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Fiscal Rules and Fiscal Councils

Recent Trends and Performance during the COVID-19 Pandemic

Hamid R. Davoodi, Paul Elger, Alexandra Fotiou, Daniel Garcia-Macia, Xuehui Han, Andresa Lagerborg, W. Raphael Lam, and Paulo Medas

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Fiscal Rules and Fiscal Councils: Recent Trends and Performance during the COVID-19 Pandemic

Prepared by Hamid R. Davoodi, Paul Elger, Alexandra Fotiou, Daniel Garcia-Macia, Xuehui Han, Andresa Lagerborg, W. Raphael Lam, and Paulo Medas*

Authorized for distribution by Paulo Medas
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ABSTRACT: Adoption of fiscal rules and fiscal councils continued to increase globally over the last decades based on two new global datasets. During the pandemic, fiscal frameworks were put to test. The widespread use of escape clauses was one of the novelties in this crisis, which helped provide policy room to respond to the health crisis. But the unprecedented fiscal actions have led to large and widespread deviations from deficit and debt limits. The evidence shows that fiscal rules, in general, have been flexible during crises but have not prevented a large and persistent buildup of debt over time. Experience shows that deviations from debt limits have been very difficult to reverse. The paper also presents evidence on the benefits of a good track record in abiding by the rules. All these highlight the difficult policy choices ahead and need to further improve rules-based fiscal frameworks.

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WORKING PAPERS

Fiscal Rules and Fiscal Councils

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I. Introduction

Countries have increasingly adopted fiscal rules and fiscal councils to help strengthen their fiscal frameworks, promote debt sustainability, and increase the credibility of fiscal policy. Fiscal rules are long-lasting constraints on fiscal policy through numerical limits on broad budget aggregates. Fiscal councils—independent non-partisan agencies with an official mandate to assess fiscal policy, plans, and rule compliance—have often been tasked to provide fiscal oversight, including monitoring the fiscal rules and assessing credibility of budgets and quality of public policies (IMF, 2013).

This paper presents an overview of fiscal rules and fiscal councils across the world in the run-up to and during the COVID-19 pandemic. It relies on newly updated global datasets on fiscal rules and fiscal councils during 1985–2021.[1] The evidence illustrates the diverse experiences with rules-based fiscal frameworks and sheds light on the design and operation of fiscal rules and fiscal councils around the world. While advanced economies were frontrunners in adopting fiscal rules, rules are increasingly common among emerging market and developing economies (EMDEs). Most countries have multiple fiscal rules covering different budget components to achieve fiscal objectives. The most common combinations are a debt ceiling or debt anchor supported by other operational rules, such as on expenditures or the budget balance. We also examine how features of rules have evolved in terms of their flexibility, enforcement, and monitoring. A key trend has been greater flexibility in the rules, including through the escape clauses. The number of fiscal councils has doubled over the last decade. Many of them were established to monitor the new fiscal rules or in response to external pressures after large shocks.

The pandemic has been a massive test to the rules-based fiscal frameworks. It led to a widespread activation of escape clauses to temporarily suspend the rules limits within the fiscal framework, allowing for flexibility to adopt extraordinary fiscal support to households and firms. Other countries, without escape clauses, had to resort to ad-hoc suspensions or modifications of the rules or introduced new fiscal rules. The paper discusses in detail various approaches and their challenges. Fiscal councils have also played an important role during the pandemic in assessing governments responses and use of escape clauses. Some provided costing of the emergency measures and analyses the impact of the crisis to public finances.

Deficits and debt in many countries surged during the pandemic, leading to large deviations from fiscal rule limits. About 90 percent of countries had deficits larger than the rule limits in 2020, while public debt exceeded the limits or anchor levels in over half of countries, adding to already large pre-COVID deviations. Experience suggests it will be difficult to return to the debt limits. Moreover, deviations from the deficit rule limits are associated with higher financing costs and tend to happen in periods when economic growth falters. We provide evidence that countries benefit from a good track record in abiding by rules before crises—it allows them to respond to large shocks more forcefully. The challenge is how and when to return to the fiscal rules.

The paper is organized as follows. Section II discusses the trends in fiscal rules and fiscal councils globally over the last decades before the pandemic, based on the newly updated datasets. Section III provides an overview of how countries adapted their fiscal rule framework during the pandemic, including the use of escape clauses and changes to rules. Section IV provides empirical analysis on the deviations of deficit and debt from the limits and anchors of the fiscal rules across countries and over time. Section V concludes.

[1] The updated fiscal rule dataset covers the specifics and institutional features for over 100 countries during the period 1985–2021. The fiscal council dataset covers more than 50 entities and their remit, responsibilities, and resources and staffing as of end-2021. The fiscal rule dataset builds on the previous version covering 1985–2015 by Lledó, Yoon, Fang, Mbaye, and Kim (2017) and Schäechter, Kinda, Budina, and Weber (2012). The fiscal council dataset builds on the previous version in 2016 by Debrun, Zhang, and Lledó (2017).

II. Fiscal Rules and Councils on the Rise: Trends before the Pandemic

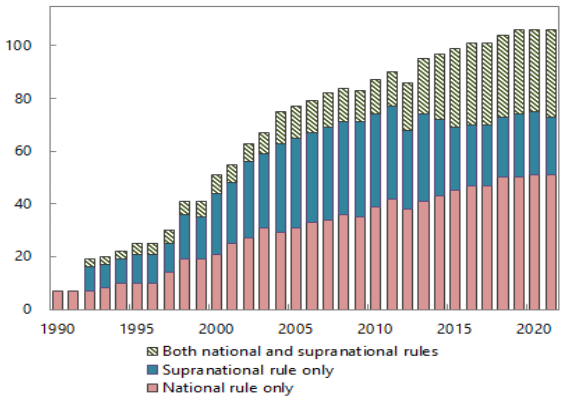
Fiscal rules

During the past two decades, a growing number of countries across the world have adopted rules-based fiscal frameworks. As of end-2021, about 105 economies have adopted at least one fiscal rule, 11 countries more than the last update in 2015 and 96 countries more than 1985.[2] Advanced countries were frontrunners on the adoption of fiscal rules, but it is increasingly common in emerging market and developing economies especially since the late 2000s. As of end 2021, there are more than twice EMDEs than advanced economies with fiscal rules. 53 countries have supranational rules many of which complemented with national rules (Figure 1).[3] The expansion in the number of rules came in a succession of waves, driven largely by the inclusion of supranational rules and the adoption of rules in the aftermath of large shocks. For example, the large increase in early 1990s reflected the signature of the 1992 Maastricht Treaty, which established debt and deficit criteria for the participation in the European Economic and Monetary Union. In the early 2000s, the increase was driven by the adoption of national rules in emerging markets as well as supranational rules in low-income countries. National rules in emerging markets have often been adopted to commit to fiscal adjustments in the wake of a crisis (e.g., Colombia, Brazil), lock in gains from reforms (e.g., Mexico, Poland), or avoid procyclical spending owing to volatile natural resource prices (Chile, Russia, Mongolia).

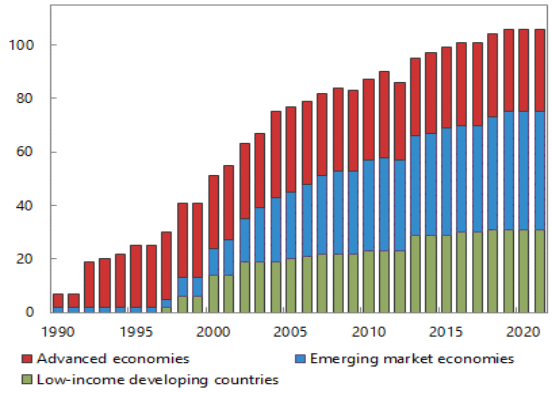
Figure 1. Fiscal Rules on the Rise: 1990–2021

(Number of countries with at least one fiscal rule)

1. National and supranational rules



2. Fiscal rules by income groups



Sources: IMF Fiscal Rules Dataset: 1985–2021; Davoodi, Elger, Fotiou, Garcia-Macia, Lagerborg, Lam, and Pillai (2022a).

The average number of fiscal rules per country has also increased steadily during the last two decades (Figure 2). Countries now have an average of about 3 fiscal rules up from about 2 in the early 2000s. The increase has been more pronounced in Europe, where many countries have adopted own national rules along with the supranational rules. The use of multiple rules can be motivated to ensure greater fiscal discipline or achieve

[2] The IMF Fiscal Rules: 1985–2021 and IMF Fiscal Council datasets are available online, which updated the previous vintage, in 2015–16 (see Davoodi, Elger, Fotiou, Garcia-Macia, Lagerborg, Lam and Pillai, 2022a, and 2022b, for details). The updated fiscal rule dataset contains 106 economies (Canada was included as historically it had adopted fiscal rules) comprising four main types of fiscal rules: expenditure rules, revenue rules, budget balance rules, and debt rules. The fiscal council dataset covers 51 fiscal councils operational in 2021 on a de-jure basis and describes their mandates, structure, and operational independence.

[3] These include 27 member states in European Union, 6 in Eastern Caribbean Currency Union (ECCU), 8 in West African Economic and Monetary Union (WAEMU), 6 in Central African Economic and Monetary Community (CEMAC), and 6 in East Africa Economic and Monetary Community, respectively (see Annex 1 for country details).

multiple fiscal objectives (Annex 1 lists the features of various types of fiscal rules used in this paper). But multiple rules contribute to the complexity of the fiscal framework (including conflict between rules and objectives) and make compliance more difficult to explain and monitor. In some cases, the large number of rules was related to political difficulties in eliminating existing rules when introducing new rules (Caselli and others, 2018).

Figure 2. Average Number of Rules per Country
(number of fiscal rules)

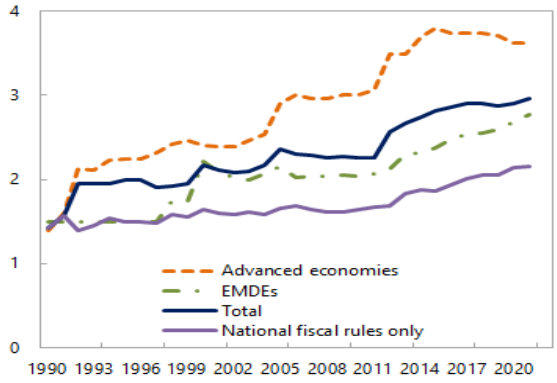
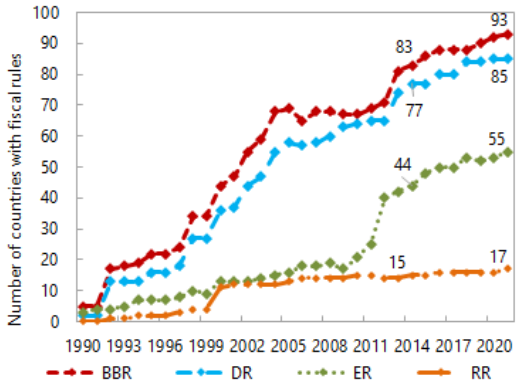


Figure 3. Types of Fiscal Rules
(Number of countries with specific type of fiscal rule)



Sources: IMF Fiscal Rules Dataset: 1985–2021; Davoodi, Elger, Fotiou, Garcia-Macia, Lagerborg, Lam, and Pillai (2022a).
Note: BBR: Budget balance rule; DR: Debt rule; ER: Expenditure rule; RR: Revenue rule.

The most common rules has been a combination of a debt rule together with operational limits on expenditures and/or budget balance (Figure 3). About 70 percent of countries with fiscal rules have a debt rule combined with operational limits on annual budget aggregates. Specifically, out of the economies with fiscal rules in 2021, one third had a debt rule together with a deficit limit and an expenditure ceiling, while another quarter of economies had a debt rule combined with a budget balance rule (Figure 4). Expenditure rules are increasingly common, often set as a ceiling on annual expenditure growth. Revenue rules have been less used, partly reflecting the fact that governments have less control over yearly revenues. Revenue rules are often set a ceiling on revenue-to-GDP ratio in advanced countries (Belgium) to avoid further tax hikes, while the rules are often set as a floor in low-income countries (such as the WAEMU) to encourage revenue mobilization.

There are also differences across income groups. Expenditure rules are prevalent, but mostly among advanced economies (Figure 5). About three quarters of advanced economies have expenditure rules, partly reflecting that several European countries (Austria, Croatia, Greece, Italy, Spain) adopted expenditure rules as part of their national fiscal framework, which aligned to the "expenditure benchmark" in the European supranational framework in 2011. However, only less than a third of emerging markets and developing economies adopted expenditure rules (Brazil, Mongolia, Paraguay), possibly reflecting the intention to increase expenditures paid by revenue mobilization efforts. Debt rules are particularly common in developing economies, with over 80 percent of EMDEs having adopted them. The majority of national debt rules is set as a debt limit or ceiling, while a minority (about 10 percent) uses a (medium-term) *anchor* concept (Finland, United Kingdom). Most countries have the debt rule expressed in percent of GDP, and sometimes the debt rule is set in net present value terms for low-income countries, as they receive a significant share of concessionary financing. Budget balance rules accounting for business cycles are more predominant in advanced economies (Czech Republic, Estonia) than emerging markets (Chile, Colombia). Even for the former group, assessing the output gap in real

time is challenging. For those EMDEs that have deficit limits accounting for economic cycles, they often rely on thresholds on actual activity rather than a measure of output gap.

Figure 4. Common Adoption of Fiscal Rules: A Snapshot in 2021
(Number of countries)

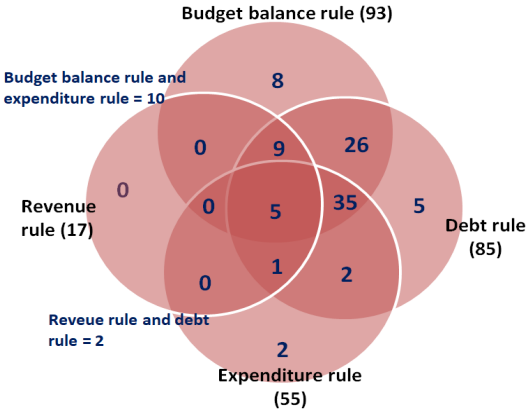
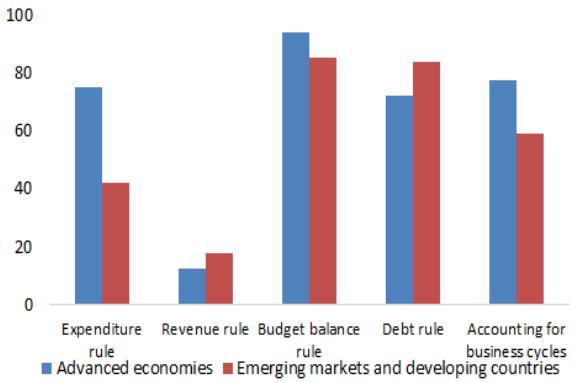


Figure 5. Differences regarding the Type of Fiscal Rules across Income Groups
(share of countries with specific type of fiscal rule; percent)



Sources: IMF Fiscal Rules Dataset: 1985–2021; Davoodi, Elger, Fotiou, Garcia-Macia, Lagerborg, Lam and Pillai (2022a).
Note: The Venn diagram shows the overlap of different rules across the world. For example, there are 5 countries that adopt all four types of fiscal rules and 35 countries that adopt debt rules with both budget balance rules and expenditure rules. Annex 1 provides the key features of different types of fiscal rules.

Additional features have been progressively introduced in the rules-based fiscal framework to enhance flexibility, enforcement, and monitoring of the fiscal rules (Figure 6). The global financial crisis in the late 2000s and the commodity price collapse in 2014–15 prompted countries to revise their fiscal rules. There were a range of reforms to improve flexibility and operational relevance of fiscal rules, as well as to enhance the monitoring and enforcement of the rules outside the government.

