Dataset on green macroprudential regulations and instruments: Objectives, implementation and geographical diffusion

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ABSTRACT

The dataset presented in this article contains the data gathered when surveying existing “green” macroprudential regulations and instruments. Official central banks’ documents and acts, as well as financial institutions reports, have been considered. In particular, for the selected OECD and non-OECD countries, the dataset contains information on the type of institutional governance, the mandate, the type of green regulation, the institution responsible for its implementation or promotion, the official reference and the related link to the document, as of February 2019. The dataset is made publicly available considering the actively evolving debate about the adoption of green prudential requirements and the implementation of green prudential instruments.

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The dataset is a unique source of information regarding the state-of-the-art green prudential regulations and instruments adopted worldwide, together with the data for the governance type and monetary policy goal.

The dataset is built by relying on a comprehensive survey of official documents of national central banks, financial institutions, and international organizations. The investigation ended on October 2018, and it has been updated on February 2019.

The dataset includes 56 countries, of which 31 are members of the OECD and 37 are under the Basel III Accord. The choice regarding the countries to include in the database is related uniquely to the availability of data regarding the adoption, or discussion about the implementation, of green prudential regulations.

The sampled countries are located mostly in Europe (43%), 25% belongs to the Asia and Pacific area, 16% to the American continent, 7% is located in the Middle East and Central Asia, and 9% is composed of African countries.

Regarding the income level (defined according to the World Bank indicators [1] and World Bank countries' classification by income [2]), 59% of the sample is composed of high-income countries, 21% by lower-middle-income countries, 18% by upper-middle-income countries and finally, by 2% of low-income countries.

A summary of the sample's characteristics, frequencies and shares are provided in Tables 1 and 2, respectively. Fig. 1 offers an overview of the diffusion of the three types of institutional frameworks.
(i.e., governance types), whereas Fig. 2 shows the worldwide adoption of the different green prudential requirements, sorted according to the Green Prudential Regulation Index we developed in the investigation by relying on the gathered data (for additional details, see Table 2 and Section 2). Fig. 3 presents the distribution of the sampled countries according to whether the adopted (or under discussion) green prudential regulation is binding for the financial sector.

The data presented in this article have been used in Ref. [3] to perform a state-of-the-art analysis of the adoption of green regulations and prudential instruments and in Ref. [4] to analyze the state-of-the-art green macroprudential architecture and understand the factors that underlie the choice of particular institutional setups at the country level.

### Table 1
Characteristics of the sample.

| Statistic                        | February 2019 |
|----------------------------------|---------------|
| Year of the survey (last update) | February 2019 |
| Sample coverage                  | 56 countries  |
| Members of the Basel Accords     | 37 countries, 2 observers |
| OECD members                     | 31 countries  |

### Table 2
Composition of the sample: frequencies and shares.

| Statistic                                      | Frequency | Share |
|-----------------------------------------------|-----------|-------|
| **By income level**                           |           |       |
| High-income                                   | 33        | 59%   |
| Upper-middle-income                           | 10        | 18%   |
| Lower-middle-income                           | 12        | 21%   |
| Low-income                                    | 1         | 2%    |
| **By geographical area**                      |           |       |
| Africa                                        | 5         | 9%    |
| Americas                                      | 9         | 16%   |
| Asia and Pacific                              | 14        | 25%   |
| Europe                                        | 24        | 43%   |
| Middle east and Central Asia                  | 4         | 7%    |
| **By central bank policy goal**               |           |       |
| Inflation targeting                           | 22        | 39%   |
| Inflation targeting & price stability         | 27        | 48%   |
| Growth                                        | 1         | 2%    |
| Mix                                           | 6         | 11%   |
| **By governance type (CBM index)**            |           |       |
| 0 Separate structure model                    | 18        | 32%   |
| 1 Separate committee model                    | 26        | 47%   |
| 2 Central bank model                          | 12        | 21%   |
| **By Green Macroprudential Index**            |           |       |
| 0 Mandatory green regulation                  | 10        | 21%   |
| 1 Voluntary green regulation                  | 13        | 27%   |
| 2 Green regulation under discussion at the policy level | 25    | 52%   |
| **By Green Prudential Regulation Index**       |           |       |
| 0 Differentiated Reserve Requirements          | 1         | 2%    |
| 1 Lending Limits and Green Financial Principles| 1         | 2%    |
| 2 Disclosure requirements                     | 9         | 20%   |
| 3 Risk assessment                              | 2         | 4%    |
| 4 Green Financial Principles                   | 14        | 31%   |
| 5 Disclosure requirements and Lending limits and Liquidity instruments | 3 | 7% |
| 6 Disclosure requirements and Risk assessment  | 7         | 15%   |
| 7 Disclosure requirements and Lending limits   | 6         | 13%   |
| 8 Disclosure requirements and Stress tests     | 1         | 2%    |
| 9 Lending limits and Stress tests              | 1         | 2%    |
| 10 Green Financial Principles and Stress tests | 1         | 2%    |
2. Experimental design, materials, and methods

The following two main strategies were used to find the relevant information to construct the dataset. First, the keywords “green finance” and “country name” were searched using various
combinations to find out the majority of data sources. The selected keywords were combined with one or more of the following terms: “macroprudential policy,” “central bank,” “climate change,” “sustainable.” The keywords’ search was then further improved by specifying, for example, the regulatory authority, if any, and the name of the central bank. The second strategy consisted in first, to identify the institutions which are known to be reporting various initiatives in sustainable finance, and second, to examine their websites.

The collected data were used to build the Green Macroprudential Index (GMI) and the Green Prudential Instrument Index (GPII).

The GMI has been created by setting up three categories; namely (i) under discussion, to which it is assigned an index equal to zero (GMI = 0) and defines countries that are currently discussing the possibility of introducing green regulations, (ii) voluntary, to which is assigned an index equal to one (GMI = 1) and defines countries that developed a voluntary green regulation; and, finally (iii) mandatory, to which it is assigned the index equal to 2 (GMI = 2), and defines countries that adopted a green prudential regulation which is already in force. The GPII is composed of 11 categories, as shown in Table 2.

Both the GMI and GPPI indices are particularly worth as they can be used to offer a clear picture of different types of currently available green macroprudential regulations, binding conditions for countries, together with their geographical adoption and diffusion.

An additional index, the CBM, has been constructed in order to present the distribution of the different governance architectures. The index is as follows; it takes value of CBM = 0 in the case of the separate structure model, CBM = 1 in the case of the separate committee model and CBM = 2 in the case of the central bank model.

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Transparency document

Transparency document associated with this article can be found in the online version at https://doi.org/10.1016/j.dib.2019.103870.

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