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How to Design and Implement Rules-based Fiscal Frameworks Based on Debt Anchors?

A Step-by-step Methodology and Application

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Abstract

This paper develops a step-by-step guide for the design and implementation of fiscal rules based on prudent public debt levels aimed at reconciling two critical fiscal policy objectives: ensuring debt sustainability while preserving flexibility to respond to exogenous shocks. The approach combines a medium-term anchor for the ratio of public debt to GDP with rolling medium-term fiscal frameworks (MTFFs) that guide fiscal policy toward convergence with the anchor, complemented by mechanisms to correct temporary deviations from the convergence path. In particular, the main components of the framework include: (i) selecting a public debt anchor and defining a credible convergence path; (ii) preparing MTFFs and annual budgets consistent with this path; (iii) establishing correction mechanisms to accommodate temporary deviations from the convergence path and well-structured escape clauses for major exogenous shocks; and (iv) creating independent fiscal institutions responsible for ensuring adequate external scrutiny of fiscal projections. Finally, by illustrating how the proposed framework can be applied in a specific country setting (Honduras), we demonstrate its potential to enhance rules-based fiscal frameworks across Latin America and the Caribbean in the post-pandemic context.

JEL classifications: E62; H61; H63.

Keywords: Fiscal Rules, Public Debt, Medium-Term Fiscal Frameworks, Fiscal Policy

I. Introduction

Public debt levels remain high in the post-Covid pandemic context, and countries are seeking strategies to safeguard debt sustainability and converge to prudent debt levels, while preserving flexibility to address budgetary challenges in a geopolitically and economically very uncertain environment. How can they pursue this dual objective? There are no easy answers, as achieving it requires in most countries a broad set of reforms to revenue and spending policies, and to fiscal institutions, as well as other structural policies to boost potential growth. A modernization of existing fiscal responsibility frameworks is an important component of this set of needed reforms in many countries.

The 2008-09 global financial crisis and especially the Covid crisis have evidenced the problems with existing fiscal rules, and the consequent need for new fiscal frameworks that provide policy flexibility to respond to unforeseeable exogenous shocks and to longer-term spending pressures while preserving or reestablishing sustainable public debt levels over the medium-term. The response to this challenge has been a recent trend towards the introduction of fiscal rules with medium-term "anchors" for the ratio of the public debt to GDP, and with medium-term fiscal frameworks (MTFFs) allowing evolving mixes of revenue and expenditure policies consistent with a targeted path of convergence of the debt to the chosen anchor. A concurrent recent international trend, and a logical corollary of the increased policy flexibility, has been the creation and strengthening of independent fiscal institutions to vet the MTFFs and their consistency with the debt anchors.

While there is a consensus that fiscal policy should be guided by policy anchors based on prudent debt levels, it is less clear how countries should adapt their fiscal frameworks to achieve this goal. This paper suggests an approach to designing and implementing fiscal responsibility frameworks that combine a public debt anchor with a medium-term budgetary framework consistent with a chosen path of convergence of the debt to its anchor. It also discusses how such an approach could be utilized in the context of a specific country (Honduras), with the potential of extending the framework to other Latin American and Caribbean countries interested in enhancing their rules-based fiscal responsibility frameworks.

In particular, we present a step-by-step guide for designing and implementing a new type of fiscal rule framework, whose main building blocks include:

- The choice of a medium-term anchor for the ratio of the public sector debt, and of a path of gradual convergence to the anchor
- The preparation of rolling MTFFs consistent with the chosen debt path, and robust to foreseeable fiscal risks
- Appropriately formulated escape clauses to accommodate the fiscal impact of large exogenous and unforeseeable shocks, and correction requirements to return to the debt path; and

- An independent fiscal council responsible for providing formal opinions on the MTFF, on the utilization of the escape clause, and on the analysis of fiscal risks.

Finally, we apply the suggested framework in a specific country (Honduras) for illustration purposes. In doing so, we highlight how the lack of a debt anchor facilitated a continued rise in the non-financial public sector (NFPS) debt even before the Covid crisis and in spite of adherence to fiscal rule targets. We discuss the choice of a medium-term debt anchor and of possible paths of convergence to it and present suggestions for reform of: i) the current MTFF, to ensure consistency with a chosen debt path; ii) the escape clause; iii) fiscal risk analysis; and the creation of an independent fiscal council.

II. Main lessons from international experiences with fiscal rules

The use of numerical targets to guide the conduct of fiscal policy has long been motivated by the objective of ensuring the medium-to-long term sustainability of a country's public finances. Such rules aim to address a number of causes of poor fiscal performance, including policymakers' potential time-inconsistency and institutional arrangements leading to deficit biases, such as the design of intergovernmental fiscal relations. A variety of fiscal rules were adopted around the world during the 1990s and early 2000s including the establishment of limits on the ratios of public debt to GDP and/or of the nominal budget deficit to GDP.[1]

In the wake of the global financial crisis, which evidenced the need to avoid procyclical fiscal contractions during downturns and expansions during boom periods (Bova and others, 2014; Maravalle and Rawdanowicz, 2020) and to respond proactively to unforeseeable exogenous shocks, rules were refined in a number of countries by targeting cyclically adjusted, rather than actual, budget balances and/or by limiting the growth of government spending. Refinements also included the introduction of escape clauses to accommodate the fiscal impact of deep recessions or of unforeseeable exogenous shocks, such as natural disasters.

Design changes in such "second-generation" rules (Schaechter and others, 2012) were complemented by increased emphasis on the institutional requirements for the effective operation of the rules, such as sound accounting, reporting, and oversight standards and mechanisms (Corbacho and Ter-Minassian, 2013). Accordingly, national, and especially international, institutions stressed the need to strengthen public financial management (PFM) systems, increase budgetary transparency, and incorporate systematically the analysis of fiscal risks in the budget process. Greater focus was also placed on improving the enforcement of rules, notably by strengthening their legal basis (in some cases upgraded to the Constitutional level)

[1] The IDB's fiscal data platform (FISLAC) includes up-to-date information on main features of, and compliance with, fiscal rules in the Latin America and Caribbean (LAC) region, https://www.fislac.com. See also Ardanaz, Ulloa-Suarez, and Valencia (2024).

and by introducing requirements to correct deviations from the rules' limits over specified time horizons.

These second-generation reforms have evidenced, however, the trade-offs that are inherent in the multiple objectives of fiscal rules, namely ensuring fiscal sustainability, allowing a proactive role of fiscal policies in macroeconomic stabilization, and avoiding complexity in order to facilitate the rules' transparency and acceptability by the political class and the population at large. Specifically, while rules have improved in terms of the strength of their legal basis, flexibility, and monitoring and enforcement, they have become less effective in terms of ensuring fiscal sustainability and significantly more complex (Davoodi and others, 2022).

The weakening of the effectiveness of the rules in terms of fiscal sustainability is reflected in the fact that excesses over debt ceilings were significantly higher after the global financial crisis (2011-19) than during the crisis. This implies that, although fiscal balances improved after the crisis, especially for the advanced economies, they did so less than would have been required to reverse the increases in the debt-to-GDP ratios that had occurred during the crisis. The deviations also suggest that, although monitoring and enforcement mechanisms were strengthened in the second-generation rules, they remained insufficient to ensure adequate compliance with the rules.

As a result, most countries failed to build fiscal buffers in the years preceding the Covid-19 pandemic. When the pandemic hit, governments had little choice but to enact quickly large packages of measures to support households and businesses affected by the mobility restrictions required to contain the spread of the pandemic. The packages varied significantly across countries in both size and composition, but, together with the recession-induced declines in revenues and increases in health spending, led in most countries to further sharp increases in the public debt in 2020, to unprecedentedly high levels.

To accommodate the fiscal cost of the packages, countries that had escape clauses in their fiscal rules quickly activated them, while most of those that did not have such clauses suspended the rules for the following one or two years. As these flexibility mechanisms expire, policymakers have been confronting the question of whether to reinstate the previous fiscal rules, recalibrate their targets, or undertake more fundamental reforms of their fiscal responsibility frameworks.

These decisions have to be made against the background not only of the legacy of the pandemic on government deficits and debt, but also of a changed economic environment, characterized by higher inflation and the related need to mitigate its impact on poor households; tighter monetary policy and consequently higher costs of new borrowing and of the portions of the public debt at variable interest rates; and the fiscal costs of population ageing, and of mitigation and adaptation to climate change.

For all these reasons, the policy debate post-pandemic has been placing increasing emphasis on the design of fiscal responsibility frameworks, rather than on reforms of

narrowly defined fiscal rules, with the aim of better balancing the objective of ensuring fiscal sustainability over the medium term with the need for flexibility in the short-term conduct of fiscal policy, to adapt quickly to a more uncertain and volatile environment.

Specifically, more recent proposals for reforms of fiscal rules and frameworks emphasize the need for a "public debt anchor" to guide the conduct of budgetary policies over the medium term (see, e.g., Acalin et al. 2025; Davoodi and others, 2022). The anchor should reflect a prudential margin below the debt level considered the maximum sustainable under each country's circumstances. This latter level would be assessed on the basis of a number of considerations, such as the primary balance required to stabilize the debt; the latter's maturity structure and associated refinancing requirements; the country's standing in international financial markets; and the level of the government's liquid financial assets. The prudential margin would be calibrated through stochastic analyses designed to ensure with high probability that the maximum sustainable debt level would not be exceeded under the country's historical range of relevant shocks. If a country's current debt level exceeded the anchor, the fiscal framework would target a path of convergence to it over a specified, ambitious but realistic, time period.

The other key ingredient of the framework would be the preparation of rolling medium-term fiscal frameworks (MTFFs) consistent with the targeted path of the debt. The MTFFs would determine the mix of revenues and expenditures, reflecting existing legislation and new policy decisions by the government that, given prudent projections of relevant macroeconomic variables, would yield a path for the overall and primary budget balances consistent with the chosen debt path.

The relevant literature emphasizes the need to submit the MTFF projections to a robust risk analysis and to independent external scrutiny. Indeed, the recent decade has witnessed a rapid increase in the number of independent fiscal institutions (IFIs), with a wide range of institutional features.

