j | z_j, d_j = 1) \neq 0$, estimates are biased

$$s_j = \beta x_j + \gamma \hat{\lambda}_j + \epsilon_j$$

- ▶ where $\hat{\lambda}_j$ is the estimated inverse Mills ratio that **controls for sample-induced endogeneity**

Empirical approach II

- ▶ **Probit** estimated using **pooled cross section**
- ▶ Std errors **clustered** at condition level
- ▶ **Bootstrapped** in second stage
- ▶ **Country and time dummies**

Explanatory variables: Condition characteristics

- ▶ Conditions with an **explicit numerical target** (dummy)
- ▶ Conditions set for **continuous assessment** (dummy)
- ▶ Conditions that were previously **redrafted** (dummy)
- ▶ **Expected time to assessment** (in quarters)
- ▶ **Number of conditions** imposed in MoU condition was set
- ▶ Interaction of **numerical and continuous** dummies
- ▶ Interaction of **redrafted and delayed** dummies (second stage)
- ▶ **Policy sector** (dummies)

Explanatory variables: Macro-financial considerations

- ▶ Institutions' **nowcasts of annual real GDP growth**
 - ▶ **Exclusion restriction** in second stage
- ▶ **Nowcast update**: update of nowcasts between MoU drafting and assessment
 - ▶ Positive value represents higher-than-expected growth
- ▶ 10-year sovereign bond **spread**;
- ▶ **Upcoming disbursement** relative to GDP nowcast;

Drivers of condition assessment

| | (1) | (2) | (3) |
|-------------------------|----------------------|----------------------|-----------------------------|
| Numerical | -0.364*** (0.076) | -0.171** (0.082) | -0.113 (0.079) |
| Continuous | 0.030 (0.077) | 0.038* (0.077) | -0.016 (0.068) |
| Redrafted | 0.077** (0.038) | 0.066* (0.038) | 0.108*** (0.040) |
| Expected time to assess | -1.552*** (0.105) | -1.503*** (0.108) | -1.671*** (0.117) |
| Number of conditions | -0.008 (0.033) | -0.053 (0.036) | -0.811*** (0.191) |
| Numerical · Continuous | 0.347 (0.226) | 0.228 (0.224) | 0.275 (0.204) |
| GDP growth nowcast | -0.177*** (0.014) | -0.177*** (0.014) | 0.265*** (0.047) |
| Nowcast update | 0.075* (0.040) | 0.081* (0.041) | 0.025 (0.051) |
| Spread at assessment | -0.116*** (0.014) | -0.116*** (0.014) | 0.064** (0.028) |
| Disbursement-to-GDP | 13.469*** (0.851) | 13.402*** (0.852) | 14.415*** (1.066) |

Drivers of condition assessment II

| | (1) | (2) | (3) |
|--------------------|-------|----------------------|-----------------------------|
| Financial | | -0.174 (0.151) | -0.222 (0.146) |
| Fiscal | | -0.848*** (0.192) | -0.749*** (0.188) |
| Fiscal-structural | | -0.098 (0.142) | -0.017 (0.138) |
| Structural-labour | | -0.119 (0.175) | -0.089 (0.180) |
| Structural-product | | 0.136 (0.146) | 0.207 (0.143) |
| <i>N</i> | 6160 | 6160 | 6160 |
| pseudo R^2 | 0.200 | 0.213 | 0.269 |
| Year dummies | No | No | Yes |
| Country dummies | No | No | Yes |

Drivers of condition fulfillment

| | (1) | (2) | (3) | (4) |
|-------------------------|----------------------|----------------------|-----------------------------|-----------------------------|
| Numerical | 0.202** (0.088) | 0.221** (0.112) | 0.191* (0.113) | 0.235** (0.103) |
| Continuous | 0.597*** (0.127) | 0.650*** (0.125) | 0.695*** (0.144) | 0.695*** (0.136) |
| Redrafted | -0.023 (0.063) | -0.012 (0.065) | -0.092 (0.067) | -0.199*** (0.064) |
| Expected time to assess | -1.705*** (0.168) | -1.773*** (0.177) | -1.772*** (0.237) | -0.705*** (0.141) |
| Number of conditions | -0.046 (0.045) | -0.011 (0.043) | -0.358*** (0.117) | -0.349** (0.187) |
| Numerical · Continuous | 0.289 (0.349) | 0.308 (0.378) | 0.368 (0.442) | 0.200 (0.394) |
| Nowcast update | 0.029 (0.064) | 0.008 (0.065) | 0.143* (0.076) | 0.018 (0.073) |
| Avg spread | -0.071*** (0.011) | -0.068*** (0.011) | 0.029 (0.027) | 0.033 (0.032) |
| Disbursement-to-GDP | 8.944*** (0.182) | 8.457*** (1.188) | 2.387 (1.732) | -4.923** (1.490) |
| Delayed | -0.050 (0.083) | -0.034 (0.082) | 0.190* (0.098) | 0.197** (0.088) |
| Redrafted · Delayed | -0.092 | -0.097 | -0.004 | 0.054 |