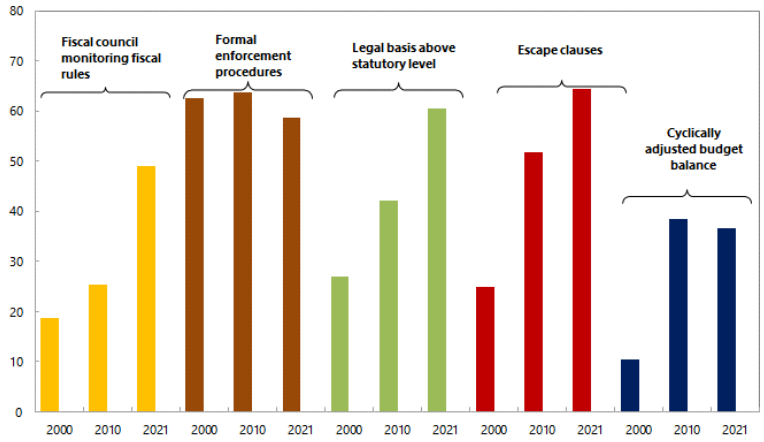
- **Escape clause.** Over the past two decades, many countries introduced flexibility provisions in their fiscal rules, which formed a cornerstone of the 'second generation' fiscal rules (Eyraud and others, 2018). Additional provisions on escape clauses became more widespread in countries' fiscal framework (Colombia 2011, Jamaica 2014, Grenada 2015). Some countries further clarified the activation requirements of existing escape clauses to limit the possibility of misuse (European Union 2011, Armenia 2017; Georgia 2018). Before the pandemic hit, two thirds of countries with fiscal rules had included escape clauses, a notable rise relative to previous decades across all income groups and among supranational and national fiscal rules.
- **Legal basis.** The legal basis of national fiscal rules is above the statutory level for a growing number of countries.[4] In 2000, only 30 percent of countries established fiscal rules in the legislation. Currently more than 60 countries have fiscal rules featured at or above statutory levels such as in a fiscal responsibility or budget framework laws (Armenia, Jamaica, Paraguay) or in constitutions (Brazil, Denmark). As of 2021, over 40 percent of fiscal rules were supported by fiscal responsibility or budget framework laws (typically specify the numerical rules and set out procedural and transparency requirement), doubled from a decade ago and particularly in EMDEs. A stronger legal basis can help make fiscal rules more durable and credible, although effective implementation remains critical to success.

[4] Most of the fiscal rules are implemented through a mix of political commitments, coalition agreements, statutory norms (legislative directives or constitutions) or international treaties in case of supranational rules.

- **Formal enforcement.** A large share of countries with fiscal rules have put in place formal enforcement mechanisms (72 out of 104), though the share has largely stayed flat over the past decade. A formal enforcement mechanism often requires integrating the fiscal rules in annual budget preparation and medium-term fiscal framework, as well as holding the government accountable for ex-post compliance. For example, many European countries have had a correction mechanism to specify actions to return to the fiscal rules following a deviation as part of the 2012 Fiscal Compact. Austria strengthened the national enforcement by enhancing the Court of Auditors and improving the sanction procedures. Poland has established several preemptive triggers as debt approaches its fiscal rule limits with increasing degree of fiscal adjustments. For non-European countries, Peru and Panama have correction mechanisms that guide the return of the fiscal rules after deviations. In practice, the implementation and degree of accountability can vary significantly across countries.

Figure 6. Fiscal Rules Flexibility and Enforcement Characteristics, 2000–21

(Percent of total number of economies with at least one fiscal rule)



Sources: IMF Fiscal Rules Dataset: 1985–2021; Davoodi, Elger, Fotiou, Garcia-Macia, Lagerborg, Lam, and Pillai (2022a).

- **Stabilization**. In 2021, about 40 countries had rules in place that accounted for fluctuations over business cycles. For example, the use of cyclically adjusted deficit limits in the European Union since 2005 has been part of defining a medium-term objective (MTO) for fiscal policy that require countries to follow an adjustment path if the structural balance is weaker than the country-specific MTO. This was reformed in 2015 that allowed for different adjustment paths for different stages of the cycle to reach a MTO. Over the last decade, the share of countries with fiscal rules adjusted for cyclical conditions has gradually declined. This could reflect the difficulty in implementing the cyclically adjusted deficit limits, given the challenges in assessing the output gap, treatments of one-off factors, and communicating the adjustments to the public.

The improvements in the design of fiscal rules were reflected in the growing strength of fiscal rules. Building on the methodology of European Commission (2015b), an index on the strength of fiscal rules is constructed based on four institutional criteria: (i) the legal basis, (ii) presence of a monitoring mechanism, (iii) enforcement and correction mechanism in place, and (iv) flexibility and resilience against shocks (technical details in Annex III). A numerical score is then assigned for each type of fiscal rule based on indicators in each of the four institutional criteria. Rules were further weighted reflecting the government coverage with a higher weight for

the general government than the central government. This is because the former has a broader coverage on fiscal aggregates. The scoring is summed into a single index, with a higher score indicating greater strength.[5]

The standardized scoring index shows a continued improvement of fiscal rule frameworks on average over time across income groups (Figure 7). The notable improvements over the last decade were largely driven by greater resilience against shocks in the fiscal rules among advanced economies and adoption of stronger legal basis and monitoring of fiscal rules in EMDEs. However, within the overall improvements, there has been significant variation across countries. Several countries have seen a decline owing to the frequent amendments and the growing complexity of rules that are not necessarily consistent with each other (Annex III). While the flexibility and resilience of fiscal rules have improved over the last decade, there are tradeoffs with the rules becoming more complicated (Figure 8; IMF 2021).

Figure 7. Distribution of Fiscal Rule Strength Index, 2010–2020
(standardized scores)

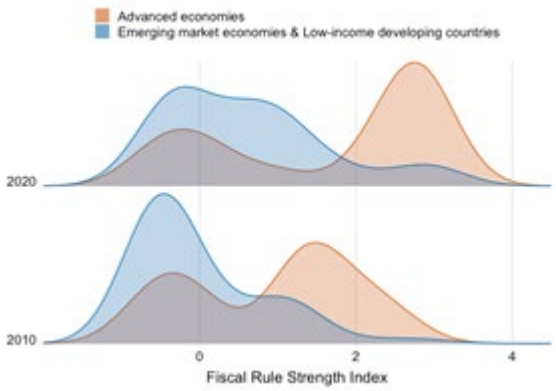
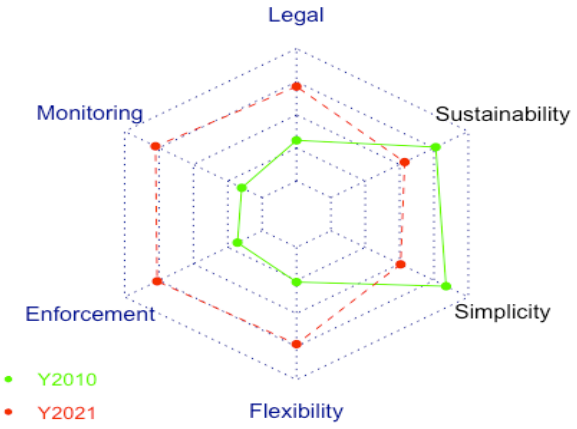


Figure 8. Tradeoffs between Simplicity, Flexibility, and Sustainability in Fiscal Rules
(standardized scores)



Source: Authors estimates based on the latest update of IMF Fiscal Rules dataset (1985–2021) and Fiscal Council dataset.
Note: The Annex III contains the methodology in assigning the scores in each category. Higher strength index indicates the fiscal rules have greater flexibility, coverage, enforcement, and resilience against shocks. In Figure 8, further away from the center indicates a higher scoring in respective categories. For example, the legal basis of fiscal rules had strengthened during 2010–21 but the simplicity of fiscal rules has decreased during the period. In general, multiple rules reduce the scoring of simplicity principles. The existence of debt rules that are not amended frequently helps contribute to the sustainability principle.

Fiscal councils

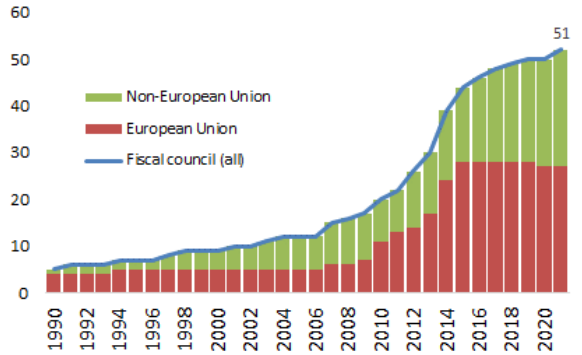
Fiscal councils, or independent fiscal institutions, represent another pillar of the rules-based fiscal framework. They are nonpartisan public entities with a statutory or executive mandate aimed at promoting sustainable public finances through assessing fiscal plans and performance, evaluating macroeconomic and budgetary forecasts, monitoring the implementation of fiscal rules, and costing of government measures (IMF 2013). Their functions help foster transparency and promote fiscal stability so that they raise the reputational and electoral cost of governments' undesirable policies and broken commitments.

Along with the widespread adoption of fiscal rules, an increasing number of countries has established fiscal councils over the last decade. There were 51 fiscal councils in 49 countries as of 2021, about twice the number

[5] The strength index, however, has important limitations including not capturing all design issues or implementation challenges. For example, it does not distinguish the differences of a sound debt anchor and a hard ceiling in the debt rule or whether escape clauses are well-designed or not.

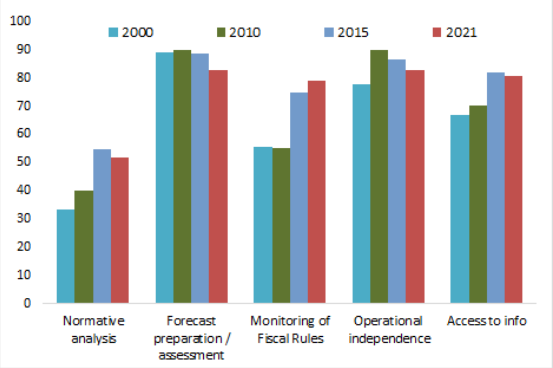
in 2010 and a third more relative to last update in 2016 (Figure 9). In 2015, the European Fiscal Board was established to monitor the implementation of supranational rules. The rise of fiscal councils extended beyond Europe to emerging markets. For example, Brazil, Costa Rica, Chile, and Panama have all created new fiscal councils over the last five years to monitor the implementation of fiscal rules. External pressures either from the aftermath of the global financial crisis (e.g., Greece, Hungary, and Colombia) or from supranational directives in Europe have driven the rapid rise of fiscal councils.

Figure 9. Number of Fiscal Councils
(Number)



Sources: IMF Fiscal Council dataset; Davoodi, Elger, Fotiou, Garcia-Macia, Lagerborg, Lam and Pillai (2022b).

Figure 10. Key Characteristics and Activity of Fiscal Councils
(Share of fiscal councils worldwide, by type of activity)



Sources: IMF Fiscal Council dataset; Davoodi, Elger, Fotiou, Garcia-Macia, Lagerborg, Lam and Pillai (2022b).
Note: Based on de-jure status.

Fiscal councils have a considerable diversity of institutional forms. Most are attached to the legislature branch (parliamentary budget offices), the executive, or as stand-alone entities. Parliamentary budget offices have historically emerged in presidential political systems such as in Korea and the United States. They have spread in various forms such as in Australia, Canada, Georgia, and Mexico. Fiscal councils attached to the executive include those in Belgium, Croatia, the Netherlands, and the United Kingdom.[6] Fiscal councils in two countries (France and Finland) are attached to the supreme audit institution. Stand-alone entities are more common among recently established fiscal councils as they often emanate from comprehensive Fiscal Responsibility Laws (Czech Republic, Slovak Republic, Sweden). While the work of audit agencies and fiscal councils may overlap in some areas, including assessing whether fiscal rules are complied, audit agencies have other distinct roles such as on performance audits of individual government entities. Fiscal councils, on the other hand, often contribute to the planning and formulation of policies and place a greater focus on economic evaluation and analysis of policies and less on verifying if the legal or budgetary processes were followed.

Fiscal councils often have multiple mandates. Almost all assess public finances—the core of the watchdog function. They review governments' annual or medium-term budget proposals and/or the long-term sustainability of public finances and related risks. Fiscal councils' analysis is geared towards promoting sound fiscal policies. They also provide ex-post assessment of fiscal performance against government targets or objectives. Half of fiscal councils globally provide normative analysis such as recommendations on fiscal policies to inform the public debate.

[6] In United Kingdom, the OBR is classified as an executive non-departmental public body. It has an executive function as the official forecaster for the government and is sponsored by the Treasury with OBR's strategic framework set by the U.K. Chancellor. The OBR is also operationally independent in conducting its works and has several safeguards on its operational independence.

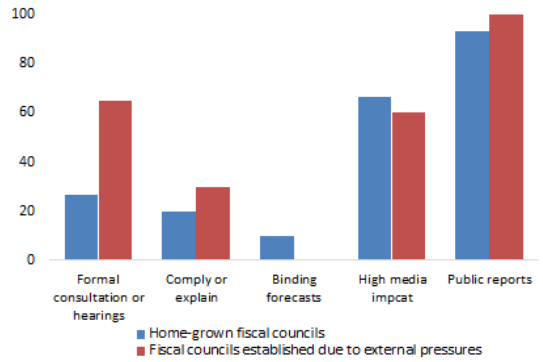
Many fiscal councils have been responsible for preparing or assessing macroeconomic and budget forecasts, though the share has gradually decreased over time. This can help reduce the deficit bias in government budgets. In many cases, the government is obliged to "comply or explain" in case of significant differences between the forecasts in the budget plans and those of the fiscal council. The involvement in budget forecast ranges from preparing a set of macroeconomic or revenue projections to be used in budget to a mere technical review of the budget assumptions. For example, the government in the Netherlands has to use the council's forecasts in the budget. The U.K. government has used the forecast of the Office of Budget Responsibility (OBR) since its creation in 2010 and is required to 'comply or explain' if it were not to use the 5-year OBR's fiscal forecasts. In contrast, the forecasts of fiscal councils serve only as a comparator to official projections in Canada and the United States. In preparing the forecast, many fiscal councils have performed short- to medium-term forecasts. Several fiscal councils go beyond yearly forecasts and take a medium or long-term view of fiscal trajectories, such as the 10-year horizon in U.S. Congressional Budget Office or the fiscal sustainability over 40–75 years horizon in Canada, Korea, the Netherlands, and United Kingdom.

Fiscal councils are often tasked to monitor the compliance of fiscal rules. In 2021, the majority (80 percent) of fiscal councils were tasked to monitor the implementation of fiscal rules, a 25-percentage points increase from 2010 (Figure 10). This trend is associated with the increasing use of fiscal rules and the legal requirements mandating such independent monitoring for European Union member states. It is likely to continue as new fiscal rules usually specify a mechanism of independent fiscal oversight.

Beyond budgetary forecast, fiscal councils are sometimes tasked to produce unbiased estimates related to specific spending programs or policy measures. The costing of policy proposals could be self-initiated by the councils or required by parliamentary requests to provide comparative estimates against government proposals. Nearly half of fiscal councils are involved in costing of policy measures but approaches vary across countries, ranging from simple review of tax and expenditure estimates in the budget to an extensive costing of specific policy initiatives emanating from government or parliamentarians. The latter is more common if the councils are associated with the legislative branch.