In the aftermath of the Covid pandemic, a number of advanced and emerging market countries have implemented reforms of their fiscal responsibility frameworks centered on a public debt anchor and a medium-term fiscal framework broadly consistent with that anchor. For example:

- Following protracted discussions in 2022-23, the European Union modified in April 2024 its fiscal governance framework, by replacing the rule requiring all member countries with public debt levels above 60 percent of GDP to reduce their debt by at least half a percentage point of GDP per year with a more flexible country-specific approach of convergence to the 60 percent target, through country-proposed and EU-approved 5- to 7-year paths for total expenditures net of discretionary tax changes. The requirements for the

proposed paths vary depending on the distance of the country's debt from the 60 percent target.[2]

- In the LAC region, in 2022 Chile modified its structural balance–based fiscal rule by requiring the path of the structural balance to be consistent with a ceiling of 45 percent of GDP for the gross public debt.[3] In 2021, Colombia adopted an anchor equivalent to 55 percent of GDP for the public debt net of government financial assets, and a fiscal rule for the structural budget balance consistent with that anchor. Under the new rule, the required level of the balance in each year depends on the distance of the debt from the anchor at the end of the previous year. Colombia complemented this reform with the creation of an independent fiscal council. Following a temporary suspension of its fiscal rule in 2020, to accommodate the budgetary impact of Covid, Jamaica reinstituted in 2021 its fiscal responsibility framework to ensure convergence with its 60 percent of GDP debt anchor by FY 2027-28, and also created an independent fiscal council to monitor the implementation of the rule. More recently, El Salvador revamped its fiscal responsibility framework by requiring the debt-to-GDP ratio to converge to 80 percent of GDP by 2030 and 75 percent of GDP by 2035, and calling for the preparation of rolling medium-term fiscal frameworks (MTFFs) consistent with the targeted path of the debt.[4]

III. Main components of a fiscal responsibility framework consistent with a medium-term public debt anchor

In line with the international trends discussed in the previous section, the FRF outlined in this section aims to ensure an appropriate blend of fiscal sustainability and flexibility objectives. Specifically, the fiscal sustainability objective is reflected in recommendations to:

- Adopt a prudent medium-term "anchor" for the public debt, and choose a path of gradual convergence to it.
- Derive, from the anchor, target paths for the overall and primary budget balances, and build an MTFF consistent with these paths.
- Subject the projections for revenues and expenditures to appropriate robustness checks through scenario and stress testing; and
- Ensure adequate external scrutiny of the projections.

The flexibility objective is pursued through the following features of the framework:

- The government chooses not only the level of the anchor and the path of convergence to it, but also how to distribute the needed fiscal adjustment

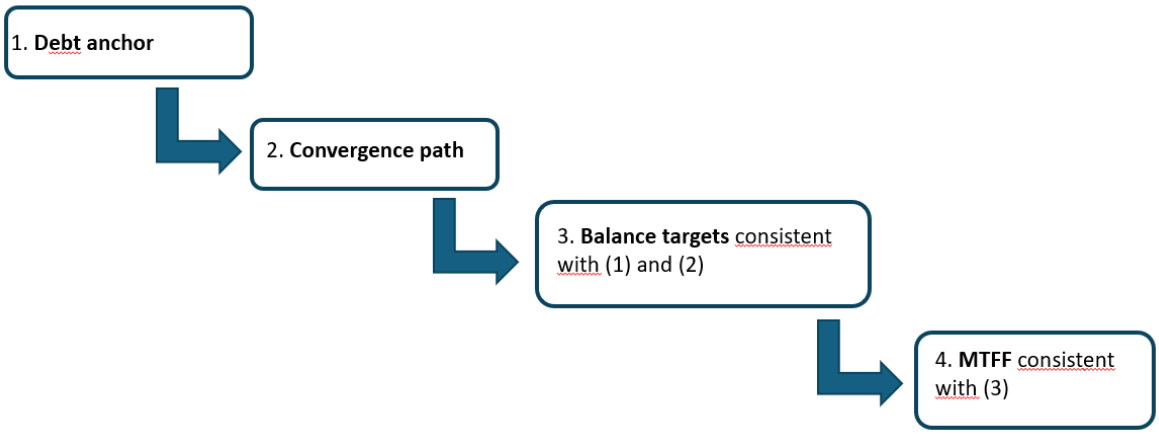
[2] See EU 2024, chapter II-2 for details on the new framework.
[3] See Decreto de Hacienda no 755 of June 29, 2022.
[4] See Decreto N. 328 of June 10, 2025.

among revenue and expenditure policies, taking into account revenue elasticities and spending rigidities imparted by current legislation.

- Cyclical revenue shortfalls and deviations of interest payments from their projected path are accommodated during budget execution but must be corrected within the following one or two years.
- A well-structured escape clause for major exogenous shocks, with maximum allowed deviation from the targets and time span for return to the debt path, is included.
- The framework's targets are subject to review after a few years.

The rest of this section outlines the main elements of the proposed framework. Figure 1 presents the logical sequence of steps involved in its design.

Figure 1. Main components and sequencing of proposed fiscal responsibility framework



1. Choice of the debt anchor and the convergence path

The literature offers different methodologies to estimate a prudent level for the ratio of the public debt to GDP. One such methodology (regime-switching) seeks to identify a critical level of that ratio, above which the debt dynamics become unstable. This level is estimated through autoregressive regressions.[5] A second methodology (the one more commonly used by the IMF staff) estimates the maximum sustainable level of the debt ratio as the one that a government can service, given its fiscal reaction function, namely its capacity to generate primary fiscal surpluses. A prudent level of the debt (the anchor) is defined as one that ensures with high probability that the maximum sustainable level would not be exceeded under a stochastically modeled range of shocks.[6] Other methodologies utilize early warning or machine learning

[5] See for example, Granger and Teräsvirta (1993).
[6] See for example, Eyraud et al. (2018).

models to estimate debt limits beyond which there would be significant risks of debt crises.[7]

Once the debt anchor has been chosen, the country's fiscal authorities need to define the length and profile of the path of convergence of the debt to it. Various considerations should influence such choices. An overly lengthy or significantly back-loaded path would carry credibility risks. A front-loaded one would signal a strong commitment to fiscal sustainability, and could yield significant reductions in interest costs, but it may not always be feasible in light of existing fiscal rigidities or political realities. The path may also be influenced by the time profile of preexisting spending commitments, e.g., on large public investment projects. In any event, a clear and detailed public explanation by the authorities of the criteria guiding the choice of the anchor and the convergence path would help strengthen credibility.

Given the significant uncertainties affecting the global economy and their implications for any national economy, both the choice of the debt anchor and the path of convergence to it should be subject to review after a set number of years. For example, the fiscal responsibility framework could specify that the level of the debt anchor would be reviewed and changed as needed after five years. The convergence path could be reviewed every three years.

2. Preparation of MTFFs and annual budgets consistent with the chosen debt path

Translating the chosen path of convergence to the debt anchor into operational budgetary targets and procedures requires several steps:

- First, a specification of macroeconomic projections (for GDP, inflation, interest rates, and exchange rates[8]) under a baseline and one or more alternative scenarios modeling main risks.
- Second, a projection of the factors (realization of contingent liabilities and variations of the external debt stock due to exchange rate changes) that would affect the relation between the overall budget balance and the changes in the debt.
- Third, a projection of the path of interest payments on the existing debt stock and on new financing, net of interest receipts on the financial assets held by NFPS entities. This calculation allows the projection of a path for the primary balance consistent with the debt path.
- Fourth, the preparation of rolling MTFFs and annual budgets consistent with the primary balance target. For this purpose, it is desirable to first prepare baseline "on current policies" projections for revenues and primary expenditures of the various components of the public sector. This projection

[7] See, for instance, Valencia et al. (2022).
[8] See below for further details on the projections of interest rates.

shows the fiscal space available for new spending programs, in particular new investments, assuming no policy changes.

- If this fiscal space is considered by the government to be too small to accommodate key new priorities (in social or infrastructure spending), consideration needs to be given to measures to raise additional revenues, and/or to cut back on lower-priority non-mandatory spending programs; or to reforms of the existing legislation underlying mandatory spending, with a view to expanding the fiscal space as needed over the time horizon of the MTFF.
- The rolling MTFFs would reflect the baseline projections modified as appropriate to incorporate the estimated fiscal impact of the new policy choices. These projections would set the top-down aggregate ceiling for primary spending in the annual budget for the first year of each MTFF.
- The baseline budgetary projections should be tested for robustness by replicating them under the alternative macroeconomic scenarios mentioned above.[9]

In what follows, we provide specific suggestions—based on good international practice—on projecting interest payments and baseline revenues and primary spending.

a. The projection of net interest payments

The projection should reflect:

- The composition of the public debt by type of issuer, currency (domestic or foreign); rate of interest (fixed or variable; concessional or not); and maturity
- Assumptions about the future course of foreign interest rates, the country's spread for bonds and commercial loans, and exchange rate changes
- Assumptions about the future course of domestic real interest rates and inflation, in turn reflecting the expected evolution of monetary policy
- Assumptions about the rate of return on public financial assets.

b. The preparation of baseline projections for revenues and primary expenditures

The next step is the preparation of "baseline" projections for the main categories of revenues and primary expenditures for the components of the public sector.

The definition of baseline projections is simpler for revenues than for expenditures, since for revenues from taxes and social security contributions, it means assuming no change in their rates or in the definition of their base, and no major changes in tax administration; and for non-tax revenues, such as those of state-owned enterprises (SOEs), the continuation of their current tariff structure.

[9] A range of standardized scenarios and stress tests are included in the IMF's and World Bank' debt sustainability analysis (DSA) templates for market-access and low-income countries. See IMF (2018b and 2021).

The literature and international experience with baseline tax revenue projections offer a range of more or less sophisticated (and analytically and data-intensive) techniques, ranging from the calculation and extrapolation of effective tax rates, to the econometric estimation of buoyancy and elasticity coefficients and their application to the projected changes in the relevant proxy tax bases, and to the use of microsimulation models utilizing the information collected by the tax administration from taxpayer returns.[10]

The choice of techniques may vary by type of tax, depending on its rate structure (the simpler methods being more appropriate for taxes with a single statutory rate), whether the tax in question has been subject to significant changes in rates or definition of the base (in which case purging the revenue series from the impact of these changes or using dummy variables for the year of the change in econometric estimates becomes more important), the availability of sufficiently long time series on the proxy tax bases, etc.

In any event, the preparation of as reliable as possible baseline revenue projections requires the unit in charge of the task in the ministry of finance to collaborate closely with the tax and customs administration(s), the Social Security (SS) institutions (for the estimate of SS contributions), and with the units responsible for the preparation of the budget in each SOE (for the projection of their revenues from sales).

As regards baseline projections for expenditures, the definition of existing policies may vary depending on whether it is limited to expenditures mandated by existing legislation (e.g., social security benefits, the payroll for existing public employees, and formula-based transfers) and prior government obligations (such as availability payments for PPPs); or it includes ongoing spending programs authorized each year to provide essential public services (such as education and health) and expenditures under already authorized investments. There is some variation across countries in the breadth of coverage of baseline expenditure projections.[11] A pragmatic approach to the definition of baseline expenditures would be the exclusion of new investments, new current spending programs, substantive changes in the coverage or standards of service provision for existing ones, as well as the cost of future changes in the remuneration of public employees not mandated by law.

