SUERF
The European Money and Finance Forum

SUERF Policy Brief
No 1106, March 2025

Green Fiscal Rules? Challenges and Policy Alternatives



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Keywords: Fiscal rule, Golden rule, Medium-term fiscal framework, MTFF

JEL codes: E62, H61

Abstract

We argue that 'green' fiscal rules (that exempt green-related spending or borrowing from fiscal rule limits) are not an effective tool for fiscal policy to tackle climate change. In addition to other practical design challenges, simple simulations of green rules illustrate that they can either (i) lead to unsustainable debt dynamics when climate goals are pursued mostly using spending-based instruments (e.g., public investment and subsidies), or (ii) need to implicitly assume an overly large fiscal adjustment in the non-green budget, which would undermine the rule's credibility. Another caveat is the high uncertainty surrounding countries' climate cost estimates. A better alternative is adopting a more comprehensive strategy to integrate climate change considerations into fiscal policy design, taking into account the complex policy trade-offs and long-term effects. The appropriate mix of climate policies, including carbon pricing, should be pursued within the overall setting of fiscal and debt objectives. Developing 'green' medium-term fiscal frameworks would help design appropriate policies and build public consensus for the needed climate reforms.

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Fiscal policy urgently needs to integrate the climate agenda… but 'green' fiscal rules are not the appropriate tool.

Addressing climate change will require significant upfront action by governments, together with the private sector, on mitigation and adaptation. The impact of such actions on the fiscal accounts can vary widely depending on the tools chosen and the country specificities (including the degree of vulnerability to natural disasters). For instance, relying largely on expenditure-based measures to achieve net zero emissions would put significant pressure in the fiscal accounts in the absence of compensatory measures on the revenue side (IMF October 2023 Fiscal Monitor).

Some have suggested the introduction of so-called 'green' fiscal rules – which typically propose excluding spending (and borrowing) associated with green policies from fiscal rule limits – as a solution to both protect climate-related priorities and promote fiscal sustainability (e.g., Darvas and Wolff, 2021). Other variants include modifying rules to include 'green' escape clauses, setting benchmarks to guarantee a minimum level of expenditures, or the establishment of green investments funds towards achieving climate goals.

Yet, *green* fiscal rules suffer from severe design challenges, prompting the need for a more comprehensive fiscal strategy to tackle climate change, as described in the remainder of this note.

How to calibrate green rules: Unsustainable debt dynamics or overly tight non-green fiscal balances?

Fiscal rules, whether green or not, should be calibrated to meet their central objective of promoting debt sustainability. This requires that the level of spending is consistent with the level of revenue mobilization and a manageable debt level under most economic scenarios. However, the fiscal costs associated with addressing climate change are highly uncertain and potentially very high, especially if countries rely mainly on government spending measures (e.g., investment, subsidies). Excluding such fiscal costs from fiscal rules (including limits on borrowing) could lead to disruptive debt dynamics and undermine the effectiveness of the fiscal rules in promoting fiscal discipline and ultimately the ability of the government to deliver on its development and green goals.

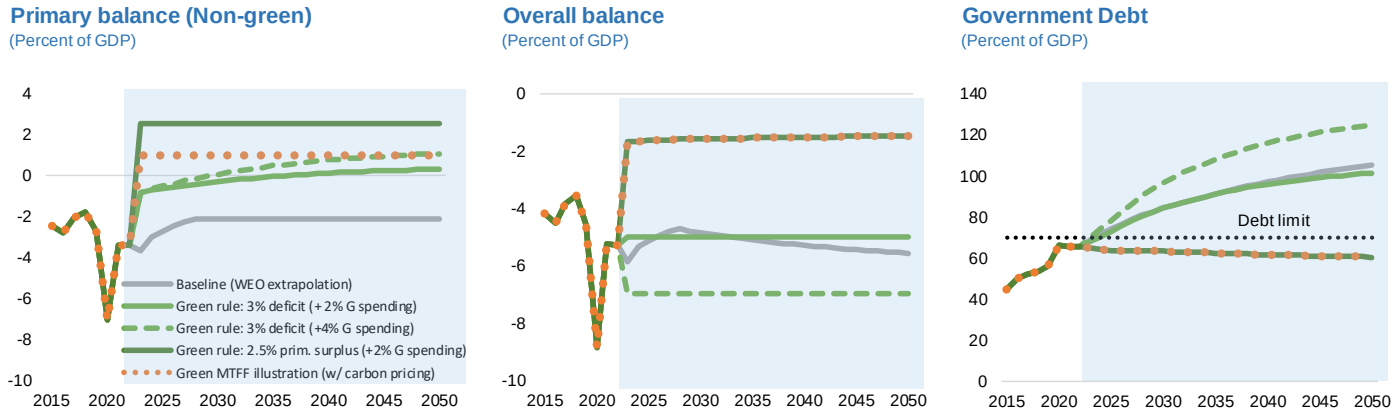
For illustration, we simulate the impact of simple green rules on fiscal balances and debt for a typical emerging market (EM). We follow a methodology for calibrating traditional fiscal rules that has been widely applied. Simply put, fiscal rules should safeguard that public debt remain below a threshold (debt limit), above which debt sustainability risks are high (and lead to debt distress). Caselli and others (2022) estimate that for a typical emerging market the debt limit was around 95 percent of GDP pre-pandemic (when global interest rates were low) but was significantly lower at around 70 percent of GDP during the mid-2000s; the lower end of this 70-95 range can be considered a *prudent* limit. Next, using the IMF's FAD debt anchor calibration toolkits (Eyraud and others, 2018; Gbohoui and others, 2023), we estimate that debt should target additional fiscal buffers (a safety margin below the debt limit) of around 20 percent of GDP when accounting for normal macroeconomic volatility and up to 30 percent of GDP when also accounting for tail risks from natural disasters. In other words, according to this simplistic calibration, a typical EM may want to avoid public debt exceeding 70 percent of GDP and target levels below 40-50 percent of GDP over the medium term to ensure public debt sustainability.