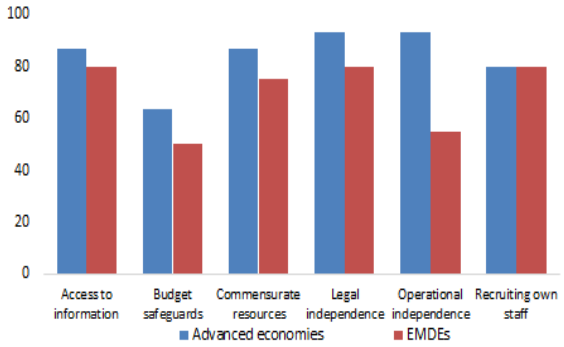
There have been improvements over the last two decades in strengthening fiscal councils, though challenges remain in ensuring operational independence and access to information. The access to timely information allows the fiscal councils to provide relevant assessment to inform the public debate. It is often secured in formal documentation when fiscal councils are established but the implementation varies in practice. Among OECD countries, challenges remain in access to information in several fiscal councils that have led to escalations and legal interventions (OECD 2020). Over 80 percent of fiscal councils in advanced economies had de-jure operational independence in 2021 such as appointing its own staff, having its own channel of influence in the press, and long-term appointments to limit political interference. Independence from partisan influence is often enshrined in legal provisions prohibiting political interference, especially among recently established fiscal councils. However, some fiscal councils in practice have faced challenges to achieve their mandates. For example, Canada's fiscal council was given a broad mandate to improve forecasts but had limited resources commensurate to the remit. The Hungary's fiscal council was restructured with a cut in resources in 2021 (Beetsma and Debrun 2018; OECD 2020). The operational independence of fiscal council in EMDEs is lower, particularly in countries that do not have sufficient budget safeguards and the resources available for fiscal councils are subject to political discretion (Figures 11 and 12).

Figure 11. Channels of Influence in Fiscal Councils
(Share of fiscal councils, 2021)



Sources: IMF Fiscal Council dataset (2022); Davoodi, Elger, Fotiou, Garcia-Macia, Lagerborg, Lam, and Pillai (2022b).

Figure 12. Independence in Fiscal Councils
(Share of fiscal councils, 2021)



Sources: IMF Fiscal Council dataset (2022); Davoodi, Elger, Fotiou, Garcia-Macia, Lagerborg, Lam, and Pillai (2022b).

III. Rules-based Fiscal Frameworks are being tested by the Pandemic

The COVID-19 crisis is testing the resilience of the rules-based fiscal framework. During the pandemic, governments have responded swiftly and forcefully to save lives and avoid a sharper contraction. In many cases, they had to deviate from the rule limits to provide the necessary fiscal support. Fiscal councils were called to assess the impact of the crisis, cost emergency measures, and monitor the suspension of the fiscal rules. Their assessments helps the credibility of the fiscal framework and policies in response to the crisis by promoting transparency and accountability.

Fiscal rules were put into abeyance during the pandemic

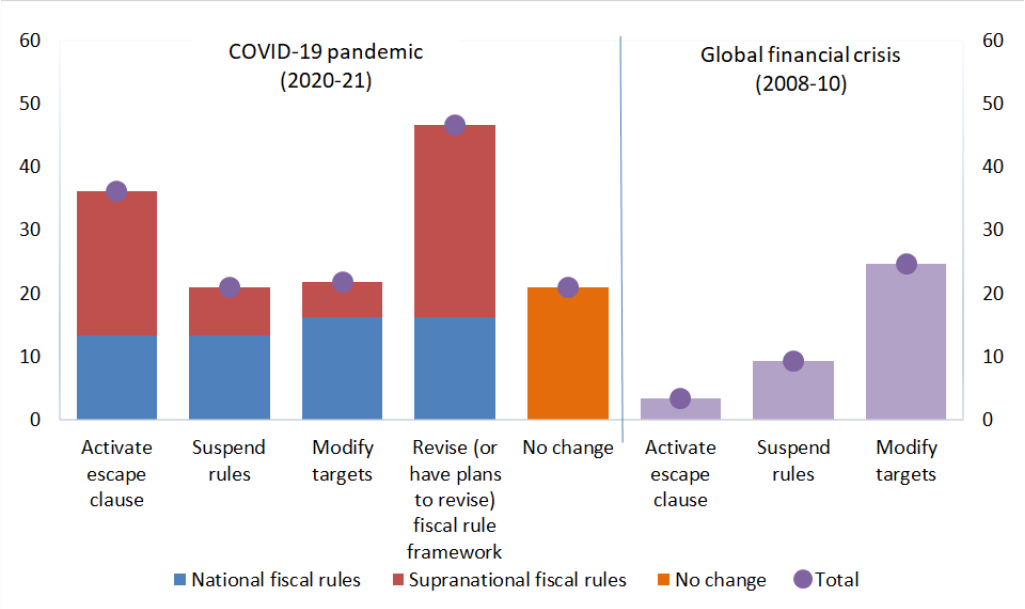
Countries have used different ways to adapt their fiscal rules in response to the health crisis, including activating the escape clauses, suspending the fiscal rules temporarily, and modifying the fiscal rule limits. A review of countries showed a diverse use of flexibility in their fiscal rules during the pandemic (Figure 13).

- *Activation of escape clauses.* During the pandemic, a notable feature was the widespread use of escape clauses to provide flexibility to respond to large adverse shocks within a well-defined framework.[7] Over 30 countries have invoked the escape clauses in national and supranational rules to provide flexibility in response to the health crisis (Armenia, Georgia, Grenada, United Kingdom) (Gbohoui and Medas, 2020). For example, Jamaica activated the escape clause in 2020 for one year to make space for fiscal support during the pandemic and postponed achieving the debt target by two years to FY2027/28. A number of countries extended the activation horizon amid renewed waves of infection and the uncertainty. In some countries within a currency union, the activation of supranational escape clauses has automatically activated respective clauses in the national fiscal rules (Cote d'Ivoire, France, Italy, Portugal, Senegal). Some have their own national escape clauses (Grenada) even if supranational rules do not have one,

[7] During the global financial crisis, nearly 30 percent of countries with national fiscal rules modified or suspended the fiscal rules during 2008–10, sometimes to avoid sharp fiscal tightening required by the rules as the economy entered a recession. With a few exceptions, most fiscal rules did not have explicit provisions to deal with exceptional circumstances during 2008–10. Hence, rules were either not enforced or modified by loosening the original limits. Many rules were suspended to avoid a fiscal tightening, but without adopting any plan to return to compliance. The collapse of oil prices in 2014–15 has promoted many resource rich countries to revise or recalibrate the fiscal rules to accommodate losses of revenues and delink expenditures from oil price cycles.

while others have different triggers and duration in their separate national escape clauses different from those in the supranational rules (Germany).

Figure 13. Adjustments in the Fiscal Rules During the Pandemic and Global Financial Crisis
(Share of countries with at least one fiscal rule; in percent)



Sources: IMF Fiscal Rules Dataset: 1985–2021, Davoodi, Elger, Fotiou, Garcia-Macia, Lagerborg, Lam and Pillai (2022a), and authors' estimates.
Note: The total share does not sum up to 100 percent because a country could exercise more than one of these options. For example, a country can activate its escape clause and suspended temporarily the rules. For countries that have supranational rules, if escape clauses were activated for both national and supranational rules, it was recorded as an activation of escape clauses in the national fiscal rules. Data limitation made it difficult to separate the classification of escape clauses and suspension between national and supranational fiscal rules during the global financial crisis.

- *Temporary ad-hoc suspension of fiscal rules.* Many countries opted to suspend the rules temporarily during the pandemic (Azerbaijan, Colombia, Iceland, Indonesia, Peru, Russia). The temporary suspension, however, was not uniform. For example, Colombia resorted to suspending the rules for two years to make room for higher deficits. Indonesia fiscal rules were suspended through the provisions in the Constitution, which allowed the government to introduce a regulation in Lieu of Law in the case of compelling emergency under legislative supervision. The Russian government requested a temporary suspension of the oil price-based rule for 2020–21 from the parliament, given the sharp drop in oil prices and production at the onset of the pandemic.

- *Modified fiscal rule limits.* Another common approach, however, was to modify the fiscal rule limits during the pandemic, particularly among emerging markets and developing economies (Chile, Ecuador, Malaysia, Mexico, Mongolia, Namibia, Panama, Vietnam). Nearly 20 countries modified the national rule limits during the pandemic. Ecuador revised the fiscal rule in 2020 by introducing an expenditure growth rule and setting new annual budget balance targets. The debt rule was revised to impose a long-term ceiling for the debt of nonfinancial public sector not exceeding 40 percent of GDP by 2032, with interim transitional targets. In late 2020, Panama revised the Social Fiscal Responsibility Law to raise the deficit target (above its 2 percent of GDP limit) and anchor the budget deficit at 1.5 percent of GDP from 2025.

Several countries combined different ways to provide flexibility to the rules during the pandemic (Table 1). A few countries have provisions of escape clauses in their fiscal rule, but those are too restrictive such that the activation of escape clauses was not adequate in response to the pandemic. For example,

- Peru chose to suspend the fiscal rules, citing the severity of the health crisis would require greater flexibility than the escape clauses allowed. Paraguay initially activated the escape clauses, and eventually suspended the fiscal rules temporarily. India initially activated the escape clause before the pandemic in FY2019/20, partly reflecting larger deficits from a reduction in corporate income tax and the needs to boost investment. With the significant economic fallout from the pandemic, the government suspended the fiscal rule to provide fiscal support. [8]
- Poland's escape clause had provisions for war and national disaster but not for the pandemic. It suspended the national expenditure rules to allow for additional spending. Revisions to the expenditure rules specified a return to the regular spending path within 2–4 years, with part of the pandemic-related spending allowed to carry over during the transition period. It also introduced new national escape clauses in 2020 to allow for automatic activation when growth contracted.
- In Brazil, the government activated the public calamity clause in 2020 to lift the obligation to comply with the primary balance target and other obligations under the fiscal responsibility law. The government also created a separate 'war budget' through a constitutional amendment to accommodate higher pandemic related spending, while keeping non-pandemic expenditures under the expenditure limit.

Some countries introduced new fiscal rules. For example, Uruguay introduced a new expenditure rule and a budget balance rule and established a fiscal council in 2020. Costa Rica introduced an expenditure rule on current expenditures, in which the limit is based on average GDP growth of the previous four years provided that debt is below the threshold.

Several countries have announced new framework or plan to revise the framework as part of the transition to reinstate the fiscal rules. [9] The Social Investment Law in Colombia was sanctioned in September 2021, which revised the fiscal rules framework. At the same time, the government established a transition path on structural net primary deficit during 2022–25 to return gradually to the fiscal rule limits. Uganda has introduced a new charter of fiscal responsibility covering FY2021–26 which includes fiscal rules to guide fiscal policy when oil production starts. The United Kingdom announced a new medium-term fiscal strategy that aims to stabilize debt while meeting spending needs on aging, climate, and inequality. For countries with escape clauses, the activation of escape clauses is set to expire soon by end of 2021 or 2022. In some countries, the framework would require returning to the fiscal rules within a specified timeline. For example, Georgia and Panama require returning to the rules within a few years without necessarily the needs to compensate for the accumulated deviations of deficits. In Switzerland, deficits arising from extraordinary measures accumulate in a notional account and will need to be rectified over the next 6 years with structural surpluses. Germany has a similar specification that requires adjustments 'within a reasonable time frame'.

[8] Paraguay activated the escape clause in 2020, which allowed the deficit to rise to 3 percent of GDP. The government then suspended the deficit rule to meet the spending needs and planned to return to the deficit limits by 2024. In India, the initial activation allowed a temporary deviation of deficit not exceeding ½ percentage points of GDP in a year in February 2020 and raised the FY2020/21 deficit to 3.5 percent of GDP.

[9] There is also a growing debate on whether to change fiscal rules in Europe before exiting the escape clauses.

Table 1. Fiscal Rules during COVID-19: Selected Country Examples

Countries	Remarks
Brazil	Brazil in 2020 declared a "public calamity" that allowed not to meet the primary fiscal deficit and other requirements of the fiscal responsibility legislation. It also amended its constitution to create a "war budget" (an additional easing of 8.4 percent of GDP for COVID-19 related measures) from regular budget and exempted the government from the prohibition to borrow and finance current expenditures.
Colombia	The Social Investment was sanctioned in September 2021, which indicated the introduction of a medium-term debt anchor and revision to its structural net primary balance ceiling. The ceiling would vary depending on the debt level. In the near term, the government establishes a transition path of deficits during 2022–25. At the same time, the fiscal council (Autonomous Fiscal Rule Committee) would be tasked with greater operational independence to provide oversight on the fiscal rules.
India	India activated the escape clause in February 2020 before the pandemic —which allowed a temporary deviation of deficit not exceeding ½ percentage points of GDP a year— and raised the FY2019/20 and FY20/21 deficit to ½ percentage points of GDP above the previous estimate to 3.8 and 3.5 percent of GDP, respectively. With the significant economic fallout from the pandemic, the government suspended the fiscal rule through FY20/21 in order to provide fiscal support and announced that the FRBM Act will be amended to reflect the authorities' revised fiscal path.
Poland	Poland has an escape clause that allows higher expenditure limits in case of war and national emergency, and natural disaster. The epidemic was added to the clause in 2020, along with a change that the clause applies whenever the projected real GDP growth was 2 ppt below the 6-year historical average. This provided the scope to raise the deficit up to 8 percent of GDP.
United Kingdom	The government activated the escape clause in March 2020. The Office of Budget Responsibility (OBR) was tasked to assess fiscal performance against legislated targets. In October 2021, the government reinstated the fiscal rules as part of the post-pandemic fiscal framework. The rules require the government to target a balanced current budget by the third year of the rolling forecast period, a ceiling on government net investment of 3 percent of GDP on average during the rolling period, a declining public sector net debt (excluding the Bank of England) by the third year of the rolling five-year forecast period, a ceiling on welfare spending and an innovation with a focus on the balance sheet of the public sector.

Sources: National authorities and authors' compilation.

Supranational rules have also been put to test during the pandemic, with additional challenges of divergence within the group. The European Union has activated the escape clause until end 2022 to allow wide flexibility to respond to the pandemic. (Table 2). The WAEMU suspended the convergence pact following the Declaration by the WAEMU head of states in April 2020. It will review the regional surveillance framework and encourage member states to resume fiscal consolidation after the crisis. In June 2021, the head of states for WAEMU countries committed to converging toward the fiscal deficit anchor over the years 2024–26, The ECCU has extended the required timeline of achieving the debt target at or below 60 percent of GDP by five years to 2035. When charting the transition path to reinstate the fiscal rules, the long-standing divergence among member states, which had become more prominent during the pandemic, would need to be considered. The current framework in the European Union requires an adjustment by one twentieth (1/20) of the difference between the debt level and the debt anchor every year. Such pace could prove difficult for high debt countries.[10] Within ECCU, St. Kitts and Nevis has stayed within the debt target while debt in Dominica exceeded 100 percent of GDP in 2020, making it difficult to achieve the supranational debt target over the medium term. The regional framework in the CEMAC requires implementing credible three-year national plans to meet the convergence criteria (a deficit limit of 1.5 percent of GDP and public debt limit at 70 percent of GDP), although there have been persistent deviations in most member states before the pandemic.

[10] For example, in 2020 Italy's debt stands at about 160 percent of GDP. Under the current 1/20 rule, Italy would need to reduce debt by about 5 percentage points of GDP each year.