The preparation of baseline projections for primary expenditures requires decisions regarding the degree of aggregation of budget lines, the choice of the base level for each category, and the respective roles of the public entities involved in the process. While greater granularity (e.g., by spending programs) would increase the accuracy of the projections, it would also make the process significantly more complex, and time- and resource-intensive. For less advanced countries, it is preferable to begin by preparing aggregate baseline projections for the main categories of spending in the

[10] A useful resource in this area is the IMF's course on revenue forecasting available at The International Monetary Fund: Revenue Forecasting and Analysis | edX.

[11] See Rahim and others, 2022 for a range of advanced and developing countries' examples of the use of baseline expenditures.

economic classification, namely wages and salaries, purchases of goods and services, social security transfers, subsidies and other transfers, and investments; and to increase the degree of disaggregation as more experience is gained. The basis of the projections should be the latest available annual budgetary data, adjusted for any one-off factor and for the full-year impact of factors that affected those data for only a part of the year.

The respective roles of the Ministry of Finance (MoF) and other entities involved in the process, such as the line ministries, Social Security institutions, and SOEs, could be expected to evolve over time. In the initial phase, with limited disaggregation of the projections, the MoF would be largely responsible for their preparation, seeking inputs from other entities as needed. Over time, the process would become more bottom-up, with initial projections being prepared by the entities, and the MoF being responsible for setting guidelines for their preparation, analyzing and challenging the entities' submissions, and aggregating them as needed for the MTFFs and budgets.

The key task in the preparation of baseline projections is the identification and projection of the price and volume drivers of the chosen expenditure categories. At the high level of aggregation discussed above, the following factors should be considered:

- For public wages and salaries: the level of the workforce in the previous year and its prospective evolution assuming normal replacement of retiring employees; any wage changes mandated by law (e.g., on account of indexation to consumer prices), or agreed in previous negotiations; and, if possible, an estimate of wage drift (net changes in the average wage due to promotions, retirements, and their replacement with more junior employees).
- For other public consumption, the projected change in its deflator or in consumer prices.
- For social security transfers, projected demographic changes affecting the stock of benefit recipients; and changes in the relevant price (or wage) index, if benefits are automatically adjusted for inflation.
- For transfers determined by formula, the relevant variables would be those in the formula. For other transfers, in the absence of more specific information about the likely evolution of their determinants, a baseline projection may be made by assuming their constancy in relation to nominal GDP.
- The baseline projection for investments should include the expected stream of payments for already approved multiannual projects.

c. Translating MTFF projections into annual spending ceilings

As indicated above, the comparison of baseline projections for revenues and expenditures would provide an estimate of available fiscal space for new policy initiatives, possibly evidencing the need for corrective measures, to be decided by the government taking into account their expected fiscal and macroeconomic impact, social implications, and legal and political feasibility. Estimating the fiscal impact of

measures under consideration may require the use of microdata, such as taxpayer returns, and household income and consumption surveys.[12] Estimating their macroeconomic effects and second-round repercussions on the fiscal variables would require the use of general-equilibrium models. In their absence, it may be necessary to ignore such effects, especially if the proposed policy changes are not major ones.

Once the package of corrective measures has been finalized, and their estimated impact reflected in the rolling MTFF, the projected level of primary spending for the first year of the MTFF would represent the top-down spending ceiling for budget negotiations with spending units in the central government and with other relevant entities of the public sector. The law enacting the FRF would specify that the resulting aggregate ceiling in the central government budget, once set, cannot be modified during the year.

3. Flexibility provisions

a. Correcting annual deviations from the targets due to revenue shortfalls and interest rate developments

The framework outlined in the preceding subsections provides a significant degree of ex-ante policy flexibility within the overarching constraint of ensuring convergence to a sustainable debt anchor over the medium term. A further degree of flexibility can be introduced by allowing temporary deviations from the chosen path to accommodate the impact of factors outside the government's control, such as unexpected increases in interest rates and cyclical fluctuations in revenues, during the execution of the budget.

Specifically, the framework could specify that, if revenues fell short of the forecast, or if, due to unexpected changes in interest rates or the exchange rate, interest payments exceeded the forecast, the resulting higher deficit and consequent deviation from the targeted debt path would be allowed during the year, provided that the debt ratio returned to its targeted level by the end of the year t+1 or t+2. This would give the government one or two years to correct the deviation. Conversely, if revenues exceeded the projected amount or interest payments fell short of the projection, the government could not use the windfall to increase primary spending during the year but would have additional fiscal space in the subsequent one, as it would begin the year with a debt ratio lower than targeted.

[12] The IMF's revenue forecasting course mentioned in footnote 2 above provides useful step-by-step guidance to techniques to estimate the revenue impact of proposed tax policy changes for different types of taxes.

b. Allowing constrained flexibility to accommodate large unforeseeable exogenous shocks

As mentioned in Section II above, most countries (especially after the global financial crisis) have included in their fiscal responsibility frameworks escape clauses allowing a temporary suspension of current fiscal rules in the event of a severe recession or other large exogenous and unforeseeable shocks. For example, new or revised escape clauses were adopted by the European Union (2011), Colombia (2011), Jamaica (2014), Grenada (2015), and Ecuador (2020).

International experiences suggest that a well-defined escape clause should specify (i) a limited and clearly defined set of events triggering the operation of the clause; (ii) the authority to activate it; (iii) the extent of permissible deviation from the rules; (iv) the timeline and actions to revert to the rules; (iv) an effective monitoring mechanism; and (v) a good communication strategy. Specifically,[13]

- The events triggering the activation of an escape clause should be outside the government's control and preferably defined in quantitative terms. In most countries, a recession is defined as a decline in GDP of at least 1 percent for a minimum of one year (in some cases for two consecutive quarters). Large natural disasters (such as earthquakes, droughts, floods, or nationally declared health emergencies) are often characterized as involving estimated fiscal costs equivalent to at least 1 percent of GDP.
- The power to propose the activation of the escape clause is typically assigned to the Executive but several countries require its endorsement by the Parliament, given its budgetary impact and to help ensure that the escape clause is being used appropriately. In countries that have created an independent fiscal institution (IFI), the latter is often required to provide a formal opinion on the appropriateness of invoking the clause.
- The government's proposal to invoke the escape clause should explain (i) the reasons for activating it; (ii) why these are in line with the triggers predefined in the legislation; (iii) the period over which the rule will be suspended and the maximum deviation allowed from the targets; and (iv) the proposed time path to return to the rules. The proposed period of suspension and the extent of deviation from the rules should reflect the nature and expected fiscal cost of the trigger event. Most countries limit the period of suspension to two or three years.
- Most escape clauses require the government to present to the Parliament a plan of action to ensure the return to compliance with the applicable fiscal rules after the end of the application of the clause, and to report periodically on the execution of the plan, explaining and motivating any unavoidable deviation from it. The national IFI, if applicable, is generally required to provide opinions on the initial proposal and its subsequent updates. The execution of the

[13] Details on the main characteristics of escape clauses and other relevant features of fiscal rules across countries can be found in the IMF's database on fiscal rules. See Alonso et al. (2025).

adjustment plan is also subject to monitoring and review by the country's Supreme Audit Institution.

- A well-crafted communication strategy is instrumental, when activating an escape clause, to foster the credibility of the fiscal framework and avoid adverse market reactions. A successful communication strategy should rely on simple and clear messages aimed at informing the public and the markets about the recent economic developments and the assumptions behind the fiscal projections as well as the uncertainty surrounding them. It should spell out the implications of the activation of the escape clause, the expected size and duration of the deviation, and the adjustment path to revert to the rule. Repeated communications will be required to explain how the proposed policies will be adapted as more information becomes available on the path of economic activity or on the impact of the natural disaster.

4. Ensuring adequate independent scrutiny of fiscal projections

As mentioned in Section II above, the rapid increase in the adoption of fiscal rules by countries worldwide in recent years has been complemented by a widespread creation of fiscal "watchdogs", or independent fiscal institutions (IFIs) responsible for assessing the consistency of proposed budgets with the rules, and for monitoring risks of non-compliance during the budget execution. Some IFIs predate the 2008-09 global financial crisis, but their number more than trebled after the crisis, to 51 by 2020, as countries and supranational institutions like the EU have sought to complement increased flexibility in the design of fiscal rules with greater external scrutiny over their implementation.

IFIs vary across countries in institutional affiliation, breadth of remit, degree of operational independence and budgetary autonomy, size of staff, and access to information (Davoodi et al. 2022). The majority of IFIs across the OECD are institutionally attached to the legislative branch of government, but some (including in Belgium, the Netherlands, and the United Kingdom) to the executive branch, and two (France and Finland) to the Supreme Audit Institution. A few (e.g., in Portugal, Sweden and some eastern European countries) are stand-alone.

IFIs are generally responsible for preparing assessments of the government's macroeconomic and budgetary projections and of the consistency of proposed budgets with applicable fiscal rules. Some of them (e.g., in the Netherlands and the United Kingdom) are also responsible for preparing the macroeconomic forecasts underlying budgetary projections. Some of the IFIs (in particular those reporting to the respective legislatures, such as the US Congressional Budget Office, CBO) are charged with preparing estimates of the cost of proposed new legislation.[14] Typically, such IFIs require much larger staff than the others. Many IFIs also prepare long-term projections to highlight the impact of longer-term trends, such as population ageing,

[14] The Dutch and Australian IFCs also do costing of parties' electoral programs.

on the sustainability of the public finances. They also carry out various analytical studies of specific fiscal topics but only about half of them make formal recommendations based on such studies.

Most IFIs play a key role in monitoring and reporting on a country's compliance with its fiscal rules during and after the budget execution, although the official ex-post certification of such compliance is typically a responsibility of the audit institutions, namely the Courts of Accounts. This monitoring function has increased significantly over time (Davoodi et al. 2022).

IFIs use a range of channels to influence fiscal outcomes. All publish periodic reports on their activities, in particular their assessments of proposed budgets and of government reports on budget execution. Most also engage actively with the media, and several (especially the longer-established ones) have significant resonance in informed public opinion. Many also hold regular formal consultations with the government or hearings in Parliament to explain the results of their analysis. Fewer can issue binding opinions on forecasts, although some of them are legally entitled to receive a formal public explanation from governments that do not comply with their recommendations (the so-called "Comply or Explain" provision).

Independence from partisan politics, operational autonomy and timely access to relevant information are essential for the effective working of an IFI (OECD, 2014). Operational autonomy encompasses appointments based on technical competence and fixed-term mandates for the leadership, autonomy in the recruitment of staff, and adequate and stable funding. The vast majority of IFIs enjoy (at least de jure) such independence. Access to relevant information has also improved over the last decade.

Rigorous empirical analyses of the effectiveness of IFIs are complicated by both the heterogeneity of their mandates, and the fact that most of them have a rather short track record. An assessment based on a country's fiscal outcomes (e.g., the development of fiscal balances and debt) would not be appropriate, because these outcomes reflect many factors outside the IFIs' control.