Drivers of condition fulfillment II

| | (1) | (2) | (3) | (4) |
|---------------------|---------------------|---------------------|----------------------------|---------------------|
| Financial | | 0.440** (0.224) | 0.592*** (0.291) | 0.730*** (0.256) |
| Fiscal | | 1.237*** (0.397) | 1.464*** (0.391) | 1.889*** (0.349) |
| Fiscal-structural | | 0.276 (0.233) | 0.429* (0.259) | 0.427* (0.239) |
| Structural labour | | 0.374 (0.234) | 0.586** (0.266) | 0.615** (0.282) |
| Structural product | | 0.362 (0.230) | 0.588** (0.279) | 0.459* (0.247) |
| Inverse mills ratio | 0.843*** (0.125) | 0.854*** (0.138) | 1.203*** (0.184) | |
| Observations | 2730 | 2730 | 2730 | 2730 |
| Pseudo R^2 | 0.056 | 0.067 | 0.144 | 0.133 |
| Year dummies | No | No | Yes | Yes |
| Country dummies | No | No | Yes | Yes |

Strategic assessment of loan conditions

- ▶ Significant inverse mills ratio shows lenders consider macro-financial environment and condition characteristics when deciding whether to assess
- ▶ Positive sign shows these **strategic timing considerations improve compliance: greater flexibility helps**
- ▶ What is the underlying motivation for such behaviour?
 1. Incorporate missing state contingency (Abraham et al., 2019)
 2. Minimise scrutiny of process (Antic and Persico, 2020)

Drivers of assessment delays

| | (1) | (2) | (3) |
|-------------------------|----------------------|----------------------|-----------------------------|
| Numerical | -0.247*** (0.084) | -0.104 (0.092) | 0.044 (0.107) |
| Continuous | -0.521*** (0.131) | -0.480*** (0.152) | 0.056 (0.176) |
| Redrafted | -0.091* (0.054) | -0.130** (0.056) | -0.002 (0.069) |
| Expected time to assess | -2.701*** (0.184) | -2.735*** (0.178) | -4.328*** (0.267) |
| Number of conditions | 0.750*** (0.059) | 0.690*** (0.087) | -0.157 (0.155) |
| Numerical · Continuous | -0.228 (0.480) | -0.403 (0.473) | -0.533* (0.307) |
| GDP growth nowcast | -0.141*** (0.014) | -0.147*** (0.020) | 0.690*** (0.052) |
| Nowcast update | -0.391*** (0.054) | -0.387*** (0.079) | -0.371*** (0.086) |
| Spread at assesment | -0.205*** (0.017) | -0.216*** (0.021) | -0.012 (0.125) |
| Disbursement-to-GDP | 14.818*** (0.831) | 15.086*** (0.896) | 31.906*** (2.803) |

Drivers of assessment delays II

| | (1) | (2) | (3) |
|--------------------|-------|----------------------|----------------------------|
| Financial | | -0.283 (0.223) | -0.359 (0.250) |
| Fiscal | | -0.898*** (0.337) | -0.871** (0.361) |
| Fiscal-structural | | -0.050 (0.197) | -0.012 (0.231) |
| Structural-labour | | 0.019 (0.233) | 0.108 (0.273) |
| Structural-product | | 0.274 (0.199) | 0.398* (0.230) |
| <i>N</i> | 6160 | 6160 | 6160 |
| pseudo R^2 | 0.346 | 0.361 | 0.556 |
| Year dummies | No | No | Yes |
| Country dummies | No | No | Yes |

Policy lessons

- ▶ When designing conditionality for official loans, lenders should:
 - ▶ Focus on fewer conditions, stated in quantifiable terms
 - ▶ Take account of preferences to stabilise before reforming
 - ▶ Incorporate ex-ante state contingencies in contracts
 - ▶ Provide an in-built mechanism for transparently adjusting conditions

Thank you for your attention