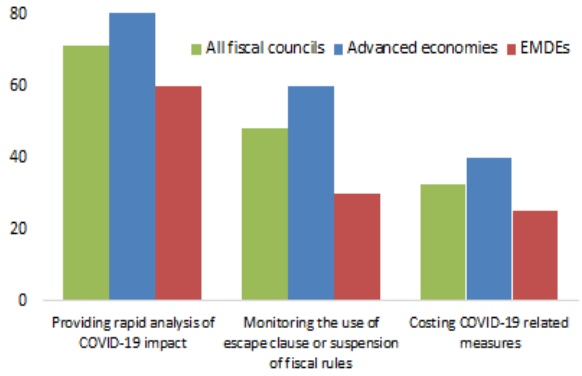
Table 2. Experience across Supranational Rules during COVID-19	
European Union	It activated the general escape clause for the first time in March 2020 as the European Commission concluded that conditions were met in the Stability and Growth Pact (SGP), citing a severe economic downturn in the euro area or the Union as a whole. While the clause did not suspend the procedures of the SGP, it allowed member states to temporarily depart from the normal budgetary requirements, provided that this did not endanger fiscal sustainability in the medium term. The escape clause has been extended to end 2022.
ECCU	The Eastern Caribbean Currency Union (ECCU), which does not have union-wide escape clause, decided to extend the convergence to the 60 percent of GDP debt target date by 5 years to 2035 in February 2021. They encouraged member countries to enact fiscal frameworks to support fiscal efforts in the post-pandemic period. The country members, highly reliant on tourism, suffered a large contraction (about 16 percent of GDP in 2020). Public debt stood at 84 percent of GDP in 2020 and would reach about 90 percent of GDP in 2021.
CEMAC	The Central African Economic and Monetary Community (CEMAC) suspended the fiscal rules given that it did not have an escape clause. In 2020, five countries missed the deficit ceiling (1.5 percent of GDP) and two missed the debt target (70 percent of GDP). Despite the temporary suspension, member countries are expected to return to the rule by 2023.
WAEMU	In April 2020, the Heads of States of the eight member countries of the Western African Economic and Monetary Union (WAEMU) temporarily relaxed their fiscal rules (including a deficit ceiling of 3 percent of GDP and a debt target of 70 percent of GDP). No time horizon was specified to reinstate the rules and other convergence criteria, although in June 2021, the head of states for all WAEMU countries committed to converging toward the fiscal deficit anchor over the years 2024–26. Countries in the WAEMU have faced a triple crisis (economic, health, security) and pressures on external reserves during the pandemic, with the regional fiscal deficit close to 6 percent of GDP in 2020.
Sources: National authorities and compilation based on Davoodi, Elger, Fotiou, Garcia-Macia, Lagerborg, and Lam (2022a).	

Fiscal councils have also played a key role during the pandemic

Many fiscal councils have reacted quickly from the onset of the pandemic, providing independent information to policymakers and the public. Over three-quarters of fiscal councils have provided swift analysis of economic or budgetary impact of COVID-19, especially among advanced economies (Figure 14). For example, the UK's Office of Budget Responsibility considered that government measures, though may raise debt levels, were appropriate and would cost less in the long run than if no action was taken. Many fiscal councils assessed government financing options and their implications to long-term fiscal sustainability (Canada, Czech Republic). Brazil's fiscal council published reports on the impact of the COVID-19 crisis, biannual update of medium-term macro-fiscal projections, and cost estimates of government policy announcements. Given the uncertainty at the onset of the pandemic, several fiscal councils were the only public entity to publish forecasts with frequent updates (Austrian Fiscal Advisory Council and Canada's parliamentary budget office). The Netherlands Bureau for Economic Policy Analysis provided scenario analysis for four possible outcomes of the pandemic to illustrate large uncertainty and the economic impact (OECD, 2020).

Figure 14. Share of Total Fiscal Councils during COVID-19

(Share of total fiscal rules that performed the stated functions)



Source: IMF Fiscal Council dataset; OECD (2020).

At the onset of the pandemic, over half of the fiscal councils opined to support the appropriate activation of escape clause or temporary suspension of the fiscal rules (Brazil, Peru, Spain, United Kingdom; and the European Fiscal Board), though in some cases, concerns were raised on the size of fiscal response and nonstandard budgetary procedures such as relying on emergency proceedings to expedite measures rather than parliamentary approval of supplementary budgets. Peru's fiscal council supported the temporary

suspension of the fiscal rule and estimated the budget cost of the cash transfers and the size of tax revenue shortfall. Ireland fiscal council noted that the COVID-19 related social measures might have contributed to breaching the legislated limit and required the government to seek parliamentary approval.

At the same time, over a third of fiscal councils estimated the costing of COVID-19 emergency measures and released their findings as part of fiscal oversight. For example, the fiscal council in Spain benchmarked its costing of COVID-19 measures with the budget and presented those gaps in more disaggregated details. The parliamentary budget office in Canada costed various proposals on expanding VAT credits and rebates as an alternative relief program and provided an oversight of the budget for the parliament. The U.S. congressional budget office has had a formal role in the legislative process to estimate the cost of bills and resolutions approved by congressional committees. Chile's fiscal council published the fiscal assessment reports in which it contested the size of the fiscal measures, asking government clarification in response, and emphasized a need for a return to fiscal prudence over the medium term.

Many fiscal councils stressed the need for greater transparency for COVID-19 fiscal responses. The European Fiscal Board and several fiscal councils in Europe, for example, raised concerns on the limited transparency on the design, fiscal impact, and take-up rate of government liquidity support measures. They expressed concerns regarding (i) the absence of objective and disaggregated quantifications and classification of the adopted measures, (ii) the lack of viability requirements in support measures to firms, (iii) overlap between measures, resulting in excessive support to some recipients, (iv) significant delays in implementation, and v) excessive bureaucracy. Some measures were not for COVID-19 related, but part of the ad-hoc spending and revenue measures, which could have long-lasting impact on deficits (Network of EU Independence Fiscal Council, European Fiscal Monitor, March 2021).[11] In Latin America, Peru's fiscal council called for an assessment of the quality of the fiscal responses to improve accountability and provided budgetary costs of the cash transfers and the shortfall in tax receipts during the pandemic. Estonia's fiscal council recommended include a government plan to return to budget balance in the post-COVID environment. The Czech fiscal council warned the long-lasting amendments to national fiscal rules beyond the period during the pandemic. In general, fiscal councils worldwide have risen to their mandates during the pandemic to provide fiscal oversight but challenges remain to ensure adequate fiscal oversight as countries exit from the crisis.

IV. Assessing Deviations from Fiscal Rule Limits

This section explores the dynamics of deviations from fiscal rules. The literature has extensively studied the effects of adopting fiscal rules on fiscal policy and macroeconomic outcomes.[12] Empirical studies on the behavior of deviations from fiscal rules have usually focused on specific regions (e.g., Delgado Tellez and others, 2017; Diaz Kalan and others, 2018; and Nandelenga and others, 2020). This section provides an overview of deviations in debt and budget balance rules across countries and over time and examines how key fiscal and macroeconomic variables behave after countries exceed the deficit rule limits. We also examine whether the record of past deviations affects the capacity to respond to large shocks.

[11] National fiscal councils in the European Union expressed opinions on member states' Recovery and Resilience Plans (RRPs), funded by the EU-wide Recovery and Resilience Facility, to boost the recovery from the pandemic. Many national fiscal councils deemed the RRPs and the fiscal stance in 2021 as appropriate. Nevertheless, some raised concerns about the quality of national governments' three-year budget plans submitted in April 2021 under the Stability and Convergence Plans (Network of EU Independence Fiscal Council 2021).

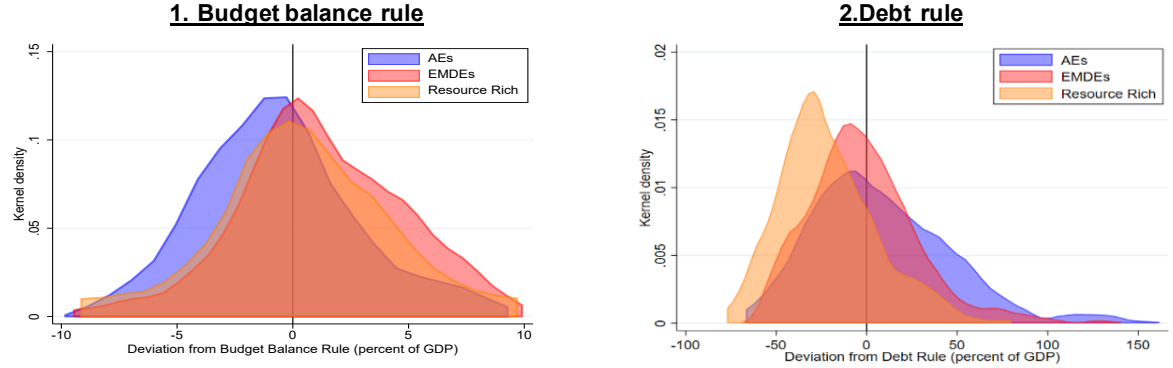
[12] For example, Alesina and Bayoumi (1996), Fatás and Milhov (2006), Eyraud, and others (2018), and Grosse-Steffen and others (2021).

Deviations from fiscal rule limits are calculated based on comparing fiscal aggregate outturns relative to the limits in the fiscal rules.[13] For this exercise, we focus on budget balance rules (BBRs) and debt rules (DRs), which are the most common and are easier to compare across countries. Supranational rules are used if they are present. The exact definition of BBR rules varies across countries, ranging from the overall balance in Indonesia to the structural primary balance in the Chile and Colombia, as well as other more complex definitions. For each country, BBR deviations are measured as the difference between the most relevant budget balance concept available in the IMF World Economic Outlook database and the limit set in the rules (see Annex II).[14] Deviations from the debt rule are defined as gross debt minus the rule limit or anchor levels.[15] Formally, the deviation from rule *X* in country *i* and year *t* is given by $D_{i,t}^{X} = X_{i,t} - X_{i,t}^{limit}$, where *X* is either the deficit or debt level as a percent of GDP. Positive deviations on deficit rules imply that the country's deficit exceeds the rule limit. The implications of deviations are explored using regression-based analysis. We use a sample of about 90 countries from 1990-2021.[16]

Deviations before and during the Pandemic

Deviations from BBRs and DRs have been common across countries, even before the pandemic. On average, countries exceeded the deficit and debt limits about 50 and 42 percent of the time during 2004–21, respectively.[17] Just before the pandemic, debt already exceeded the debt limit or anchor in more than half of countries (44 out of 81). Deviations from BBRs have been frequent in emerging markets and developing economies and resource-rich countries (Figure 15), which are prone to large negative shocks. However, large deviations from debt limits are more prevalent among advanced economies. The distribution of deviations from debt limits is skewed to the right, especially for advanced economies.

Figure 15. Distribution of Deviations from Fiscal Rule Limits, 2004–21



Source: Authors' estimates.
Note: the charts show the distribution of deviations from the deficit and debt rule limits across countries over the period 2004–21. Positive deviations mean the deficit and debt levels are higher than the limits prescribed in the fiscal rules. The vertical axis shows the density function.

[13] We use data from the IMF's Fiscal Rules and World Economic Outlook (WEO) datasets.

[14] A positive deviation does not necessarily imply noncompliance with the fiscal rules, as some countries activated the escape clause and some rules have limits or targets that are only binding in future years.

[15] Regarding debt rules, some countries have frequent changes in target levels, while others specify limits as medium-term anchors to be reached in the years ahead. This paper calculates deviations relative to the initial debt limit for countries that raise limits over time and treats future limits as present. In addition, some countries define the debt limit in net present value (NPV) terms, which is typically about 10 percent smaller than nominal debt at market prices. The NPV debt is not available in the WEO dataset, so the deviation is approximated based on nominal debt.

[16] The sample is smaller than the number of countries with debt and deficit rules in 2021 because not all of them have simple budget deficit limits or debt limits/anchor that allow to measure deviations.

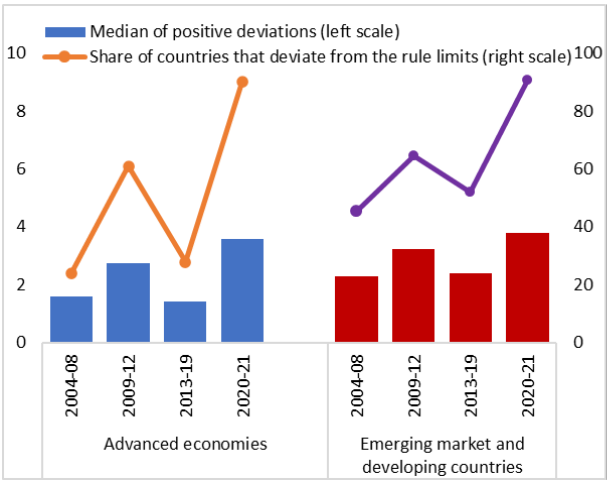
[17] Years older than 2004 are dropped as the number of countries with fiscal rules was substantially smaller in that early period. Data for 2021 are IMF projections.

The pandemic has led to unprecedented deviations of deficit and debt from fiscal rule limits. The economic fallout of the pandemic and the resulting forceful fiscal responses have led to a sharp rise in deficit and debt. About 90 percent of countries with BBRs saw their deficits exceed the rule limits in 2020, with the median positive deviation at about 4 percent of the GDP. A greater share of countries exceeded BBR limits and to a larger degree than in the global financial crisis (Figure 16). At the same time, over half of countries with DRs had debt exceeding the limit or anchor levels with a median deviation of 50 percent of GDP for advanced economies and 26 percent of GDP for emerging market and developing economies. Notably, deviations from debt rules were at historical records in 2020–21 both in terms of levels and share of countries. Nonetheless, several countries managed to remain below the debt limits as they had fiscal buffers allowing for a forceful response without breaching the debt limits (for example, Denmark and Estonia).

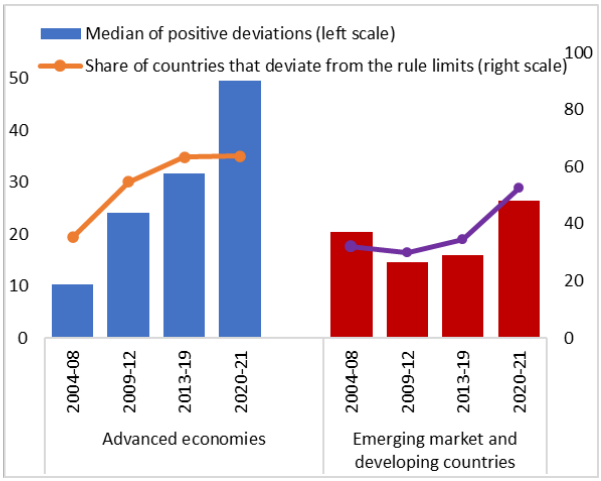
Figure 16. Deviations of Debt and Deficit from Fiscal Rule Limits

(in percent of GDP left scale; percent, right scale)

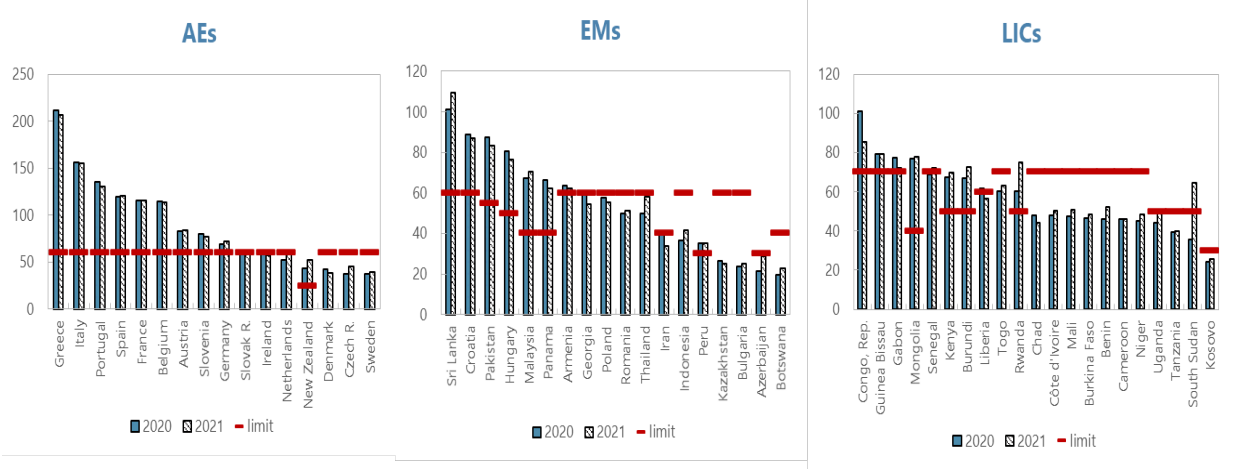
1. Deviations from budget balance rule



2. Deviations from debt rule



Deviations of debt from the debt rule limits/anchor levels for Selected Countries, 2020–21



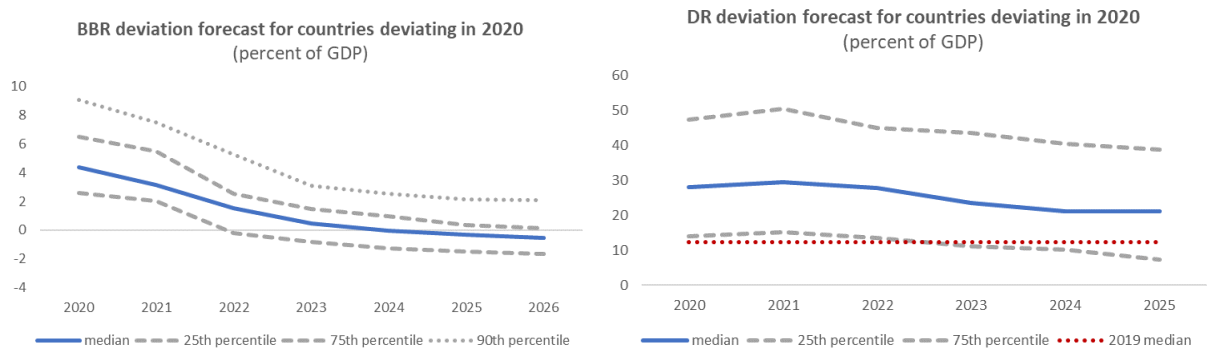
Source: Authors' estimates and IMF World Economic Outlook database.