Therefore, attempts to evaluate the effectiveness of IFIs have focused on measuring their impact on countries' accuracy of economic and budgetary forecasts, on the one hand, and degree of compliance with applicable fiscal rules, on the other. An analysis of these two questions (Beetsma and others, 2018) suggests that fiscal forecast errors tend to be lower in countries where such forecasts are subject to scrutiny by an IFI or are based on macroeconomic projections prepared by the latter. Also, the presence of an IFI in a country tends to be positively associated with better compliance with balance- and expenditure-based rules.

IV. An application of the proposed framework to Honduras

1. A brief overview of the current FRF

Honduras adopted a Fiscal Responsibility Law in 2016 which, among other provisions, included three fiscal rules: 1) a deficit rule, stipulating that the nominal deficit of the nonfinancial public sector (NFPS) should decline from 1.6 percent of GDP in 2016 to 1 percent of GDP by 2019 and could not exceed the latter amount thereafter; 2) a current spending rule, limiting the growth rate of nominal current spending of the central government (CG) to the sum of the average real GDP growth over the past ten years and the projected inflation rate for the following year; and 3) a limit (equivalent to 0.5 percent of GDP) on the annual increase of the stock of floating debt.

The FRL required the government to present both its rolling 4-year Medium-Term Fiscal Frameworks (MTFFs) and its annual budgets with deficits and spending projections in line with the rules, and to explain any likely deviations from the targets in the mid-year budget review, but it did not envisage any sanctions for non-compliance.

The FRL also included an escape clause, to be activated in the event of an exogenous shock with an estimated fiscal impact exceeding 1 percent of GDP, or of a recession, defined as a real decline in GDP for at least two consecutive quarters. The law stipulated that, in the first case, the rules would be suspended, and the ensuing deficit would have to be reduced by 0.5 percent of GDP per year, starting the year after the end of the shock. In the event of a recession, the deficit limit would be raised to 2.5 percent of GDP for a maximum of 2 years.

The escape clause was first activated in the wake of the Covid pandemic and of two major hurricanes. Decree-Law 27-2021 stipulated new limits for the NFPS deficit (5.4 percent of GDP in 2021, 2.3-2.9 percent of GDP in 2022, and 1 percent of GDP in 2023) and for the growth of current CG spending (ranges of 13.8-15.7 percent in 2021; 6.3-9.5 percent for 2022; and 6.1 percent for 2023).

In the event, the NFPS deficit remained below the limits in both 2021 (3.7 percent of GDP) and 2022 (0.2 percent of GDP) and the growth of current CG spending also remained within the permitted ranges. The significantly better than expected deficit performance in 2022 mainly reflected the combined impact of the post-Covid economic recovery, acceleration of inflation, and under-execution of planned investments. The NFPS debt, which had risen gradually but steadily over the previous decade, rose sharply to over 54 percent of GDP in 2020, before declining to 52.3 percent of GDP by end-2022.

For 2023, a new Decree-Law (157-2022) significantly raised the limits for the NFPS deficit (to 4.4 percent of GDP) and the growth of CG current primary spending (to 18 percent). The deficit limit was lowered to 3.4 percent of GDP in the MTFF for 2024-27 and the outturn was significantly better (1.3 percent of GDP). Current primary

spending also rose substantially less (7.8 percent) than the 18 percent limit. The NFPS debt is estimated to have declined to 45 percent of GDP by end-2023.

2. Reform opportunities

The FRL represented an important institutional improvement, helping reduce the fiscal deficit from its peak 2013 level of over 7 percent of GDP, but has some shortcomings, especially in light of the international trends discussed in the previous section.

First, the fiscal framework lacks a medium-term debt anchor. The limits on the deficit and current spending are not sufficient to ensure the stabilization of the public debt, let alone its decline to a prudent level, as demonstrated by the fact that, even before its COVID-19-related jump in 2020, the debt had continued to rise (albeit more slowly) after the enactment of the FRL. Moreover, under growth assumptions less favorable than in the baseline, the debt could rise to levels entailing risks of unsustainability.

Second, unexpected cyclical revenue shortfalls or exogenous increases in interest rates on the public debt may lead to non-compliance with the deficit rule, but do not require subsequent correction, thereby contributing to the rise in the debt. Thus, the rules neither facilitate macroeconomic stabilization during cyclical upturns nor guarantee debt sustainability.

Third, the escape clause calls for a deficit decline of at least a 0.5 percent of GDP in case of a major exogenous shock, but specifies no correction requirement for deficits incurred during a recession in the subsequent upturn. This asymmetry can lead to a ratcheting up of the public debt.

The rolling 4-year MTFFs present some disaggregated macroeconomic and fiscal projections. In particular, they break down the NFPS into its main institutional components: the Central Administration (CA), the decentralized budgetary entities, the Social Security (SS) institutions, the local governments, and the state-owned enterprises (SOEs). They include projections for some categories of revenue and expenditures, primary and nominal balances, and main financing sources for the CA, the SS, and the electricity SOE (ENEE). For the other components of the NFPS, only projections of the nominal budget balance are presented.

Little detail is provided in the published MTFF and budget documents on the methodology underlying the projections. The relation between the macroeconomic assumptions and the fiscal projections appears to be unidirectional, with no feedback from the fiscal policies to the macroeconomic (growth and inflation) performance. According to the authorities, revenue projections for the most important taxes utilize estimated (but not published) buoyancy or elasticity coefficients. Limited detail is provided on the assumptions underlying the projected growth rates of expenditures on the public wage bill, other public consumption, current transfers, and interest payments on the public debt. In contrast, significant detail is provided on the composition of the public investment program, both by entity and by sector.

3. Towards a new fiscal responsibility framework

This subsection outlines the main components of a recommended reform of the Honduran FRL. Annex 1 provides a summary of the steps involved in such a reform and an illustrative timetable for its implementation, beginning in 2025.

a. Choice of the debt anchor and the convergence path to it

Estimating the prudent debt level ratio provides the basis for establishing a medium-term anchor for budgetary policies in Honduras. For doing so, we considered three different methodologies discussed in Section III: regime change, forward looking, and early warning system. The regime-change methodology yields a range of estimates, with an average level of 45 percent of GDP. The forward-looking methodology estimates the maximum sustainable debt ratio at 57 percent of GDP, and the ratio that would guarantee with 90 percent probability that such maximum would not be exceeded at 44 percent of GDP. The average estimate of the prudent debt ratio by early warning and machine-learning models is around 42 percent of GDP (See Annex 2 for details).

There are reasons for choosing a somewhat lower target (40 percent of GDP) as the medium-term debt anchor. The vulnerability of the Honduran economy to exogenous shocks, in particular natural disasters related to climate change, is likely to continue increasing in the foreseeable future.[15] This points to the need to build fiscal buffers in the form of lower debt levels.

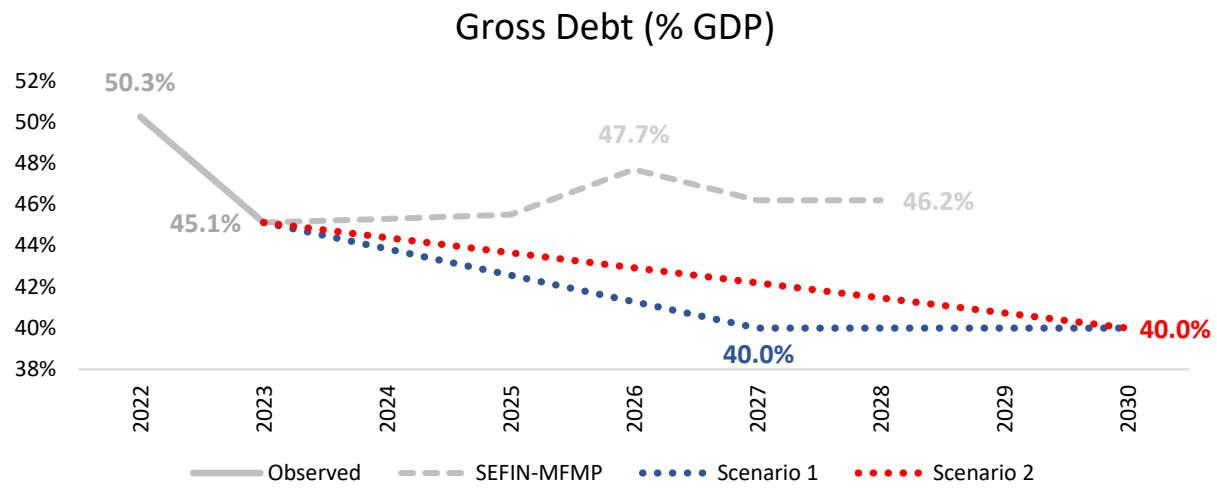
As mentioned in the preceding section, the NFPS debt ratio is estimated to have declined to 45.1 percent of GDP at end-2023, some 5 percentage points above the recommended debt anchor.[16] A revised FRL would require the government to choose a time span for the debt to converge to the anchor and a path for such convergence. The chosen path would become the binding constraint on budgetary policies until the anchor is reached, subject to a mid-way review during the period.

As an input into such choice, a medium-term dynamic stochastic general equilibrium model (MEGDE) calibrated for Honduras has been used to simulate the macroeconomic and fiscal implications of two different horizons for the debt ratio to GDP to decline to 40 percent of GDP over the next few years.[17] Under Scenario 1, the

[15] Honduras is particularly vulnerable to the impacts of climate change. In 2023, it ranked 28th out of 191 countries on the European Commission's INFORM Risk Index, which assesses countries based on the risk of humanitarian crises and/or natural disasters that could overwhelm national response capacity. Climate-related natural risks, especially storms, floods, and droughts, have serious consequences for economic and social development. According to the World Bank (2023), the average annual losses over the past two decades were equivalent to 1.8% of GDP. Additionally, natural disasters cause damage to infrastructure, especially when resilience measures are not incorporated. For example, public infrastructure damage from Tropical Storm Eta and Hurricane Iota reached 4,320 million Lempiras, impacting critical sectors such as transportation, water and sanitation, electricity, and telecommunications.
[16] According to latest available figures, the General Government gross debt ratio stood at 48% of GDP in 2023 (see IMF: *World Economic Outlook*, October 2025).
[17] See Appendix III for details.

debt ratio declines linearly to 40 percent over the next three years and stabilizes at that level thereafter. Under Scenario 2, the debt converges to the anchor by the end of the decade (Figure 2).