Finally, we simulate fiscal balance and debt trajectories, following Escolano (2010), under alternative green fiscal rules. We abstract from modeling the energy transition and assume, in all scenarios, that the representative EM reaches a net zero emissions goal by 2060 by adopting mostly spending-based policies (such as public investment and subsidies, with limited use of carbon pricing), requiring additional expenditures of around 2 percent of GDP per year relative to baseline investment (October 2023 Fiscal Monitor). Moreover, beyond investment needs for mitigation, building resilience to climate change would imply further climate-change adaptation costs averaging around 1-2 percent of GDP per year for many developing countries (Aligishiev et al. 2022). Noteworthily, these estimates are highly uncertain and subject to wide dispersion across countries, which further complicates the calibration of green fiscal rules.

Our simulations show that, since the fiscal costs of green policies can be very large, debt can either become unsustainable or overly compress other spending under a green rule, resulting in an inefficient allocation and undermining the fiscal rule (Figure 1).
In particular:

- Debt is shown to be unsustainable, significantly surpassing the debt limit (black dotted line) under a business-as-usual scenario based on extrapolating IMF World Economic Outlook projections, abstracting from targeting green spending needs (**gray** line).
- Similarly, debt can become unsustainable under green rules consisting of a 3 percent of GDP deficit ceiling (as has been commonly adopted in many countries) that exempts 2 percent of GDP annual green spending on mitigation, and possibly an additional 2 percent of GDP annual green spending on adaptation (**green** solid and dashed lines)
- Calibrating a fiscal rule that preserves debt sustainability (approaching the debt anchor over time) would require an annual primary surplus of around 0.5 percent of GDP. A *green* fiscal rule that exempts green spending on mitigation would require an even larger fiscal adjustment in the non-green budget implying a primary surplus amounting to around 2.5 percent of GDP (**dark green** line) or higher if other climate spending (e.g. for adaptation) were also exempted. Achieving such a large surplus would require difficult policy decisions—EMs averaged a primary deficit of 0.7 percent of GDP during 2000-2022.
- An illustrative scenario shows that a more balanced mix of fiscal policy tools to achieve the net zero emissions target, beyond green government spending – for example by adopting green PFM practices, such as a green medium-term fiscal framework (MTFF) that incorporates enhanced investment efficiency combined with carbon pricing – can lead to an improved fiscal balance for the green sector, thereby allowing more space to accommodate non-green spending priorities while keeping debt sustainable (**orange** dotted line).

Figure 1. Typical EM: Green Fiscal Rules Could Lead to Unsustainable Debt Levels or Overly Tight (Non-Green) Fiscal Balances



Further challenges in designing green fiscal rules

Green fiscal rules also face other operational challenges related to their design. For instance:

- Green rules suffer from similar risks as traditional so-called 'golden rules', which exclude investment spending from the budget ceiling. Such rules provide incentives to misclassify current as capital spending in the case of golden rules (and non-green as green spending in the case of green rules) to avoid limits imposed by the rules, making them complex to monitor and enforce and undermining fiscal sustainability (Mancini and Tommasino, 2023). Similarly, introducing a floor on green spending (in addition to other operational rules) could undermine compliance with the other existing rules, as often happens in the face of multiple rules (Caselli et al., 2022).