Note: In the two top charts, the lines show the share of countries with deficits or debt exceeding the fiscal rule limits, whereas the bars show the median deviations for those that exceed the fiscal rule limits. . AE: Advanced economies; EMDEs: Emerging and developing economies; EMs: Emerging market economies; LICs: Low-income developing countries.

Returning to fiscal rule limits will likely be a challenge for many countries as suggested by past experience, including the aftermath of the global financial crisis. After the global financial crisis, countries returned only gradually to BBR limits. For example, by end 2010, about half of OECD countries had announced fiscal plans that included medium-term measures over the next 3 years (2010–13) (OECD 2011). Some did it to rebuild fiscal buffers (Germany and United Kingdom), while others responded to rising market concerns (Greece, Hungary, Ireland, Portugal, Spain). In general, advanced economies slowly returned to pre-crisis deficit levels but their debt remained elevated and deviations from the fiscal rule limits continued to rise. The share of countries with debt exceeding the anchor level increased consistently for emerging market economies in the years following the global financial crisis. Among emerging markets and developing economies, deficits were first reduced but they then widened again after 2014 when the oil prices fell.

The current WEO projections for the post-pandemic years suggest that many countries will continue to have deficits exceeding the limits in the fiscal rules in the next 2–3 years. For example, the European Union intends to deactivate the escape clause by end 2022, but many member states will need a transitional period given their deficits and debt levels are exceeding the rule limits significantly. Debt is projected to remain significantly higher than the limit, or anchor levels, for most advanced economies with the deviations projected to decline gradually over the medium term (Figure 17).[18] Such large deviations from fiscal rule limits suggest that it might not be feasible or appropriate to converge quickly to rule limits, given the lingering pandemic and the uneven recovery across countries. In some cases, the uncertainty makes it difficult to set a well-defined timeline to reach the fiscal rule targets (IMF, 2021).

Figure 17. Projected Deviation from Budget Balance and Debt Rule Limits (Percent of GDP)



Sources: Authors' estimates; IMF World Economic Outlook database, October 2021 vintage.
Note: Based on countries with deficits and debt exceeding their rule limits in 2020, respectively.

Dynamics around deviations from fiscal rules

A panel regression approach is used to analyze the dynamics of deviations from BBRs and DRs, focusing on the persistence of the deviations. The regression specification allows for heterogenous persistence coefficients conditional on whether a country was exceeding the deficit rule or debt rule in the previous period. This helps distinguish whether countries deviating from the rule tend to revert more quickly to their mean deviation than those that are not exceeding it. The specification also incorporates cross-interaction terms between the two types of rules, as well as other controls.[19] The following econometric model is estimated:

[18] Debt dynamics are projected to be more favorable than after the GFC against the background of low interest rates and a less protracted GDP slump (in the absence of a major financial crisis).

[19] A logit panel model of the determinants of rule breaches was not found to be sufficiently robust to the inclusion of fixed effects.

$$D_{i,t}^{X} = \beta_0 D_{i,t-1}^{X} + \beta_1 D_{i,t-1}^{X} * I\left(D_{i,t-1}^{X} < 0\right) + \beta_2 D_{i,t-1}^{-X} * I\left(D_{i,t-1}^{-X} \geq 0\right) + \beta_3 D_{i,t-1}^{-X} * I\left(D_{i,t-1}^{-X} < 0\right) + \beta_4 g_{i,t} + \delta_i u_{i,t},$$

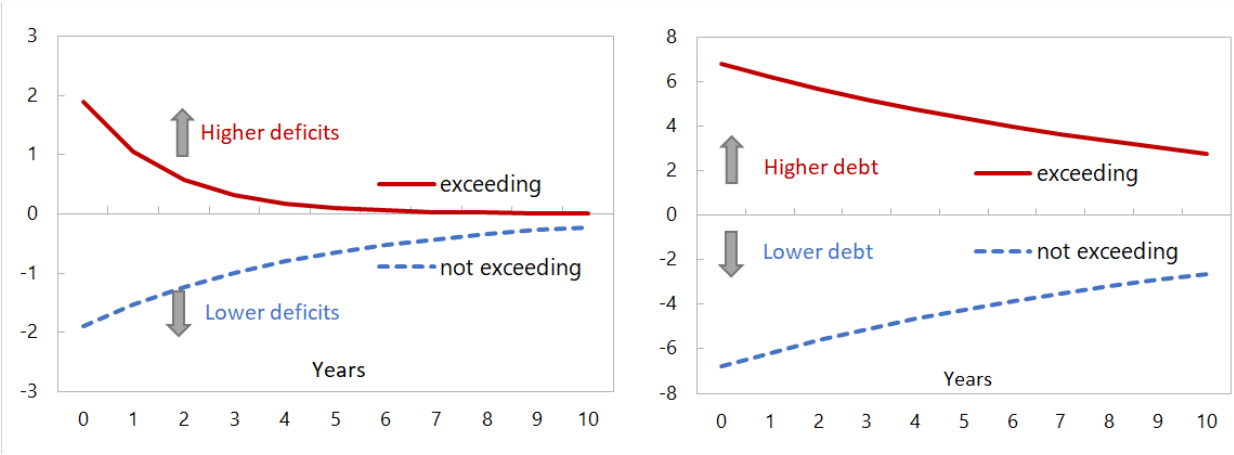
where *i* denotes the country and t the year. D_{it}^{X} indicates distance from rule limits, with X taking the deviation values BBR or DR, and $-X$ the opposite (DR for the BBR regression and vice versa). $I(\cdot)$ is the indicator function, g is real GDP growth, δ_i are country fixed effects, and u_{it} is a potentially autocorrelated error term. Annex II contains the regression results, as well as robustness tests and alternative econometric specifications.

The estimated coefficients show that deviations from deficit limits tend to be persistent, but countries exceeding the rule tend to return to the deficit limits relatively faster. For countries with deficits exceeding the rule limit, the autocorrelation coefficient is about 0.55, significantly lower than that for countries not exceeding the limits (Figure 18). This implies that countries exceeding the deficit limits tend to return to the mean levels soon—a country with the typical deviation (1.9 percent) would on average take 3–4 years to converge close to its means.[20]

Countries that have a deficit below the rule limits currently are more likely to remain so in the future years. The autocorrelation coefficient of the gap is about 0.81 for observations that are below the BBR limit in the previous period. For a typical average gap of 1.9 percent of GDP below the mean level will remain so in 10 years in the absence of large shock (Figure 18). On the interactions between deviations of BBR and DR, the regression results point to a negative statistically significant coefficient on DR deviations. This means that countries with a higher level of debt tend to have a smaller deficit deviation, perhaps suggesting greater need to rein in deficits when the debt rule limit is exceeded. The coefficient on real GDP growth is slightly negative as expected.

Figure 18. Persistence of Deviations from the Fiscal Rule Limits

(Distance to countries' mean deviation in percent of GDP)



Sources: Authors' estimates.

Note: The persistence is obtained from the autoregression coefficients (β_0 and β_1), with the initial levels set as the average deviations from the respective fiscal rule limits. For simplicity, the charts show the example of a country whose average deviation is zero over time.

Deviations from the debt rule are also very persistent, and more so for countries with larger deviations from the deficit limits. The autocorrelation coefficient for DR deviations is about 0.9, without significant differences

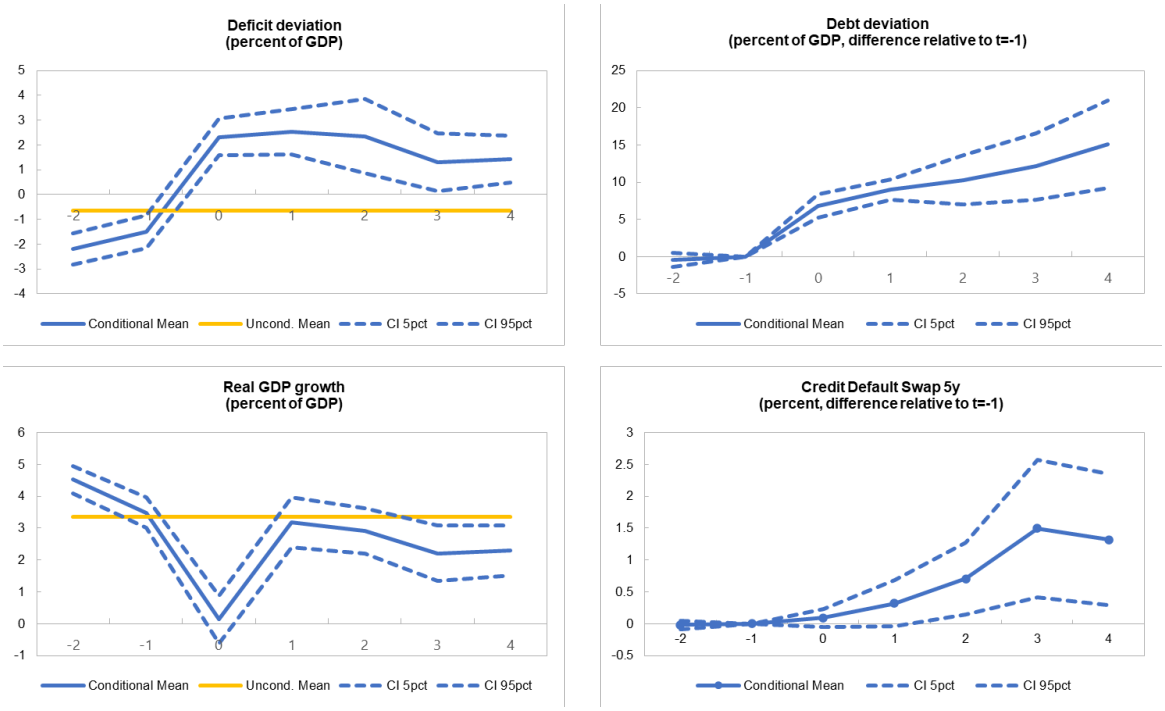
[20] The coefficient implies that countries bridge about a half of the gap each period. A country with a 1.9 percent deviation would have a 0.3 percent deviation after 3 years absent any shocks. The results are consistent with those in Reuter (2015) and Caselli and others (2018), which show EU countries exceeding the deficit rule limits tend to revert faster to the limits than those that were not exceeding them

between countries above or below the debt ceilings or anchors.[21] This is not surprising as the public debt level is an accumulation of previous budget deficits and reflects other economic and financial factors (e.g., GDP growth, interest and exchange rates). Higher real GDP growth tends to correct for DR deviations—the coefficient is large and statistically significant as expected. The debt rule deviations also depend positively on BBR deviations, with a similar magnitude on the estimated coefficients regardless of whether countries are exceeding the deficit limits or not. As a robustness check, the analysis also distinguishes between the use of debt ceilings and debt anchors in countries' fiscal rules. Debt deviations are slightly more persistent in countries with debt anchors but the difference is not statistically significant.

Correlation between macroeconomic variables and deviations from fiscal rules

We now examine the path for some macroeconomic variables when countries exceed the deficit rule limits. The analysis uses a panel regression with country fixed effects where the regressors are dummies that are each equal to one for periods during two years before to four years after the event of exceeding the BBR limit (where year 0 is the year of the initial breach). Figure 19 shows the path for some macroeconomic and fiscal variables for countries exceeding the BBR limit, compared with the unconditional average over the entire period and across countries with BBRs. For the debt stock and financing cost, the chart shows the difference relative to the period before the deficit exceeds the limit (i.e., difference relative to year t-1).

Figure 19. Paths of Macroeconomic Variables around a Crossing of the BBR Limits



Sources: IMF World Economic Outlook database, Kose and others (2017), and authors' estimates.
Note: Coefficients from a panel regression with country fixed effects and dummies indicating each period in year {-1,..,5} relative to an initial BBR breach at year 0, defined as the budget balance deviation turning positive. The panel charts without an unconditional mean show the variables in difference relative to year -1, the year before the BBR is breached. A repeated breach within 5 years of an initial breach is *not* treated as a separate episode. The bottom quartile of countries by 2019 GDP in USD is excluded from the sample, as their data are noisier for some variables. Standard errors are clustered at the country level.

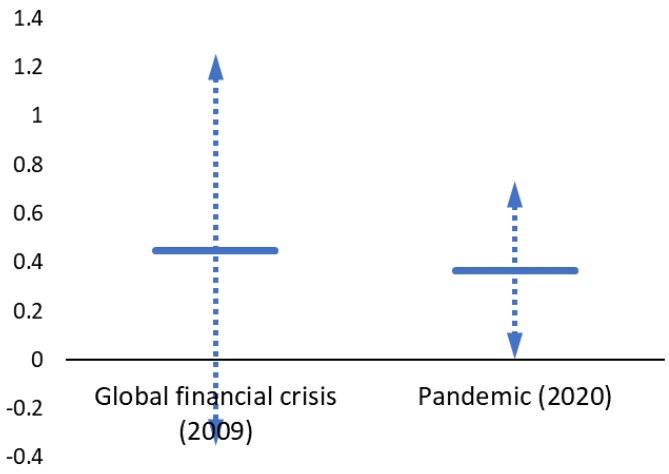
[21] The autocorrelation coefficient in a fixed-effects regression without other controls is significantly lower than 1, ruling out the existence of a unit root.