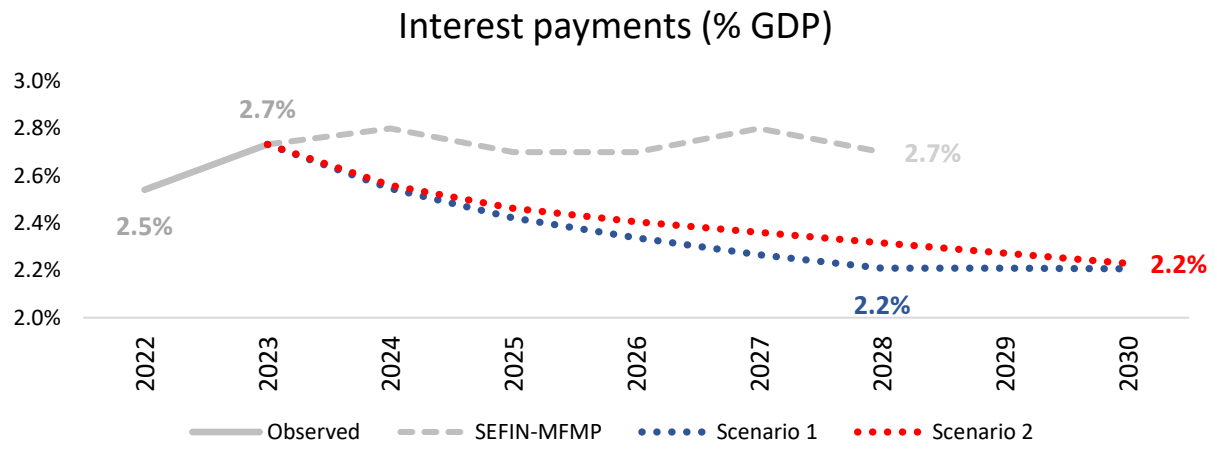
Figure 2: Simulated alternative paths of convergence of the ratio of the NFPS debt to GDP to a 40% anchor



Source: IDB staff simulations using the MEGDE. Note: SEFIN-MFMP projections correspond to the 2025-2028 Medium-Term-Fiscal Framework.

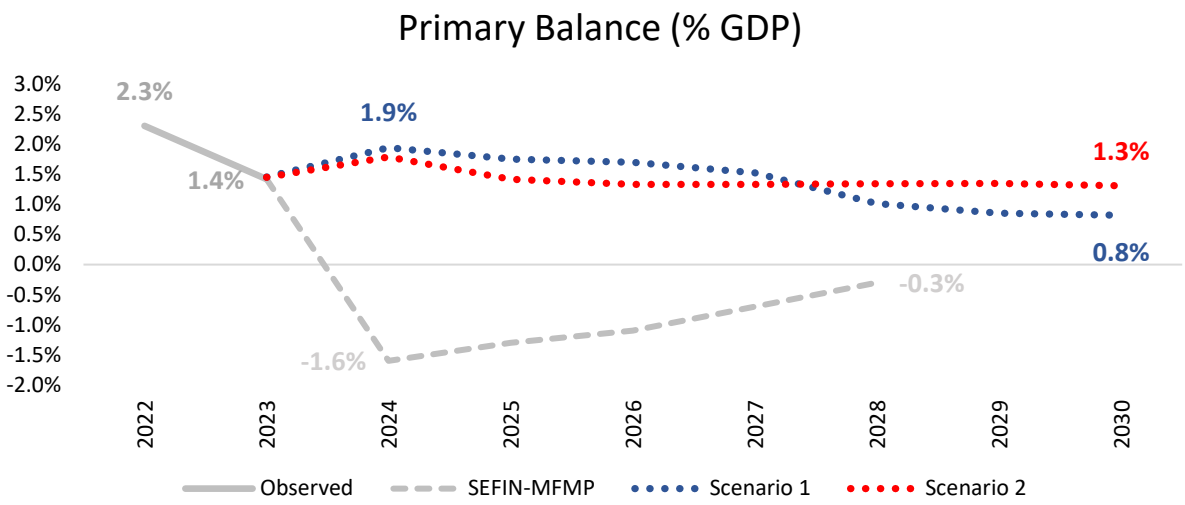
The alternative paths would have different implications for interest payments and for the primary balances needed to achieve the targeted decline in the debt ratio. Figures 3 and 4 below depict the simulated paths of interest payments and of the primary balances respectively, under the two alternative scenarios.

Figure 3: Simulated paths of interest payments under the alternative scenarios



Source: IDB staff simulations using the FISLAC model. Note: SEFIN-MFMP projections correspond to the 2025-2028 Medium-Term-Fiscal Framework.

Figure 4: Simulated paths of the primary balance under the alternative scenarios



Source: IDB staff simulations using the FISLAC model. Note: SEFIN-MFMP projections correspond to the 2025-2028 Medium-Term-Fiscal Framework.

The simulations suggest that under scenario 1 the primary surplus would need to rise faster than under scenario 2 during the rest of this decade but would decline significantly below it after 2027. Cumulative interest payments over the period 2024-2030 would be lower under scenario 1 than under scenario 2 by 0.4 percentage points of GDP. The interest savings would be larger if the faster adjustment path were to lead to a reduction of interest rates faster than assumed in the model.

The revised FRL would specify that, from the year following its enactment onwards, both the rolling MTFFs and the annual budgets would have to target overall and primary balances consistent with the chosen debt path. The convergence path would be reviewed by the government at the time of preparation of the third MTFF under the revised FRL, and could be changed, if deemed appropriate, provided it remains consistent with achieving the anchor by the fifth year.

To translate the targeted declines of the debt into a path for the overall budget balance, it must be taken into account that, according to the Honduran authorities, the primary surplus of the Social Security Institutes cannot be used to reduce the debt (i.e., it must go into asset accumulation to pay future benefits). Therefore, the required nominal balance should be at least equivalent to the targeted debt reduction plus the projected surplus of the SS Institutes.[18]

In addition, other factors that affect the relation between changes in the debt stock and the nominal balance should be taken into account in calculating the required path of the latter. Among such factors are the expected realization of explicit or

[18] The MEGDE simulations include an adjustment for this, but the make no allowance for the realization of contingent liabilities.

implicit contingent liabilities (CLs) of entities included in the NFPS, and the impact of significant changes in the exchange rate on the stock of debt.

Explicit CLs include guarantees provided by the public sector to the private partner under PPPs; central government (CG) guarantees for loans or bonds issued by other public entities; and pending judicial claims against NFPS entities. Implicit CLs stem from the likelihood of CG's bailouts of public entities (local governments and SOEs) in financial distress, and from the fiscal impact of natural disasters.

The 2016 FRL requires the inclusion in annual budgets of an Annex on Fiscal Risks, comprising a quantification of CLs. The Annex to the 2024 budget puts the stock of explicit CLs at end-March 2023 at 31 percent of GDP, of which 47 percent was accounted for by judicial claims against the public administration; 40 percent by government guarantees, including those to ENEE for electricity generation contracts; and the remainder by guarantees for PPPs. Implicit guarantees to public enterprises at the same date are estimated at nearly 10 percent of GDP, using a rating methodology for creditworthiness of each enterprise. In contrast, implicit CLs related to local governments are estimated at less than 1 percent of GDP. The same Annex presents a projection of the annual flows of realization of PPP-related CLs during 2024-27, at 3 percent of GDP in 2024 and averaging about 0.06 percent of GDP in 2025-27. The annual flow of calls on guarantees is projected to average about 1.2 percent of GDP during 2024-27. It is unclear whether and, if so, how these flows are reflected in the 2024 budget and the 2024-27 MTFF.

b. Preparation of MTFFs and annual budgets consistent with the chosen debt path

The Honduran authorities currently do not prepare baseline projections under current policies for either the MTFF or the annual budget. The published projections in both documents include the projected fiscal impact of new tax or expenditure policies, as well as of the continuation of existing ones. For the reasons explained above, it would be desirable that the authorities begin preparing baseline projections in future MTFFs. The comparison of the baseline budget balance with that consistent with the targeted path of convergence to the debt anchor would provide an estimate of available fiscal space for new policy initiatives, possibly evidencing the need for corrective measures, to be decided by the government taking into account their expected fiscal and macroeconomic impact, social implications, and legal and political feasibility.

Once the package of corrective measures is finalized, and its estimated impact reflected in the rolling MTFF, the projected level of primary spending for the first year of the MTFF would represent the top-down spending ceiling for budget negotiations with spending units in the CG and with other entities of the NFPS. A reformed FRL would specify that the resulting aggregate ceiling in the CG's budget, once set, cannot be modified during the year.

The framework outlined in the preceding subsections provides a significant degree of ex-ante policy flexibility, within the overarching constraint of ensuring convergence to

a prudent debt anchor over the medium term. A further degree of flexibility can be introduced by the provision, discussed in Section III above, to accommodate shortfalls in revenue or unexpected changes in interest rates during budget execution with a one- or two-year correction requirement.

c. Allowing constrained flexibility to accommodate large unforeseeable exogenous shocks

In light of the lessons from international experiences with escape clauses discussed in section III above, it would appear recommendable for Honduras, in reforming its escape clause, to:

- Define as triggers for the invocation of the clause a decline in real GDP at an annualized rate of 1 percent for two consecutive quarters, or a national emergency or natural disaster with an estimated fiscal cost equivalent to at least 1 percent of GDP.
- Limit the duration of the application of the clause to a maximum of two years.
- Require the government to specify: a) the maximum excess of the nominal deficit above its target during the application of the clause, and its justification; b) the nominal balances required to return to the targeted path of the NFPS debt over the subsequent two years (extendable to three years if the cumulative fiscal cost of the disaster exceeded 5 percent of GDP); and c) the actions it proposes to ensure compliance with a) and b).
- Require at least semiannual published reports to the Congress on compliance with the requirements above.

d. Further strengthening risk analysis and management

Significant progress has been made in recent years by the Secretaria de Finanzas (SEFIN) in strengthening the analysis, disclosure, and management of fiscal risks. Specifically,

- Recent MTFFs include debt sustainability analyses (DSAs) for the external and total public debts, which show the paths of the ratios of external and public debt to GDP and revenues, and of debt service to revenues, under baseline macroeconomic and fiscal assumptions and under the standardized stress tests recommended by the IMF-WB DSA methodology for LICs.
- The more recent MTFFs also include several scenarios with alternative macroeconomic (GDP growth, inflation, and the exchange rate) and fiscal (the annual path of the NFPS deficit) assumptions.
- As mentioned above, the 2024 budget includes a detailed Annex on Fiscal Risks, which presents estimates of the maximum exposures, probability of realization and related expected losses, and annual payments over the next four years for the following main types of explicit or implicit CLs: PPPs, judicial claims, guarantees to other public entities, municipal governments, and financial and non-financial SOEs.

For each category of CLs, the Annex provides some explanation of the criteria for assessment of the related risks. Specifically for the valuation of the guarantees, the estimated probability of default is linked to a rating of the beneficiary entity that is based on a set of its creditworthiness indicators (size and structure of indebtedness; liquidity; and profitability) compared with respective thresholds. A rating system based on indicators of debt, dependence on support by the central government, and rigidity of spending is also utilized to assess the risk of large and medium-sized municipalities requiring a bailout. The Annex also includes a fairly detailed discussion of the financial conditions and relations with the budget for each of the non-financial SOEs.