- Other key practical design challenges include defining green spending and deciding which types of green spending should be exempted from the rule limits. There is no widely accepted consensus on this and heterogenous definitions across countries undermines transparency. Furthermore, many projects will contain some degree of "green" spending as countries adapt to climate change. In addition, beyond capital spending there could be a case for excluding current spending such as green subsidies (for instance, mitigation spending in the form of public investment or private investment supported with government subsidies can be equivalent) and interest payments associated with financing the green budget, which would further worsen the debt dynamics. Finally, the potential introduction of other measures, such as carbon taxes, should be considered in the design of green rules.

Proposed alternative: A comprehensive fiscal strategy to address climate using green MTFFs

Given the significant tradeoffs involved, a broader policy analysis and discussion is needed. Such efforts will require building wide public support for the difficult policy choices and a more comprehensive fiscal strategy. Most countries will need to adopt a mix of policies and tools to share the burden of the climate transition between the public and private sector. It will likely involve to some degree carbon taxes, public and private investment, regulations on energy efficiency and climate adaptation. Such complex and dynamic policy choices cannot feasibly be reflected in a fiscal rule.

Instead of green rules, we propose a more comprehensive method of incorporating complex climate considerations in the formulation of fiscal policy using medium-term fiscal frameworks– an important tool to guide and articulate governments' medium-term fiscal plans. MTFFs comprise a set of institutional arrangements for prioritizing, presenting, reporting, and managing fiscal aggregates; they include a fiscal strategy and medium-term projections of macro-fiscal aggregates, in which outer year budget ceilings can help to guide subsequent annual budgets.

Adopting 'green' MTFFs—that account for the (long-term) effects of climate change and climate policies on fiscal accounts—can help optimize the mix of green fiscal policy tools. We propose the following main elements for an effective green MTFF (Figure 2):

1. *Climate change considerations should be incorporated into macro projections by quantifying their impact in terms of economic costs* (e.g. on potential growth, government revenue, and fiscal costs) and considering different climate shock scenarios.
2. *Costing different climate policies and measuring their consistency with achieving climate objectives can provide a framework to consider an optimal mix of fiscal tools*. Different fiscal policy tools to address climate change mitigation can have vastly different fiscal impact (e.g. a country adopting carbon pricing will require less measures on the spending side). Spending on climate change adaptation (implying a short-term fiscal cost) should be weighed against the counterfactual of inaction, which would result in lower potential growth and larger climate-related shocks over time (requiring larger fiscal buffers to deal with shocks).
3. *Debt sustainability analysis should incorporate risks associated with climate change*. The DSA should: feature different types of climate shocks (e.g., natural disasters for small islands); include scenarios with and without investment in mitigation and adaptation (which affects the size of shocks and long-run potential growth); and adopt a longer-term perspective, given the horizon of climate change effects.
4. *Fiscal rules and objectives should be calibrated accounting for climate risks and policies in the MTFF*. Fiscal rules' calibration should consider the impact of disasters (and adaptation policies) on the need for fiscal buffers, potential growth, and consider revenue mobilization measures (e.g. carbon taxes). An escape clause should be well-defined for large natural disasters.
5. *Other green PFM practices should be adopted alongside MTFFs to strengthen their effectiveness*. These include, for instance: (i) green budget tagging (budgetary classification according to climate impact), enhancing transparency surrounding the government's green actions (e.g., reporting framework, environmental impact assessments and evaluations, green spending reviews), establishing independent oversight on climate aspects of the MTFF, and climate-smart public investment management.

Figure 2. Components or Elements Supportive of Green MTFFs

Macroeconomic projections	Climate-related policies	Risks and Debt sustainability	Fiscal Rules	Other green PFM practices
✓ Economic costs of climate change (e.g., on potential growth). ✓ Related fiscal costs. ✓ Scenarios	✓ Choice of measures. ✓ Impact on taxes (e.g., carbon taxes). ✓ Impact on expenditures (investment; energy subsidies, safety nets).	✓ Risks related to climate change. ✓ Effects of climate-related policies (e.g., adaptation). ✓ Longer-term perspective.	✓ Mitigate risks (reduce needed buffers) ✓ Target broad aggregates	✓ Green PFM through other phases of the budget. ✓ Climate-smart public investment

Conclusion

Making economies greener and more resilient to natural disasters is of paramount importance. Governments will need to play a leading role, but the fiscal costs could be significant and will require addressing complex tradeoffs. Governments are debating ways to protect climate-related spending amidst tight budget constraints and rising debt sustainability concerns, but green fiscal rules are not an effective solution. Fiscal rules are not a panacea—their primary objective should be to constrain excessive deficits and signal commitment to fiscal responsibility. Excluding 'green' spending from the rule limits would undermine those objectives and ultimately constrain governments' ability to pursue its policy priorities, including on climate. An alternative, more comprehensive, approach is to strengthen medium-term fiscal frameworks to better reflect the challenges posed by climate change and the effects of green policies.

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