BBR deviations are often associated with negative growth shocks and buildup of debt in years ahead. Consistent with the previous results, BBR deviations tend to be persistent. The initial period of a deviation typically coincides with a large decline in real GDP growth rate, suggesting adverse growth shocks may contribute to push deficits above the rule limit. Economic growth tends to stay lower in the aftermath of a BBR deviation in subsequent years.[22] When the deficit crosses the fiscal rule limits, countries typically face a persistent debt buildup and higher financing costs. Debt continues to drift higher even after the initial deviation. Moreover, credit default swaps typically rise gradually after a deviation for about 3–4 years to about 1 percentage points higher.[23]

Another question is whether previous deviations from fiscal rule limits affect countries' response to large shocks after controlling for other factors such as debt levels. The hypothesis is that a good track record of rule compliance would improve credibility and allow governments to respond more in face of a large shock. To investigate this, we analyze how fiscal deficits behaved during the GFC and the pandemic. The fiscal response (measured by the change in the primary balance) in 2009 and 2020 is regressed against country-level deviations from fiscal rule limits (measured by the average deviation in previous years, with observations below the deficit limit censored at zero) and other controls, including the lag of the primary balance, GDP growth rate, lagged GDP per capita in purchasing power parity, and lagged debt-to-GDP ratio.[24] To avoid bias from the endogeneity of GDP growth to the fiscal impulse, the regressions instrument GDP growth using its lag and specific variables for each episode: the lagged size of the construction sector for 2009 and the Oxford stringency index of COVID-19 measures for 2020. OLS regressions yield similar results as the IV regressions presented in Figure 20 (see Annex II for the full regression results).

Figure 20. BBR Deviations and Fiscal Impulse During the Global Financial Crisis and the Pandemic

(Change in primary balance in percent of GDP)



Sources: Author's estimates, OECD, University of Oxford, and IMF World Economic Outlook.
Note: The chart shows the slope coefficients of the impact of previous average BBR deviations on the change in the primary balance during large shocks. The arrows indicate the 95 percent confidence intervals. Deviations are the average annual breach of the BBR by country for previous years. The regressions control for the lag of the primary balance, the lag debt-to-GDP ratio, the lag of the log of per capita PPP GDP, and GDP growth. GDP growth is instrumented with the lagged size of the construction sector in 2009 and the Oxford index of the stringency of COVID-19 measures in 2020, in addition to its own lag.

The results show that a better record of observing the fiscal rules has been associated with a larger fiscal response to large shocks. During the Global Financial Crisis and the pandemic, countries averaging smaller deviations from BBRs in previous years also featured larger fiscal responses (i.e., larger declines in the primary balance), even controlling for other factors. The difference was only statistically significant during the pandemic, as the smaller sample size during the global financial crisis widens the confidence interval. The fact that previous BBR deviations even after controlling for the effects of the lagged primary balance and debt levels

[22] Whereas this may partially capture the W-shaped dynamics of GDP after the GFC in some EU countries, the pattern is also present for EMDEs. Moreover, only about 1/3 of the initial deviations in the sample (period t=0) occur between 2008 and 2010.

[23] In line with estimates from Diaz Kalan and others (2018) for a sample of European countries

[24] It is not necessarily a proper measure of the fiscal stance as it would require an assessment of the output gap, which is difficult during a large shock. Here measures a change in primary balance and controls for other factors that potentially affect the fiscal positions. For 2009 the average previous deviation is calculated only until 2007, as some countries had already entered a recession in 2008.

suggests that maintaining deficits below limits does seem to strengthen fiscal credibility and allow countries to respond more forcefully when shocks hit (IMF, 2021).

V. Conclusions

Based on the newly updated datasets on fiscal rules and fiscal councils, we provided an overview of the developments on fiscal rules and fiscal councils before and during the pandemic. Many countries have embraced these institutions to help keep public finances on a sustainable path while meeting stabilization objectives.

Fiscal rules and councils have been on the rise globally. About 105 countries had fiscal rules at the end of 2021, from less than 10 countries in the early 1990s. About 50 countries have established fiscal councils as of end-2021. The number and design of fiscal rules has also been evolving. The most common form has been a combination of a debt rule and operational limits on expenditures and/or budget balance. Based on a new index of fiscal rules strength, fiscal rules seem to have improved over time, with stronger enforcement and oversight. Many countries introduced flexibility provisions in their fiscal rules, especially through escape clauses. Before the pandemic, two thirds of countries with fiscal rules had escape clauses. An increasing number of countries have improved the legal basis of their national fiscal rules (statutory level or above) and many have also put in place formal enforcement mechanisms. At the same time, over the last decade, the share of countries with fiscal rules adjusted for cyclical conditions declined, likely reflecting significant operational challenges. However, the design of rules has varied significantly across countries. Several countries have seen frequent amendments, and the growing complexity of rules can undermine the transparency and credibility of the framework.

There have also been improvements regarding the independence and capacity of fiscal councils, although challenges remain. Many have legal access to timely information to provide relevant assessment to inform the public debate. However, ensuring operational independence of fiscal councils and adequate budgetary safeguards remains challenging in many countries.

The rules-based fiscal framework came under pressure during the COVID-19 pandemic, with countries using different ways to adapt their fiscal rules in response to the crisis, including activating the escape clauses, suspending the fiscal rules temporarily, and modifying the fiscal rule limits. In particular, the widespread activation of escape clauses showed how fiscal rules can have large flexibility during large shocks within a well-defined rules-based framework. Fiscal councils have played an important role during the pandemic, including analyzing the COVID-19 impact, monitoring the use of escape clauses, and costing pandemic-related fiscal measures. Many fiscal councils stressed the need for transparency for COVID-19 fiscal responses. In general, fiscal councils have risen to their mandates during the pandemic to provide fiscal oversight.

Fiscal rules have allowed for a forceful response to the pandemic, disclaiming the concerns that rules are rigid in constraining the governments' response in bad times, However, fiscal rules have not prevented a large and persistent debt buildup over time. The paper shows that deviations from deficit and debt rules have been common across countries, but have reached unprecedent levels with the pandemic. On average, countries exceeded the deficit and debt limits by about 50 and 42 percent of the time during 2004–21, respectively. The COVID-19 economic and health crisis, and associated fiscal responses, led to a sharp rise in deficits and debt. Almost all countries with deficit rules exceeded the limits—by an average of 4 percent of GDP in 2020. Debt deviations also reached unprecedent levels. The median deviation reached 50 percent of GDP in advanced

economies and 26 percent of GDP in emerging market and developing economies, partly reflecting high pre-pandemic debt levels.

History suggests that the return to fiscal rule limits will likely take time where there have been large debt deviations. For countries with deficits exceeding the rule limit, the estimated autocorrelation coefficient is about 0.55—that is, a country with the typical deviation (1.9 percent) would on average take 3-4 years to converge close to its mean. Deviations from the debt rule are even more persistent as exemplified in the aftermath of the global financial crisis. Advanced economies slowly returned to pre-crisis deficit levels but their debt remained elevated.

The policy challenge is whether and how countries should return to the limits and the fiscal rules, while ensuring credibility of the fiscal framework. Several countries plan to revise the framework as part of the transition to reinstate the fiscal rules. Supranational rules have also been put to test during the pandemic, with additional challenges related to the divergence between member states. When charting the transition path to reinstate the fiscal rules, the long-standing divergence among member states will need to be considered.

There is an opportunity to further strengthen fiscal frameworks. While each country will choose its own path, international experience suggests that a sound, rules-based framework will need to rely on strong political commitment, including a better record of compliance, creating incentives to build buffers during good times, and designing effective mechanisms to manage large shocks in bad times. Strengthening fiscal councils' ability to operate independently and fulfilling their mandates would also improve credibility and accountability of policies. An important finding of the paper is that countries with a good track record regarding fiscal rules are able to respond more aggressively during crisis. The release of two updated global datasets on fiscal rules and fiscal councils will help inform new research.

Annex I. Definitions and Types of Fiscal Rules and Councils

What is considered a fiscal rule in this paper and included in the dataset?

A fiscal rule imposes a long-lasting constraint on fiscal policy through numerical limits on budgetary aggregates.[25] This implies that boundaries are set for fiscal policy which cannot be frequently changed and some operational guidance is provided by specifying a numerical target that limits a particular budgetary aggregate. The demarcation lines of what constitutes a fiscal rule are not always clear. For this dataset and paper, we followed the following principles:

- Only rules with targets fixed in legislation and fiscal arrangements for which the targets can only be revised on a low-frequency basis (e.g., as part of the electoral cycle) and binding for at least three years are considered as fiscal rules. Medium-term budgetary frameworks or expenditure ceilings that provide multi-year projections but can be changed annually are not considered to be fiscal rules.
- The dataset only considers rules that set numerical targets on aggregates that capture a large share of public finances and at a minimum cover the central government level. Fiscal rules for subnational governments or fiscal sub-aggregates are not included here.
- The dataset focuses on *de jure* arrangements and not to what degree rules have been adhered to in practice.

Types of fiscal rules

The dataset distinguishes four main types of fiscal rules based on the budgetary aggregate that they seek to constrain. The rules have different properties with regard to the objectives, operational guidance, and transparency (Schaechter and others 2012).

1. **Debt rules** set an explicit anchor or ceiling for public debt, often expressed in percent of GDP. This type of rule has an objective of achieving convergence to a sustainable debt target and is relatively easy to communicate. However, debt levels are affected by factors less control by governments (such as foreign exchange, interest rates) and do not provide short-term guidance for fiscal policies.

2. **Budget balance rules** constrain the budget aggregate that primarily influences the debt ratio and are largely under government control. policy makers. Such rules provide clear operational limits and can be specified as limits on the overall balance, primary balance, or structural or cyclically adjusted balance. While the latter type provides stabilization over economic cycles, the cyclical adjustments, typically through the output gap, make those rules difficult to communicate and monitor. It is likely to treat favorable shocks as structural and adverse shocks as temporary. In addition, spending rigidities could complicate the implementation of budget balance rules. “Pay-as-you-go” rules stipulate that any additional deficit-raising expenditure or revenue measures must be offset in a deficit-neutral way. Since they do not set numerical limits on large budgetary aggregates, they are typically considered procedural rules and thus not counted in the database here as numerical fiscal rules.

3. **Expenditure rules** set limits on total, primary, or current government expenditures. Such limits are relatively easy to operate and monitor, typically set in absolute terms or growth rates, and occasionally in percent of GDP with a time horizon often ranging between three to five years. These rules are not linked directly to the debt sustainability objective since they do not constrain the revenue side. They can provide, however, an operational tool to trigger the required fiscal consolidation consistent with sustainability when they are accompanied by debt rules. The rules can help constrain spending during temporary absorption booms, when windfall revenue receipts are temporary. Moreover, expenditure rules do not restrict the economic stabilization function of fiscal policy in times of adverse shocks as they do not require adjustments to cyclical or discretionary reductions in tax revenues. Some counter-cyclical response can be achieved by excluding cyclically sensitive expenditures, such as unemployment support.

[25] In addition to numerical fiscal rules, governments can also establish procedures for the budgetary process (“procedural rules”) with a view to establishing good practices, raising predictability, and becoming more transparent (see, for example, van Eden, Khemani, and Emery, 2013). Many countries operate procedural and numerical rules in tandem, but this paper only reports on the latter. Unless indicated otherwise, the indicators on fiscal rules included in this paper cover only those rules that took effect by end-December 2021 or for which a specific transition regime was in place at that time. Fiscal rules that were adopted, but not yet implemented, are described in the dataset but not included in the charts and tables.

4. **Revenue rules** set ceilings or floors on revenues and are aimed at boosting revenue collection and/or preventing an excessive tax burden. Most of these rules are not directly linked to the public debt or spending. Furthermore, setting ceilings or floors on revenues is challenging as revenues are highly cyclical. Exceptions are those rules that restrict certain use of "windfall" revenue. Revenue rules alone could result in procyclical fiscal policy, as floors (ceilings) do not generally account for the operation of automatic stabilizers in a downturn (upturn). Revenue rules, similar to expenditure rules can be used to target the size of the government.

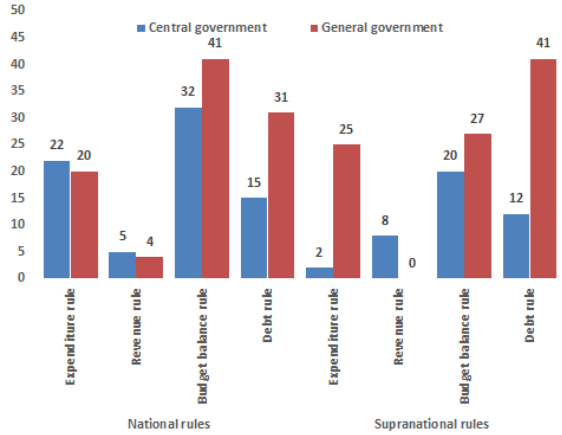
Other key characteristics of fiscal rules

Coverage of the fiscal rules

In principles, fiscal rules should cover most fiscal aggregates. Majority of supranational rules have covered fiscal aggregate at the general government levels, it is the case for less than half of the national rules (Figure A1.1). The higher status of legislation basis in supranational rules makes it more likely to extend to general government. For national expenditure and deficit rules, the coverage often focuses on central government, partly reflecting the less availability of timely data and the fact that local governments are often subject to subnational rules or restrictions that they cannot borrow or maintain a deficit (Eyraud and others 2020).

Figure A1.1. Coverage of Fiscal Rules across Countries, by Type of Fiscal Rules, 2021

(Number of countries)



Sources: Davoodi, Elger, Fotiou, Garcia-Macia, Lagerborg, Lam, and Pillai (2022a).

Exclusion of budget components from the rules

Countries with structural budget balance rules tend to exclude the cyclical components in the revenues and expenditures to assess whether the fiscal rules are in compliance (Chile, Colombia, European Union). Countries with expenditure rules often exclude certain budget components. The most common is to exclude capital spending from the expenditure rule or set a floor of capital spending as countries face development needs (Costa Rica, Kosovo 2006–08, Peru 2012, Thailand). Others exclude interest payments, pension (France), or nondiscretionary unemployment benefits (Spain). Mexico expenditure rule is defined as current primary expenditure but excludes the outlays governed by automatic rules (pensions and subsidies for electricity). The coverage of expenditure rule in the Netherlands was revised during the global financial crisis, excluding interest payments 2007–10 and unemployment and social assistance benefits (2009–10). Some countries linked the expenditure rules with the debt level (Armenia, Israel) or the level of financial assets (oil funds in Russia). In many cases, multi-year expenditure ceilings were established as part of the medium-term fiscal framework. This strengthens the predictability of fiscal policies and supports the implementation of fiscal rules. As of 2021, over a third of countries with fiscal rules had established multi-year ceilings.

Correction Mechanism

Correction mechanisms stipulates what governments would need to do in case of breaching the fiscal rules (or at risks of being breached). Most European countries have introduced correction mechanism to specify actions and path back towards the budget balance rule following a deviation as part of the 2012 Fiscal Compact. The design varies across countries although it follows principles of the European Commission. The mechanism is triggered ex-post after the fiscal rules is deemed to be breached. Poland has established several triggers preemptively as debt approaches its fiscal rule limits with increasing degree of fiscal adjustments. Outside Europe, the correction mechanisms are less common but included in some fiscal responsibility laws such as in Jamaica, Georgia, and Grenada. Some correction mechanisms specify the precise path of adjustments after the noncompliance of the fiscal rules (Slovak Republic) while others require the government to submit corrective plans for fiscal council assessment and/or parliamentary approval (Germany, Ireland).

What is considered a fiscal council in the dataset?

To be included in the dataset, a fiscal council (independent fiscal institution) must fulfill the following conditions: (i) align with the IMF definition of fiscal council specified above, (ii) be consistent with the main OECD Principles for Independent Fiscal Institutions (von Trapp, Lienert, and Wehner, 2016), and (iii) be functional and visible institutions, such as maintaining a regularly updated website or other forms of public communication. While the dataset is cross-sectional by nature, the dates of establishment and of major reforms are included.