While, as the brief discussion above shows, remarkable progress has been made in recent years in identifying, quantifying, and disclosing the major sources of fiscal risks, there remains scope for further improvement. Specifically,

- The assumptions underlying the baseline and alternative scenarios would benefit from further elaboration and justification. In particular, there appears to be little, if any, feedback from the different paths of the fiscal deficit to the growth and inflation assumptions. More generally, it is unclear what analytical or empirical model is used in producing the scenario estimates. This is one area which could benefit from greater transparency and especially from external technical scrutiny, e.g., by an independent fiscal council.
- As regards the analysis and disclosure of CLs, the main areas for improvement would seem to be:
    - Greater clarity on the assumptions used to project the annual path of payments for realized contingencies, and on how such payments are included in MTFFs and provisioned for in the annual budgets. The Annex appears to recognize that actual payments have tended to significantly exceed the projected amounts in recent years.
    - The inclusion in future Fiscal Risk Annexes of estimates of the risks from natural disasters to which Honduras is especially prone, such as hurricanes and earthquakes. Past episodes of such disasters have had significant macroeconomic and fiscal costs, and some are likely to increase in frequency and severity, as a result of climate change. The SEFIN staff is currently engaged in developing, with the technical support of the World Bank, a methodology utilizing information on past similar events to stochastically estimate the probability of future occurrence of such disasters, their macroeconomic impact, and the fiscal costs of short-term alleviation measures and longer-term reconstruction needs.
    - Strengthening the coverage and timeliness of information on pending judicial claims not only on the Central Administration but also on other components of the NFPS, especially SOEs, which have accounted for nearly 40 percent of such claims in recent years. Adjudicated claims on

decentralized entities often end up being paid by the CA, with only limited subsequent recovery from the legally responsible entity.

- Improving the information base on the finances of municipalities and their enterprises. The 2023 Fiscal Risks Annex flagged some apparent discrepancies in the data sources on municipal debt and on interest payments, which may point to underestimation of the former.

For each category of CLs, the Annex includes considerations on institutional reforms that would help mitigate their fiscal impact. The main focus is on steps to improve: the information base on the sources of the CLs; the coordination among the agencies in the Central Administration responsible for monitoring and controlling PPPs, SOEs, and municipalities; the technical capacity of the staff involved in the analysis and management of CLs; and in some cases (e.g., for PPPs) the existing legal framework. Policy recommendations to address the underlying causes of CLs (e.g., the significant quasi-fiscal burdens on the SOEs; and the very limited fiscal autonomy and lack of fiscal rules for the municipalities) are unspecific or lacking. More generally, the recommendations for reforms are not prioritized, and do not include a suggested timetable for design and implementation.

In what follows, some steps are noted that could help improve the management of CLs and mitigate their fiscal impact. Specifically,

- Strengthening the role of the SEFIN in the appraisal, approval, and monitoring of new PPP projects; barring unsolicited PPP proposals; considering the use of variable-term projects (as in Chile) to mitigate demand risks; and using the IMF-WB's PPP Fiscal Risk Assessment Model, PFRAM, as a check on the current analysis of the CLs from PPPs.
- Strengthening the management of guarantees by setting a limit in the annual budgets on the granting of new guarantees; giving SEFIN the authority to approve new guarantees within the limit; adopting a checklist of criteria to guide the approval process; levying fees for new guarantees, based on the receiving entity's credit rating; and requiring the posting of adequate collateral for the same.
- Designing and beginning to implement a strategy to assess and correct the root causes of the implicit guarantees to SOEs (in particular, the quasi-fiscal burdens to which they are subject) and municipalities (in particular, the lack of borrowing limits related to indicators of their debt servicing capacity).
- Strengthening the monitoring by SEFIN of the finances of SOEs and municipalities by improving the timeliness and comprehensiveness of their reporting.
- Investing in the reduction of fiscal risks from natural disasters, in particular by strengthening the resilience of infrastructure, focusing on major vulnerabilities; using taxation and regulatory powers (e.g., land use regulations, building codes, contagion prevention measures) to reduce risky behaviors of private agents; and assessing the costs and benefits of available risk transfer mechanisms, such

as traditional and parametric insurance, catastrophe bonds, and other state-contingent debt instruments (SCDIs).

- Ensuring adequate provisioning in the annual budgets for the estimated payments of CLs, to minimize the risk of adverse surprises and non-compliance with the spending ceiling during the budget execution.

e. Ensuring adequate independent scrutiny of fiscal projections

In Honduras, in contrast to the international trends discussed above, fiscal projections are currently not subject to independent scrutiny outside the government. Consideration should be given to the early creation of an Independent Fiscal Council to provide an external, technically based, analysis and formal opinion on the quality and reliability of the macroeconomic and fiscal projections in the MTFFs, annual budgets, fiscal risk annexes, and mid-year budget reviews, as well as on their consistency with the FRF. The Council's opinions would not be binding but the government should be required to explain in detail to the Congress, and to the public at large, its reasons for disagreement with the opinions.

To minimize the budgetary cost of creating such an institution, the Council could have only one full-time Board member (its Chairperson), a couple of part-time other Board members, and a small full-time staff. It would be crucial for its effectiveness that the legislation setting up the Council ensure adequate operational autonomy and budgetary resources for it, and especially its full and timely access to the necessary information from the relevant government agencies and SOEs. Memoranda of understanding between the Council and those entities would specify in detail the reciprocal rights and obligations, consistent with the legislation, to ensure the effective functioning of the Council.

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Appendix 1: A summary and illustrative timetable of the proposed reforms of Honduras' FRL

A revised FRL would establish a medium-term ceiling for the ratio of the NFPS debt to GDP (the debt anchor) and a process for choosing the path of convergence to it. It would specify that the MTFF and annual budgets should be consistent ex-ante with the chosen path, and detail correction requirements for ex-post deviations from the path. It would also include appropriate escape and review clauses and strengthened transparency requirements. Specifically,

- Fiscal policy going forward would be geared to ensuring that the NFPS does not exceed 40% of projected GDP by the end of 2030 and remains at or below that level thereafter. The appropriateness of the debt ratio would be reviewed in 2030 by the government, which may propose to the Congress a revised target for the subsequent years, consistent with fiscal sustainability, in light of relevant macroeconomic and policy circumstances.
- The path of convergence of the debt ratio to the 2030 ceiling would be proposed by the government in the first MTFF following the enactment of the revised FRL, and would be reviewed and, if necessary, modified in the third MTFF.
- The overall balance targets for the MTFFs and annual budgets would be set to be consistent with the debt path, taking into account available information on the expected realization of contingent liabilities and other factors affecting the budgetary stock-flow adjustment.
- In each successive MTFF and annual budget, the government would present projections of interest payments, revenues, and non-interest expenditures, disaggregated by main categories, for the Central Administration, the social security institutions, the local governments, and the SOEs, consistent with the required overall balance target for the NFPS. It would publish a document explaining the methodology underlying the projections.
- The ceiling set in each annual budget for total non-interest spending of the Central Administration could not be modified during the budget execution, except if the escape clause was activated.
- Excesses of the debt over its targeted path, due to revenue shortfalls, higher than projected interest payments, or other factors, in any one year would have to be corrected during the subsequent year, except in the case of activation of the escape clause.
- In the event of a cumulative decline in real GDP at an annualized rate of at least 1 percent for two consecutive quarters, or of a national emergency or natural disaster with an estimated fiscal cost equivalent to at least 1 percent of GDP, the government could activate an escape clause suspending the application of the debt path rule for a maximum period of two years.
- In activating the escape clause the government would have to specify: a) the maximum excess of the nominal deficit above its target during the application of the clause, and its justification; b) the overall balances required to return to

the targeted path of the NFPS debt over the subsequent two years (extendable to three years if the cumulative fiscal cost of the disaster exceeded 5 percent of GDP); and c) the actions it proposes to ensure compliance with a) and b). The government would be required to send to the Congress semiannual published reports on compliance with the stipulations above.

The following illustrative timetable sets out year-by-year steps for implementation of the recommended reforms.

2025: A new FRL is approved. It sets the level and date of the NFPS debt-to-GDP anchor (e.g., 40% by end-2030). It requires the government to define the path of convergence to it over the intervening period. The MTFF covering the period 2026-29 presents budgetary projections consistent with the chosen debt path for the same period. The budget for 2026 can amend the budgetary projections in the MTFF for the same year, if necessary, but still ensuring consistency with the chosen debt convergence path.

2026 and 2027: The MTFFs published in April of each year define the budgetary aggregates for 2027-2030 and 2028-2031 consistent with the debt convergence path. The budgets for 2027 and 2028 follow the same procedure as that for 2026. Shortfalls in revenues and higher interest payments during the budget execution can be accommodated, if needed, with a higher deficit (lower primary balance), subject to a subsequent correction requirement, but the aggregate primary spending ceiling for each budget cannot be modified through supplementary budget appropriations.

2028 and 2029: The government reviews the convergence path and reflects any needed changes in the MTFF covering the period 2029-2032. The reasons for changes are explained in the 2028 MTFF. The budget for 2029 can amend the budgetary projections in the MTFF for the same year, if necessary, but still ensuring consistency with the chosen debt convergence path.

2030: The government reviews and may change the level of the debt anchor, with comprehensive analysis and explanation of the reasons for the change.

Appendix 2: Estimating prudent debt levels in Honduras

Three complementary methodologies are used to determine prudent debt levels that align with Honduras's fiscal sustainability. This Annex briefly describes the results obtained from applying each of the approaches.

Regime-switching approach (LSTAR)

The first methodology employs a smoothed transition regime-switching model (Granger and Teräsvirta, 1993) to account for debt's non-linear behavior. The LSTAR model identifies the threshold at which public debt transitions between stable and unstable levels.

To implement the LSTAR methodology in Honduras, we used the public debt data series of the Non-Financial Public Sector (NFPS) as a percentage of GDP for 1995-2021 as a source of information. Since this methodology is based on identifying the threshold at which debt transitions between stable and unstable states, the econometric estimates are univariate and do not require additional information on other macro-fiscal variables. The dependent variable in these models is defined as gross debt (% of GDP), and the set of explanatory variables corresponds to lagged values of the same dependent variable, so the model maintains an autoregressive structure.

Generally, the debt threshold obtained in each regression is robust and consistent with the dynamics of structural change observed in the historical data series of NFPS debt, particularly during 2004-2007 and 2019-2020. Thus, under the regime-change or LSTAR approach, it is possible to determine that the prudent level of debt for Honduras ranges between 40% and 51% of GDP, with an average figure of approximately 45% of GDP (see Table A1 and Figure A1).

Table A1: LSTAR Prudent Debt Level Estimates

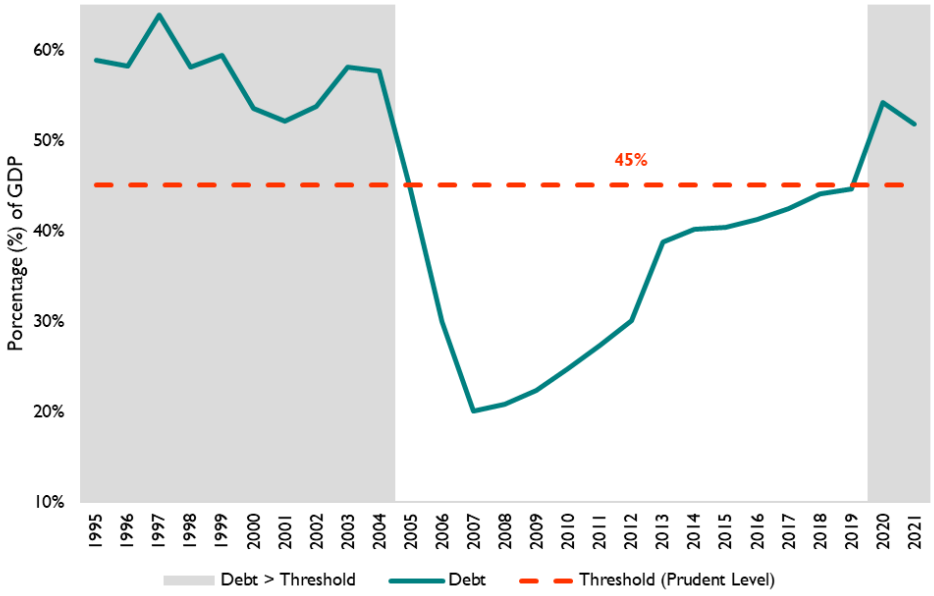
Variables	Model			
	(1)	(2)	(3)	(4)
Regime 1				
D.Debt (-1)	0.393	0.754***	-0.210	-0.445*
	(0.249)	(0.166)	(0.194)	(0.244)
D.Debt (-2)		-0.502***	-0.031	-0.135
		(0.163)	(0.128)	(0.168)
D.Debt (-3)			-0.446***	-0.320**
			(0.121)	(0.159)
D.Debt (-4)				-0.197
				(0.151)
Trend	0.005	0.005*	0.037***	0.043***
	(0.003)	(0.003)	(0.005)	(0.007)
Constant	-0.109	-0.108*	-0.604***	-0.724***
	(0.071)	(0.060)	(0.091)	(0.121)
Regime 2				
D.Debt (-1)	-1.257***	-1.355***	-0.354	-0.083
	(0.393)	(0.272)	(0.445)	(0.499)
D.Debt (-2)		0.548**	-0.637	-1.212***
		(0.271)	(0.504)	(0.358)
D.Debt (-3)			-0.237	-0.950***
			(0.528)	(0.311)
D.Debt (-4)				-0.326
				(0.301)
Trend	-0.002	-0.001	-0.032***	-0.036***
	(0.004)	(0.003)	(0.006)	(0.007)
Constant	0.100	0.069	0.540***	0.608***
	(0.086)	(0.062)	(0.094)	(0.127)
Ln(Gamma)	4.140***	6.126***	5.196***	4.711***
	(0.544)	(0.044)	(1.026)	(0.244)
Ln(Sigma)	-3.210***	-3.374***	-3.493***	-3.785***
	(0.121)	(0.125)	(0.179)	(0.178)
Threshold	**0.512*** **	**0.485*** **	**0.400*** **	**0.405*** **
	(0.018)	(0.001)	(0.002)	(0.003)
Observations	25	24	23	22
Average Threshold		**0.45**		

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: FMM-IDB staff.

Figure A1. Honduran NFPS Debt and Estimated Prudent Level with LSTAR



Source: FMM-IDB staff.

Forward-looking with risk uncertainty

The second methodology is a forward-looking approach based on the debt and uncertainty limit following IMF (2018). This approach involves estimating a fiscal reaction function (FRF) to determine the maximum level of debt the government could manage before facing the risk of default. Additionally, Monte Carlo simulations assess the impact of macroeconomic and fiscal shocks over the medium term, helping to calibrate the prudent debt level as one that, with high probability, remains below this maximum limit.

First, we estimate the fiscal reaction function following a cubic approximation that allows us to capture the non-linear dynamics of public debt and determine the implicit adjustment of the primary balance to different levels of public debt (Ghosh et al., 2013). To summarize, the function to be estimated is:

$$pb_t = \alpha + \beta_1 d_{t-1} + \beta_2 d_{t-1}^2 + \beta_2 d_{t-1}^3 + \Omega X_t + \epsilon_t$$

Where pb_t is the primary balance as a percentage of GDP, d_{t-1} is the debt as a percentage of GDP with a lag period, and X_t is a vector that includes all other macro-fiscal and institutional controls, such as GDP gap, public expenditure gap, inflation, currency depreciation, trade openness, corruption control, government effectiveness, among others. The source of information for these variables comes from official data published by the Honduran authorities, the IMF's World Economic Outlook, and the World Bank's Worldwide Governance Indicators.

Subsequently, different econometric estimations are carried out to measure the robustness of the results and determine which regression provides the best approximation of the fiscal reaction function that is consistent with the characteristics of Honduras (See Table A2). Combining the fiscal reaction function with Honduras interest payment schedule, the maximum debt limit level is obtained at around 57% of GDP (Figure A2).

Table A2. Fiscal Reaction Function Estimation for Honduras

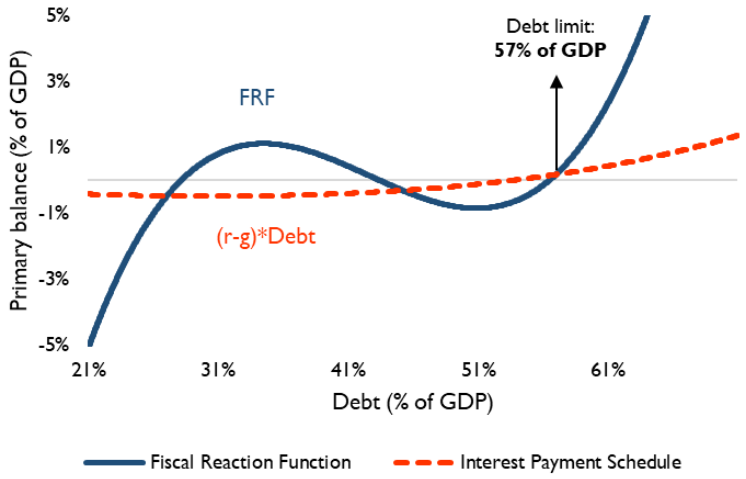
Variables	(1) Primary Balance (% of GDP)	(2) Primary Balance (% of GDP)	(3) Primary Balance (% of GDP)	(4) Primary Balance (% of GDP)	(5) Primary Balance (% of GDP)	(6) Primary Balance (% of GDP)
Debt lag (% of GDP)						
Debt	3.235*	3.448*	4.281**	2.793*	2.781*	4.605*
	(1.668)	(1.853)	(1.641)	(1.497)	(1.538)	(2.199)
Debt^2	-8.152*	-8.707*	-10.54**	-6.674	-6.615	-11.34*
	(4.345)	(4.761)	(4.282)	(3.859)	(3.958)	(5.752)
Debt^3	6.595*	7.050*	8.277**	5.285	5.218	8.958*
	(3.531)	(3.836)	(3.472)	(3.121)	(3.230)	(4.754)
Controls						
Inflation	0.187*	0.202**	0.486**	0.880***	0.904**	0.628*
	(0.0903)	(0.0908)	(0.192)	(0.269)	(0.399)	(0.337)
Regulatory quality	-0.0142	-0.0171	-0.0431	0.0394	0.0407	-0.0393
	(0.0490)	(0.0496)	(0.0598)	(0.0451)	(0.0481)	(0.0686)
Commercial openness		-0.0406	-0.0437	-0.166*	-0.166*	-0.194**
		(0.0549)	(0.0531)	(0.0823)	(0.0840)	(0.0811)
Currency exchange rate			-0.287	-0.343**	-0.339*	-0.104
			(0.169)	(0.151)	(0.167)	(0.267)
GDP gap				0.00294	0.00298	0.00436**
				(0.00190)	(0.00211)	(0.00162)
Corruption				0.00465***	0.00464***	
				(0.00119)	(0.00127)	
Responsibility					-0.00425	
					(0.0426)	
Government effectiveness						0.0353
						(0.0859)
Constant	-0.443**	-0.420*	-0.549***	-0.332	-0.335	-0.406
	(0.203)	(0.204)	(0.187)	(0.211)	(0.225)	(0.249)
Observations	26	26	26	23	23	23

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: FMM-IDB staff.

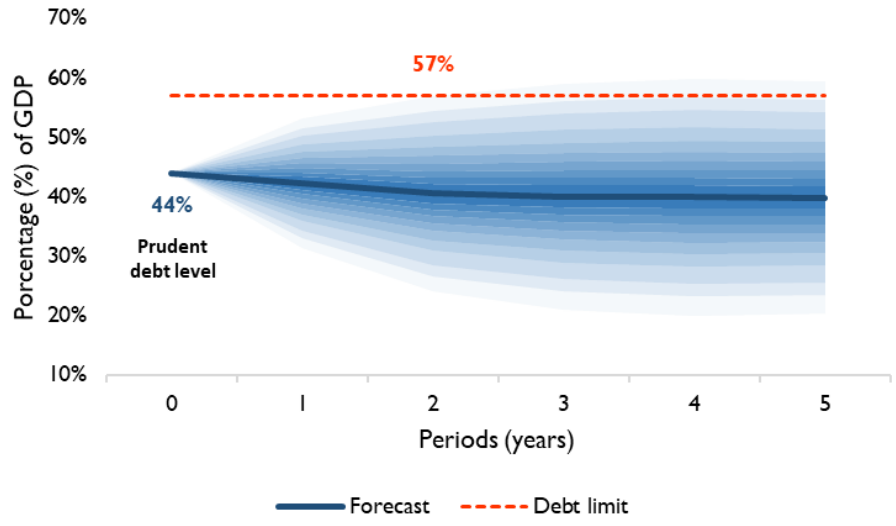
Figure A2. Estimated Debt Limit Level for Honduras



Source: FMM-IDB staff.

Based on the identified debt ceiling, a Vector Autoregressive (VAR) model calibrates Honduras's prudent debt level, ensuring future debt stays below 57% of GDP with a 90% probability under various macro-fiscal risk scenarios. These stochastic scenarios include changes in growth, exchange rates, interest rates, primary balance, debt interest, and inflation. The calibration is iterative: the initial debt is adjusted up or down depending on whether projections exceed the threshold, ensuring no more than 10% of outcomes surpass it. This approach estimates a prudent debt level of approximately 44% of GDP (Figure A3).