Table A1.1. Coverage of IMF Fiscal Rules and Fiscal Councils Datasets

Advanced economies	Emerging market economies		Low-income developing countries
Andorra	Antigua and Barbuda[1/]	Romania[1/2/]	Benin[1/]
Australia[2/]	Argentina	Russia	Burkina Faso[1/]
Austria[1/2/]	Armenia	Serbia[2/]	Burundi[1/]
Belgium[1/2/]	Azerbaijan	South Africa [2/3/]	Cambodia
Canada[2/]	Bahamas, The[2/]	Sri Lanka	Cameroon[1/]
Cyprus[1/2/]	Botswana	St. Kitts and Nevis[1/]	Central African Republic[1/]
Czech Republic[1/2/]	Brazil[2/]	St. Lucia[1/]	Chad[1/]
Denmark[1/2/]	Bulgaria[1/2/]	St. Vincent and the Grenadines[1/]	Congo, Republic of[1/]
Estonia[1/2/]	Cabo Verde		Côte d'Ivoire[1/]
Finland[1/2/]	Chile[2/]	Thailand	Gabon[1/]
France[1/2/]	Colombia[2/]	Turkmenistan	Grenada[1/ 2/]
Germany[1/2/]	Costa Rica[2/]	Uruguay	Guinea Bissau[1/]
Greece[1/2/]	Croatia[1/2/]		Kenya[1/2/]
Hong Kong SAR	Dominica[1/]		Liberia
Iceland[2/]	Ecuador		Mali[1/]
Ireland[1/2/]	Equatorial Guinea[1/]		Niger[1/]
Israel	Georgia[2/]		Nigeria
Italy[1/2/]	Hungary[1/2/]		Rwanda[1/]
Japan	India		Senegal[1/]
Korea [2/3/]	Indonesia		South Sudan[1/]
Latvia[1/2/]	Iran[2/]		Tanzania[1/]
Lithuania[1/2/]	Jamaica		Timor-Leste
Luxembourg[1/2/]	Kazakhstan		Togo[1/]
Malta[1/2/]	Kosovo		Uganda[1/2/]
The Netherlands[1/2/]	Malaysia		Vietnam[2/]
New Zealand	Maldives		
Norway	Mauritius		
Portugal[1/2/]	Mexico[2/]		
Singapore	Mongolia		
Slovak Republic[1/2/]	Montenegro, Rep. of		
Slovenia[1/2/]	Namibia		
Spain[1/2/]	Pakistan		
Sweden[1/2/]	Panama[2/]		
Switzerland	Paraguay		
United Kingdom[1/ 2/]	Peru[2/]		
United States[2/]	Poland[1/]		

Sources: IMF Fiscal Rules Dataset: 1985–2021 and IMF Fiscal Council Databases: 2021.
The list of economies which had national and/or supranational fiscal rules and fiscal councils in effect during 1985-2021. Data as of end-December 2021. The income group classification is based on IMF World Economic Outlook database.
1/ Countries also have supranational rules. United Kingdom was a member state in European Union until January 2020.
2/ Countries with fiscal councils as of end-2021.
3/ Korea and South Africa have fiscal councils but do not adopt formally numerical fiscal rules. They have indicative targets in their medium-term budget frameworks.

Annex II. Deviations from Rules: Measurement and Extended Results

Measuring deviations from budget balance rules

For most countries, the budget balance target has a direct counterpart variable in the WEO database that can be used to calculate deviations from the rule limit. The most common targets are the overall balance and the structural primary balance. However, for countries with more specific targets, the deviations need to be approximated with the closest combination of WEO variables.[26] Table A2.1 shows the WEO variables used to approximate each type of budget balance rule target. In addition to the median levels reported in Figure 16, Figure A.1.1. shows the aggregate positive deviations from budget balance rules or debt rules across country groups and over time.

Table A.2.1. Mapping of Budget Balance Rule Targets and WEO Variables

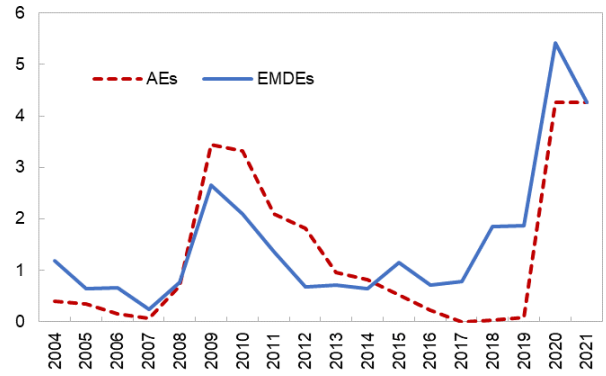
Target	WEO variable codes
Overall Balance	GGXOFB
Overall Balance excluding Foreign Financing and Grants	GGXOFB-GGRG *
Overall Balance excluding Oil Revenues	GGXOFB-TXGO *
Overall Balance excluding Investment	GGXOFB-NFIG*
Primary Balance	GGXONLB
Primary Balance excluding Oil Revenues	GGXONLB-TXGO *
Primary Balance excluding Investment	GGXOFB-NFIG *
Cyclically-Adjusted Primary Balance	GGCBP
Structural Primary Balance	GGSBP
Structural Overall Balance	GGSBP-GGEI *

Note: asterisks (*) indicate an imperfect match with the available WEO variables.

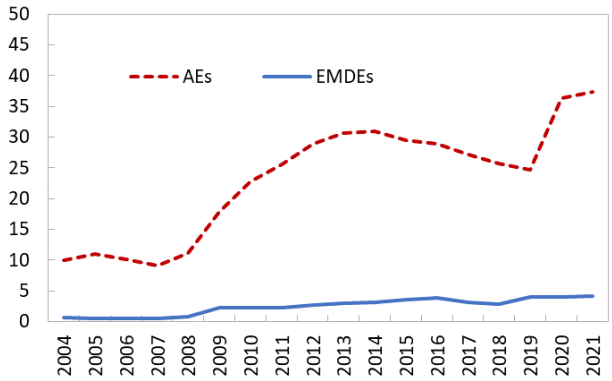
Figure A.1.1. Aggregate Deviations of Debt and Deficit from Fiscal Rule Limits

(in percent of GDP; deviation relative to the fiscal rule limit)

1. **Aggregate deviations from budget balance rule**



2. **Aggregate deviations from debt rule**



Note: The lines in the chart show the aggregate deviations across countries by income groups as a share of aggregate GDP of the countries with rules in the income group. All countries with rules are included in the sample, but negative deviations (i.e., those not exceeding the rule limit) are censored at zero. AE: Advanced economies; EMDEs: Emerging and developing economies; EMs: Emerging market economies; LICs: Low-income developing countries.

[26] BBR deviations are not calculated for Argentina and Panama (the latter during 2015–2019) as no close approximation is available.

Dynamics of deviations—regression results and robustness

Table A2.2 shows the results for the regression model presented in Section IV, with the baseline model in the first column. The robustness tests include adding year fixed effects, including small countries in the sample (defined as the bottom quartile in terms of GDP levels in USD in 2019), instrumenting real GDP growth with its own lag, and adding an interaction term between fiscal rule deviations and recessions, with the latter defined as country-year observations where the output gap is below -2 percent.

Starting with BBR regressions (upper half of the table), the results are similar across the robustness tests. However, including small countries or instrumenting GDP growth makes the difference in persistence between countries exceeding the BBR limit and those that do not insignificant. Also, BBR deviations in countries exceeding the limit are significantly more persistent amid a big recession, as expected.

Turning to the DR regressions (bottom half of the table), the results are mostly unchanged under the same set of robustness checks, and persistence of deviations is not significantly higher in large recessions. Countries that set debt limits as anchors rather than ceilings feature slightly more persistence (not shown in the table), but the difference is not statistically significant.

Table A2.2. Budget Balance and Debt Rule Deviation Dynamics—Robustness Regressions

BBR_deviation	Baseline	Year FE	Including small countries	Instrumenting GDP growth	Big Recessions
lag BBR_deviation	0.807***	0.765***	0.736***	0.707***	0.822***
	(0.055)	(0.054)	(0.099)	(0.113)	(0.059)
lag BBR_deviation (exceeding)	-0.254***	-0.256***	-0.202	-0.181	-0.400***
	(0.074)	(0.086)	(0.151)	(0.213)	(0.097)
lag DR_deviation (not exceeding)	-0.034*	-0.043**	-0.059**	0.036	-0.037*
	(0.020)	(0.020)	(0.029)	(0.057)	(0.020)
lag DR_deviation (exceeding)	-0.023***	-0.036***	-0.044***	-0.029*	-0.029***
	(0.008)	(0.006)	(0.013)	(0.015)	(0.008)
RGDP growth	-0.404***	-0.178***	-0.296***	-1.363*	-0.406***
	(0.030)	(0.057)	(0.033)	(0.800)	(0.030)
lag BBR_deviation (exceeding) * output gap <-2%					0.199***
					(0.058)
N	732	732	732	732	732
Fixed Effects	Country	Country & Year	Country	Country	Country
Estimator	Arellano-Bond	Arellano-Bond	Arellano-Bond	FE, clustered st. err.	Arellano-Bond

DR_deviation	Baseline	Year FE	Including small countries	Instrumenting GDP growth	Big Recessions
lag DR_deviation	0.910***	0.832***	0.889***	0.960***	0.919***
	(0.029)	(0.043)	(0.043)	(0.063)	(0.030)
lag DR_deviation (exceeding)	0.004	0.031	-0.052	-0.020	-0.028
	(0.044)	(0.054)	(0.069)	(0.075)	(0.049)
lag BBR_deviation (not exceeding)	0.322**	0.132	-0.022	0.352*	0.319**
	(0.162)	(0.182)	(0.322)	(0.186)	(0.163)
lag BBR_deviation (exceeding)	0.567***	0.563***	0.617***	0.439***	0.555***
	(0.125)	(0.188)	(0.170)	(0.141)	(0.128)
RGDP growth	-1.111***	-0.781***	-1.083***	-2.074**	-1.117***
	(0.131)	(0.161)	(0.113)	(0.993)	(0.132)
lag DR_deviation (exceeding) * output gap <-2%					0.021
					(0.023)
N					
Fixed Effects	Country	Country & Year	Country	Country	Country
Estimator	Arellano-Bond	Arellano-Bond	Arellano-Bond	FE, clustered st. err.	Arellano-Bond

Note: Standard errors in parentheses: * p < 0.1, ** p < 0.05, *** p < 0.01. Deviations are expressed in percent of GDP. The regression is estimated by Generalized Methods of Moments (Arellano-Bond estimator) as it includes lagged variables of the dependent variable. Small countries are the bottom quartile of the sample based on GDP levels in USD in 2019. Real GDP growth is instrumented with its own lag. Big recessions are defined as country-year observations where the output gap is below -2 percent.

Implications of deviations in major crises—regression results

The following regression is used to assess the implication on the fiscal response to crises of countries' previous deviations from fiscal rules. The regression is based on a cross-section of countries in two episodes of large economic shocks: the global financial crisis (2009) and the pandemic (2020). The equation is listed below:

$$\Delta PB_{i,t} = \beta_0 PB_{i,t-1} + \beta_1 \overline{D_{i,s<t}^{BBR}} + \beta_2 g_{i,t} + \beta_3 \quad Y_{i,t-1}^{PC,PPP} + \beta_4 \frac{Debt_{i,t-1}}{Y_{i,t-1}} + u_{i,t}.$$

PB indicates the primary balance in percent of GDP, $\overline{D_{i,s<t}^{BBR}}$ is the average deviation from BBRs in previous years, g real GDP growth, $Y^{PC,PPP}$ per capita GDP in purchasing parity terms, $Debt$ is gross public debt, Y the GDP level in local currency, and $u_{i,t}$ a heteroskedastic error term.

Real GDP growth is likely endogenous to the fiscal impulse (i.e., the negative of the change in the primary balance) in the same year. Hence, in the first two columns it is instrumented with its own lag as well as specific variables for each episode: the lag GDP share of the construction sector for 2009 obtained from OECD, and the average stringency of COVID measures in 2020 for the 2020 regression using the indices published by Oxford University. Table A2.3 presents the first stage of the IV regression—the instruments are strong in both cases, with countries featuring a larger construction sector in 2008 experiencing lower GDP growth in 2009 (the nadir of the housing bubble burst), and countries with more stringency measures in 2020 also featuring lower growth that year.

Table A2.4 shows the full regression results behind the coefficients plotted in Figure 19, as well as various robustness specifications. The coefficients in the figure correspond to "Average Deviation in Past Years" in Table A2.4, "Baseline" columns. The table shows that countries with a higher previous deviation had a more positive change in the primary balance in 2009 and in 2020, this is, they were less able to accommodate the large negative shocks with fiscal expansion (although the effect was only statistically significant in 2020). Other significant drivers of a more positive primary balance change were a lower lagged debt-to-GDP ratio, and for 2020 only a more negative primary balance in the previous year, higher GDP growth, and a higher GDP per capita level.

Table A2.3. IV first stage

Real GDP growth	2009	2020
lag Real GDP growth	0.572***	0.596*
	(0.189)	(0.321)
lag Construction Sector share	-71.435*	
	(38.629)	
Stringency Covid measures		-0.160***
		(0.040)
N	30	65
R squared	0.243	0.264
Standard Errors	Heterosk. Robust	

Note: Standard errors in parentheses: *p <0.1, **p< 0.05, *** p <0.01. The construction sector share is in percent of GDP.

Table A2.4. Fiscal Impulse Regression Results

	Baseline		OLS		GDP growth rel. to 5y mean		Cyc.-adjusted PB	
Change in Primary Balance	2009	2020	2009	2020	2009	2020	2009	2020
lag Primary Balance	0.046	-0.336***	-0.507***	-0.190	-0.059	-0.376***	0.114	-0.403**
	(0.179)	(0.115)	(0.131)	(0.125)	(0.310)	(0.123)	(0.158)	(0.152)
Average Deviation in Past Years	0.450	0.368**	0.329	0.324*	0.398	0.349**	0.404	0.177
	(0.389)	(0.182)	(0.498)	(0.172)	(0.492)	(0.172)	(0.393)	(0.167)
RGDP growth	0.025	0.187*	0.109	0.213***	0.214	0.238**	-0.441	0.144
	(0.396)	(0.107)	(0.104)	(0.072)	(0.631)	(0.104)	(0.258)	(0.167)
lag GDP per capita in PPP	-0.000	-0.038***	0.024	-0.046***	-0.008	-0.038***	-0.008	-0.024*
	(0.014)	(0.012)	(0.020)	(0.012)	(0.022)	(0.013)	(0.012)	(0.014)
lag Debt/GDP	-0.016*	-0.016**	-0.000	-0.017**	-0.027	-0.017***	-0.017**	-0.008
	(0.009)	(0.007)	(0.018)	(0.007)	(0.030)	(0.006)	(0.006)	(0.009)
Constant	-3.390**	-2.844***	-4.630***	-2.338***	-0.816	-1.793**	-2.315**	-2.219*
	(1.630)	(0.560)	(1.117)	(0.625)	(7.230)	(0.731)	(0.922)	(1.107)
N	30	65	52	74	30	65	30	48
Regression Type	IV		OLS		IV		IV	
Standard Errors	Heterosk. Robust		Heterosk. Robust		Heterosk. Robust		Heterosk. Robust	

Note: Standard errors in parentheses: * p < 0.1, ** p < 0.05, *** p < 0.01. Primary balances and deviations are expressed in percent of GDP. The third specification defines real GDP growth as a difference from the past 5-year mean. The fourth specification uses the cyclically adjusted primary balance instead of the primary balance.

Regarding robustness, OLS regression results yield similar results as the IV regressions for the main coefficients of interest. A similar result is also obtained measuring real GDP growth in deviations from the mean growth of the past 5 years (a proxy for potential growth). Finally, measuring fiscal policy with the cyclically-adjusted primary balance tends to dampen the strength of the result, although in this case data availability reduces the sample size for 2020.

Annex III. Measuring the Strength of Fiscal Rules

This appendix outlines a methodology in measuring the strength of fiscal rules based on the approaches used in the European Commission's Fiscal Rule Index (2015).[27] The strength of the fiscal rules by the European Commission is measured based on five institutional criteria: i) statutory or legal basis of the fiscal rule; ii) room for setting or revising the rules; (iii) nature of the entity in charge of monitoring the fiscal rule; (iv) correction mechanism; and (v) the resilience of the fiscal rules against shocks. The methodology assigns a strength score for each type of fiscal rule—namely, expenditure rule, budget balance rule, revenue rules, and debt rule—based on 11 indicators that reflect these five criteria. Each indicator score is standardized between 0 and 1, with weights assigned on each rule and reflect the coverage of government (central vs. general government; see below).