Figure A3. Calibrated Prudent Debt Level for Honduras NFPS with Forward-Looking Uncertainty



Source: FMM-IDB staff.

FISLAC early warning system

Estimating debt thresholds using FISLAC's early warning system involves a comprehensive set of models to identify the most effective predictor for a prudent level of debt (Valencia et al., 2022). On the one hand, a signal approximation methodology is employed to estimate the critical value of the variable associated with potential fiscal stress episodes. On the other hand, machine learning techniques are utilized to evaluate debt thresholds by identifying the determinants of these episodes. These results are then compared to determine the best predictor for the prudent debt threshold.

In the case of Honduras, the best predictor resulting from the interaction of these methodologies indicates that the prudent debt threshold would be close to 42% of GDP. Table A3 presents the performance metrics associated with the debt threshold obtained.

Table A3. Performance Metrics

	Metrics
Threshold	**42.4%**
Percentile	75
Accuracy	77.8%
Precision	33.3%
Memory	100.0%
F1	50.0%
F2	71.4%
SP	75.0%
Signal/Noise	4

Source: FMM-IDB staff.

Appendix 3: DSGE model calibrated for Honduras

The model is based on Valencia et al. (forthcoming) and serves as an analytical tool to evaluate the materialization of various fiscal scenarios, convergence towards the numerical targets of fiscal rules, conditional and anchored macro-fiscal forecasts, and value-at-risk analysis of the main macroeconomic variables in Honduras.

Based on a small open economy model, the structure includes several agents whose decisions result from maximizing behavior according to specific objectives. Two economies are assumed; the domestic economy (h) is small relative to the foreign economy (f). One of the agents in the model is the household sector, whose preferences are the same in each economy. Firms have the same production technology, depending on labor input, private capital, and a public capital externality. These firms produce homogeneous goods that they can trade internationally, which are imperfect substitutes for domestic consumption goods for households. Households are assumed to own the firms; therefore, consumption and saving decisions are equivalent to consumption and investment decisions.

On the other hand, the government interacts in the model as an agent that directly influences economic activity through taxes on consumption, capital and labor income, and public consumption and investment. It also influences macroeconomic stability through the sustainability of public finances using debt management, including the concessional component characteristic of Honduras and fiscal instruments. The model includes nominal rigidities on the prices of goods produced by firms that impact inflation dynamics. The Central Bank follows a monetary policy rule linking inflation and the output gap.

The key equations that define the structure of the model for Honduras are outlined below.

Households

Households' consumption, labor, and investment decisions affect macroeconomic activity and their interaction with other agents. The household optimization problem has two parts—consumption-cost minimization and utility maximization—both subject to constraints.

From the first-order conditions, the optimal consumption path is defined and influenced by prices, interest rates, public spending, and consumption taxes, which together determine savings decisions.

$$1 = \beta E_t \left[\left(\frac{c_{t+1} + \alpha^g g_{t+1}}{c_t + \alpha^g g_t} \right)^{-\sigma} \left(\frac{p_t^c}{p_{t+1}^c} \right) \left(\frac{1 + \tau_t^c}{1 + \tau_{t+1}^c} \right) (1 + i_{t+1}) \right]$$

Investment, linked to consumption, considers Tobin's Q, which measures the ratio between the market value of capital and its replacement cost. If this ratio exceeds one, investment is incentivized. In this model, Tobin's Q follows the Euler equation of capital.

$$q_t^k = \beta E_t \left[\left(\frac{c_{t+1} + \alpha^g g_{t+1}}{c_t + \alpha^g g_t} \right)^{-\sigma} \left(\frac{p_t^c}{p_{t+1}^c} \right) \left(\frac{1 + \tau_t^c}{1 + \tau_{t+1}^c} \right) \left((1 - \delta^k) q_{t+1}^k + (1 - \tau_t^k) r_t^k \right) \right]$$

Finally, according to the following relationship, the optimal decision between leisure and consumption shows how taxes on labor income and consumption affect labor supply.

$$n_t^{\phi} = \frac{(1 - \tau_t^w) w_t}{(c_t + \alpha^g g_t)^{\sigma} (1 + \tau_t^c) p_t^c}$$

Firms

Firms face two problems: minimizing production costs and maximizing profits by choosing an optimal price in each period. Cost minimization by firms consists of choosing the factors of production, labor, and private capital such that the cost of production is minimized subject to the technology of production.

$$\min_{\{n_t, k_t\}_{t=0}^{\infty}} w_t n_t + r_t^k k_t \qquad s.a \qquad y_t = z_t k_t^{\alpha} (A_t n_t)^{1-\alpha} k_{t-1}^{\alpha^{kg}}$$

On the other hand, firms seek to maximize their profit flow subject to three restrictions. The first is production technology, in which labor, private capital, and public capital externality are included as factors of production. The second constraint is the household demand curve, and the third is nominal price rigidity, in which firms face a given probability of adjusting their selling price in each period. When firms adjust prices, they seek to maximize the expected discounted value of their profits.

$$\max_{\{p_t^h\}_{t=0}^{T}} E_t \sum_{i=0}^{\infty} \omega^i \Lambda_{i,t+i} \left[\left(\frac{p_t^h}{p_{t+i}^h} \right)^{1-\alpha} - mc_t \left(\frac{p_t^h}{p_{t+i}^h} \right)^{-\alpha} \right] c_{t+i}$$
$$s.a \qquad c_{t+i} = \left(\frac{p_{t+i}^h}{p_{t+i}^c} \right)^{-\theta} C_{t+i}$$

Central Bank

The model includes a monetary policy module that follows a Taylor rule such that the policy interest rate adjusts to an equilibrium interest rate level, considering possible inflation and output gaps.

$$i_t^p = \alpha_1^{i^p} i_{t-1}^p - (1 - \alpha_1^{i^p}) i_{ss}^p + \alpha_2^{i^p} \left[E_t(\pi_{t+1}^h) - \bar{\pi}_t^h \right] + \alpha_3^{i^p} \hat{y}_t + \epsilon_t^{i^p}$$

Fiscal Policy

The government collects tax revenues through taxes, which can affect the economy through primary spending. In addition, the government can contract domestic and external debt to finance its expenditures. Therefore, the government's total fiscal balance is defined as the difference between revenues and total expenditures (including interest payments on outstanding debt). In this framework, it is possible to determine the trajectory of fiscal variables to serve as an input to evaluate and

calibrate fiscal rules and assess their effects on macroeconomic aggregates. The debt equation summarizes the government's budget constraint.

Debt equation:

$$Debt_t = \left[\alpha^{dom}\left(1 + i_t^{dom}\right) + \alpha^{ext}(1 + i_t^{ext})(1 + \Delta s_t) + \alpha^{con}(1 + i_t^{con})(1 + \Delta s_t)\right] * \frac{Debt_{t-1}}{(1 + g_t)(1 + \pi_t)} - PB_t$$

$$\alpha^{dom} = \textit{share of domestic currency debt}$$

$$\alpha^{ext} = \textit{share of external currency debt}$$

$$\alpha^{con} = 1 - \alpha^{dom} - \alpha^{ext} = \textit{share of concessional debt}$$

Interest payment equation:

$$Int_t = \left[\alpha^{dom} * i_t^{dom} + \alpha^{ext} * i_t^{ext}(1 + \Delta s_t) + \alpha^{con} * i_t^{con}(1 + \Delta s_t)\right] * \frac{Debt_{t-1}}{(1 + g_t)(1 + \pi_t)}$$

Overall balance equation:

$$TB_t = PB_t - Int_t = R_t - G_t - Int_t$$

Forward-looking IS curve with fiscal policy

By utilizing the optimality equations related to consumption, capital, investment, and aggregate public spending, we can derive an equation that defines the dynamics of aggregate demand within the economy. The IS curve represents this outcome and is analogous to expectations in a small open economy compared to its closed counterpart. Consequently, the determination of the output gap in this economy relies on several factors: expectations regarding economic performance, a fiscal impulse component that is evaluated through public spending and taxes on consumption and capital, the dynamics of private investment, the behavior of the exchange rate reflected in terms of trade, capital prices, and inflation.

$$\hat{y}_t = E_t[\hat{y}_{t+1}] - (\theta_1\theta_2 - \theta_1\alpha^g)[E_t(\hat{g}_{t+1}) - \hat{g}_t] - \theta_1\theta_3[E_t(\hat{x}_{t+1}) - \hat{x}_t] + \left(\frac{\theta_1\gamma}{\sigma} + a\gamma\right)\left[E_t\left(\hat{\delta}_{t+1}\right) - \hat{\delta}_t\right] + \theta_1\gamma[E_t(\tilde{y}_{t+1}) - \tilde{y}_t] - \frac{\theta_1}{\rho}\left[\hat{r}_t^k - \rho - \delta^k - \hat{\pi}_t^h + [E_t\left(\hat{q}_{t+1}^k\right) - \hat{q}_t^k] - \frac{\tau_{ss}^c}{1 + \tau_{ss}^c}[E_t(\hat{\tau}_{t+1}^c) - \hat{\tau}_t^c] + \frac{\tau_{ss}^k}{1 + \tau_{ss}^k}[E_t(\hat{\tau}_{t+1}^k)]\right]$$

Phillips curve

The Phillips curve is constructed considering inflation expectations, marginal costs, and the optimal leisure–consumption decision. It shows that the evolution of the price level in the home (domestic) economy will depend on inflation expectations; on the pressures that may be exerted by the dynamics of domestic and foreign output

growth; on the terms-of-trade conditions that determine the price of imported goods; and on a fiscal and productivity component that affects the production costs of domestic firms, thus affecting the price of domestic goods.

$$\pi_t^h = \beta E_t\left(\pi_{t+1}^h\right) + \kappa\Big[\left(\phi(1-\alpha) + (1-\gamma)\sigma_\gamma\right)\hat{y}_t + \left(\sigma - (1-\gamma)\theta_1\sigma_\gamma\right)\hat{y}_t^* + \left(\alpha^g - \theta_1(1-\gamma)\sigma_\gamma\right)\hat{g}_t - \left(\alpha^{k^g}\phi(1-\alpha) - \alpha^{k^g}\right)k_{t-1}^g - (\phi(1-\alpha)+1)\hat{z}_t - (\phi + (1+\alpha) + 1)\hat{a}_t - \left(\phi\alpha(1-\alpha)\right)\hat{k}_t + \alpha\hat{r}_t^k + \gamma\hat{\delta}_t + \frac{\tau_{ss}^c}{1+\tau_{ss}^c}\hat{\tau}_t^c + \frac{\tau_{ss}^w}{1+\tau_{ss}^w}\hat{\tau}_t^w\Big]$$