If a country has multiple rules, the total score is a weighted sum of each rule, with declining weights assigned to each additional rule.[28] The overall strength index is further standardized by deducting the sample mean and adjusted by the sample standard errors, leading to a score ranging -0.99 to 3.5. There is alternative measure such as in Schaechter and others (2012). They developed a strength index by measuring key features of fiscal rules, including the legal basis, coverage, enforcement procedure, and independent body but did not include a measure on the resilience of the rules. The scores of each rule (standardized to range between zero and five) are summed up to get the overall composite index using the principal component analysis. In both methodologies, higher statutory basis, monitoring by an independent entity outside the government, the presence of automatic correction mechanism, and the greater resilience of the rules against shocks will receive a higher score, indicating the country has a stronger fiscal rule.

The paper maps the variables available in the IMF Fiscal Rule dataset: 1985–2021 and IMF Fiscal Council dataset with those of the criteria used by the European Commission. It then assigns respective scoring to each indicator.[29] The detailed mapping of each criterion between IMF Fiscal Rule dataset and those of the European Commission is listed in Appendix Table A3.1. Three criteria used by European Commission (revision of the rule (Criterion 2), budgetary margin (Criterion 5b), and items excluded from the rules (Criterion 5d)) do not have matching variables found in the IMF Fiscal Rule dataset.

The score for each type of rule is calculated by summing up the scores of each criterion, which gives a theoretical maximum value of 10. Then, different coverage in each type of fiscal rule will be weighted with general government assigned a weight of 1 while the central government is assigned a weight of 0.75. This captures in spirit that higher coverage of the fiscal rules would indicate a potentially stronger fiscal rule that applies to a wider set of fiscal aggregates. This is similar to the EU approach except that the latter included local government, regional government (autonomy regions or federated states), central government, and social security. If a country has multiple rules, we assign a declining weight for each additional type of fiscal rule. The highest scoring rule would have a weight of 1, and the subsequent rules (in descending scoring) will be assigned weights of one-half, one-third, and one-fourth, respectively. The scoring is then summed to a single

[27] See European Commission Fiscal Rule Index Explanation: https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/fiscal-governance-eu-member-states/numerical-fiscal-rules-eu-member-countries_en

[28] For countries with multiple fiscal rules, the rule that has the highest scoring would carry the weight of 1. The subsequent rules would receive descending weights—one half for the second highest scoring rule, and 1/3 for the third highest scoring rule. Additional fiscal rules therefore would have higher strength but declining effects on the fiscal rule index.

[29] The scoring mechanism resemble closely to those by the EU criteria. For example, criteria 5 in the EU approach account for a maximum of 4 points (sum of 5a-d). Given the lack of corresponding matching variable on criteria 5b and 5d, we assign a maximum point of 2 for each category on the presence of escape clauses and the use of cyclically adjusted balance in the budget balance rule.

index, which indicates the strength of the fiscal rules. The index is further standardized by unconditional mean and standard errors, leading to an index ranging between -0.7 and 3.6.

Table A3.1. Mapping Variables to Criteria to Measure the Strength of Fiscal Rules

Criteria	Variables (This paper)		Variables (European Commission)	Score
Legal Basis	Legal basis	=	Statutory or legal basis of the rule (EC Criterion 1)	[0,1]
Room to set or revise the rules	Not applicable		Adjustment margin (EC Criterion 2)	[0,1]
Monitoring of fiscal rules	Monitoring mechanism outside the government	=	Nature of the body in charge of rule monitoring and the correction mechanism (EC Criterion C3a)	[0,1]
	Monitoring of Fiscal Rules (Fiscal Council dataset)	=	Real Time Monitoring (EC Criterion 3b)	[0,1]
	Independence – Legal & Operational (IMF Fiscal Council dataset: 2021)	=	Nature of the body in charge of monitoring the correction mechanism in case of deviation (EC Criterion 3c)	[0,1]
	Independent body setting budget assumptions and monitoring budget implementation	=	Independent body providing/endorsing macro budgetary forecast (EC Criterion 3d)	[0,1]
Enforcement and Correction Mechanism	Formal enforcement procedure; fiscal responsibility law	=	Correction Mechanisms in case of deviation from the Rule (EC Criterion 4)	[0,1]
Flexibility and Resilience against shocks	Presence of escape clauses	=	Does the rule contain clearly defined escape clauses? (EC Criterion 5a)	[0,2]
	Not applicable	=	Is there a budgetary margin defined in relation to the rule? (EC Criterion 5b)	-
	Budget balance rule defined in cyclically adjusted terms	=	Are targets defined cyclically adjusted terms or do they account for the cycle in any way? (EC Criterion 5c)	[0,2]
	Not applicable[30]	=	Are there exclusions from the rule in the form of items that fall outside authorities' control at least in the short-term (e.g., interest payments, unemployment benefits) (EC Criterion 5d)	-

Note: This paper uses the variables as indicated in the IMF Fiscal Rule 1985–2021 dataset and IMF Fiscal Council dataset. The detailed criteria and scoring by European Commission is available at https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/fiscal-governance-eu-member-states/numerical-fiscal-rules-eu-member-countries_en

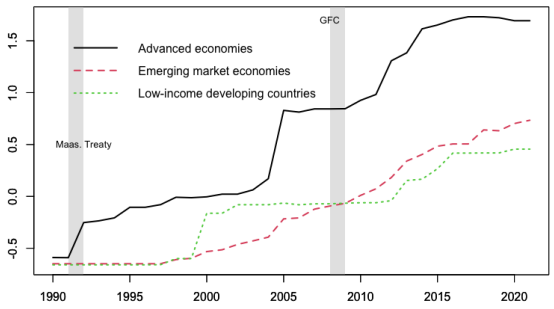
Our fiscal rule strength index incorporates both supranational and national rules on over 100 economies with fiscal rules, relative to the countries in the European Commission dataset. Our fiscal rule strength index is highly correlated (with a correlation coefficient of 0.72) to that of the European Commission for countries in the European Union (Figure A3.1), suggesting our measure is broadly consistent with that by the European Commission. The difference is mainly driven by the choice of indicators (see above).

[30] The IMF Fiscal Rule dataset has information whether the fiscal rules exclude public investment. It is not included here because the decision is largely within government control.

Figure A3.1. Correlation between Fiscal Rule Strength Indices, 1990–2021

Sources: Authors' estimates. The number of observations are randomly drawn for illustration, but the slope coefficient is obtained from the regression based on the whole sample.

Figure A3.2. Fiscal Rule Strength Index, 1990–2021



Sources: Authors' estimates.

The index indicated the strength of the fiscal rules has improved over time across all income groups, particularly for advanced economies (Figure A3.2)**.** The strength index indicated there was a persistent improvement, particularly over the last decade where countries introduced greater resilience and flexibility to the fiscal rules framework, such as escape clauses and correction mechanisms (Figure A3.3). The strengthening of fiscal rules in emerging markets have been persistent over the last decade. The discrete jumps in selected years were related to the adoption or revision of supranational rules such as the agreement of the Maastricht Treaty in 1992 and the reforms of Stability and Growth Pact (SGP) in 2005, and in 2012–13 in European Union, as well as the adoption of the fiscal convergence criteria of WAEMU in 2000 and EAMU in 2013, respectively, in sub-Saharan African countries.[31]

Despite the overall improvement, the variation of the fiscal rule strength across countries has widened over the past decade. The distribution of the indices showed that there had been an increase of variation of the fiscal rule strength, despite a general improvement across income groups (Figure A3.4), The mean index has shifted to the right during 2010–20, and the distribution of strength indices among advanced economies has turned bimodal, with higher scoring mainly consisting of EU countries implementing the SGP reforms.

In recent years, higher fiscal rule strength index is associated with stronger primary balance in the sample (Figure A3.5), though the relationship is not as strong in earlier years. Countries with stronger BBR rules—as measured by the strength index—typically have smaller and less frequent breaches of BBRs (Figure A3.6), in line with results for European countries by Larch and Santacroce (2020). This relationship is stronger in EMDEs, partly because AEs with stronger fiscal rules can deviate more from their BBR limits when faced with shocks. But there is no strong correlation between deviations of the debt rules with the strength index.

[31] The 2005 SGP reform replaced the "close to balance rule" by country-specific medium-term objectives (MTOs) for the structural budget position. The MTO is updated at least every three years. EU members are required to be at the MTO or converging towards it through an appropriate adjustment path, 0.5 percent of GDP annual improvement as a benchmark. This provides an appropriate safety margin against breaching the 3% headline deficit limit, with Member States, particularly those with debts over 60% of GDP, expected to do more when economic times are good and less when they are bad. The 2011 SGP reform (Six Pack) which became operational in 2012 added the 1/20th requirement on the pace of debt reduction. The 2012/13 reforms (Fiscal Compact and Two Pack) reinforced monitoring and enforcement procedures.

Figure A3.3. Contributions of the Improvements in Fiscal Rule Strength Index
(change in standardized scores)

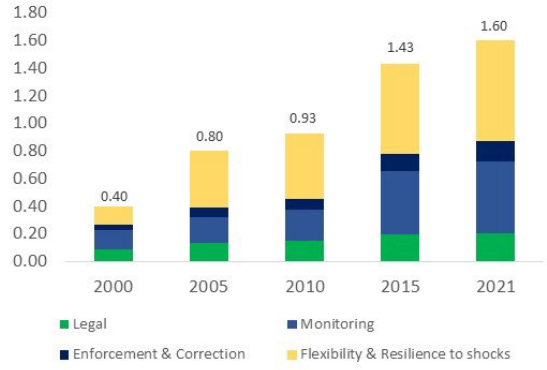
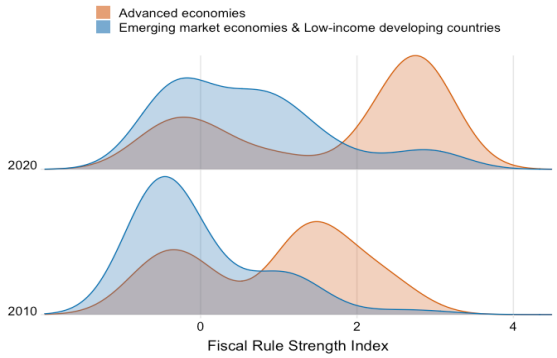


Figure A3.4. Distribution of Fiscal Rule Strength Index, 2010 and 2020
(standardized scores)



Source: Authors' estimates.
Note: Figure A3.3 shows the change of the fiscal rule strength index during the period, with adjustments standardized to reflect the scoring across components.

Figure A3.5. Correlation between Fiscal Rule Strength Index and Primary Balance
(index and percent of GDP)

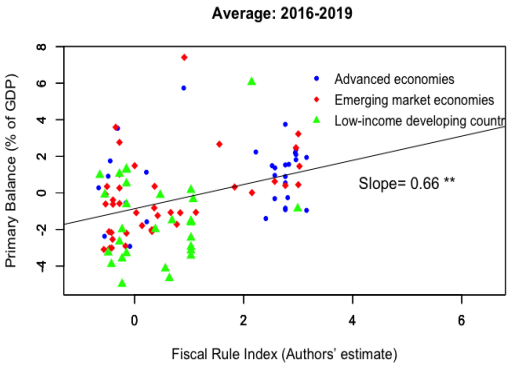
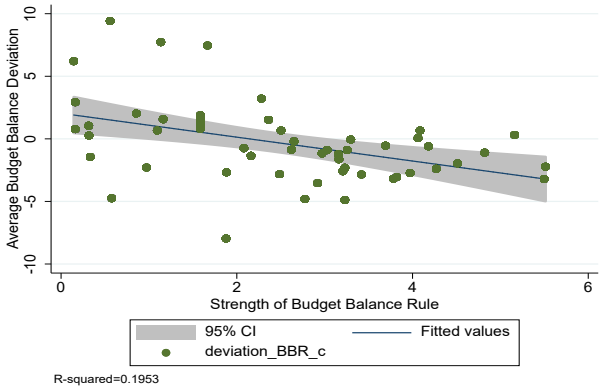


Figure A3.6. Strength of Fiscal Rules and Average Deviations from Deficit Limits



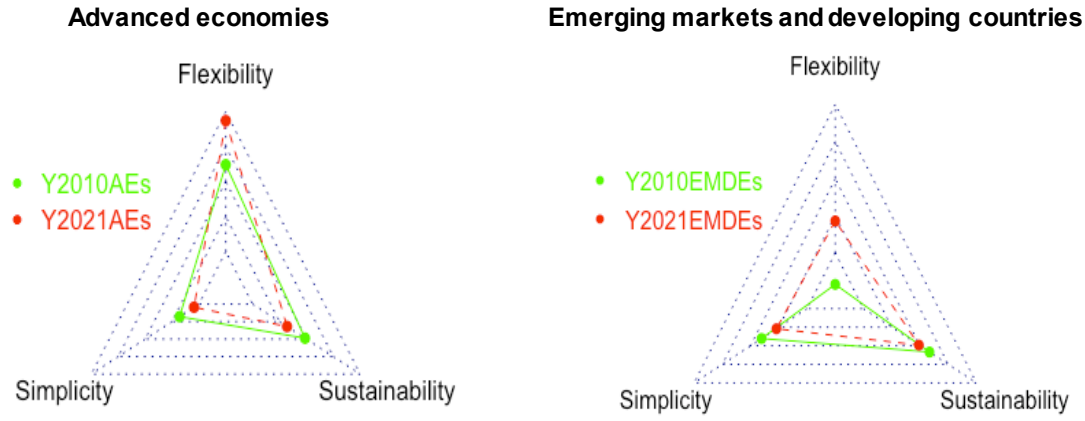
Note: country-level averages of deviations from the rule limit (in percent of GDP) and of the strength of fiscal rules index.

Robustness check indicated the compiled fiscal rule strength index is broadly consistent across alternative measures. We introduce two alternative measures to assess the robustness of the compiled strength index. First, we consider separately the supranational rules and national rules such that each type of fiscal rule (e.g., budget balance rule) existing in national and supranational levels would be counted as two rules. This would enhance the effects of adoption of supranational rules that are in principles perform similar functions as the same type of national rules. Second, we introduce a penalizing criterion, which would carry a negative scoring of -1 if countries adopt too many rules or amend their rules too frequently. In the IMF Fiscal Rule dataset, the maximum number of rules in a country is 7 and the maximum frequency of amendments in a country is 17. We then consider countries with more than four rules would be considered as 'too many' rules and amendments more than 6 (75th percentile) as 'too frequent'. In the sample, there are 204 country-year pairs with the number of rules higher than four. Results indicate that there has been a strong correlation among these alternative measures with the baseline index (0.9 or above). The alternative indices follow similar time trends and are similarly distributed, including the bimodal distribution in advanced economies.

Along with the improvements in the fiscal rule strength index, there appears some tradeoff with the simplicity and sustainability principles. While the resilience and flexibility of fiscal rules against shocks have improved during the last decade, the increasing number of rules adopted by countries may have also complicated the implementation of the rules during the last decade (Figure A3.7).

Figure A3.7. Tradeoffs of Fiscal Rules Principles, 2010–21

(unified axis scales)



Note: The scoring of flexibility is outlined above. The scoring of simplicity is measured by the number of rules relative to the maximum numbers in respective income groups. The scoring of sustainability is measured by three components in equal weight: 1) the existence of debt rule; 2) the frequency of changes in the debt rule (one minus the change frequency adjusted by duration); and (3) deviations from the debt rule limits or anchor levels. The maximum value of the axis is scaled to 1, and the minimum value is set at 0.45 to provide the same scale in the chart.

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