HOW TO

NOTES

How to Develop and Implement a Medium-Term Fiscal Framework

Teresa Curristine, Isabell Adenauer, Virginia Alonso Albarran, John Grinyer, Koon Hui Tee, Claude Wendling, and Delphine Moretti

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Abstract: This Note provides guidance on developing and implementing a medium-term fiscal framework (MTFF). MTFFs aim to promote fiscal discipline and sustainability, transparency, and better-informed fiscal decisions. An MTFF comprises a set of institutional arrangements for prioritizing, presenting, reporting, and managing fiscal aggregates - revenue, expenditure, balance, and debt - generally over a three-to-five-year period. It incorporates a fiscal strategy, medium-term projections of key macroeconomic variables and fiscal aggregates, and ceilings on total expenditure to guide subsequent annual budgets. By introducing a medium-term perspective into fiscal and budgetary decision making, MTFFs provide a clearer understanding of the impact, trade-offs, and risks of policy choices. MTFFs contribute to enhancing transparency and accountability by communicating the government's medium-term fiscal goals, policies, and fiscal performance. Ultimately, clarity on medium-term fiscal plans and on their effective implementation can bolster confidence in the government's ability to manage its finances prudently and competently. In addition to providing guidance on how to design an MTFF and the institutional and technical arrangements needed to support implementation, the Note discusses key challenges and presents country examples from across the globe by income group and concludes with lessons learned.

1. Introduction

During recent global crises, governments have navigated emergencies and prioritized immediate and near-term considerations over medium and longer-term strategies. Many countries now simultaneously face record levels of debt and higher spending demands due to medium-term challenges such as aging populations and climate change. This has increased focus on fiscal discipline and sustainability, prompting a renewed emphasis on the medium-term fiscal framework (MTFF) as a tool to guide and articulate governments' medium-term fiscal plans. MTFFs provide a structured approach to fiscal management, enabling policymakers to align their fiscal and budgetary decisions, and their fiscal rules, with broader economic objectives and maintain a sustainable fiscal trajectory over the medium term. This Note provides guidance on how to develop and implement an MTFF.

The number of countries introducing MTFFs has grown driven in part by the requirements of economic and monetary unions such as the European Union (EU) and by previous crises. The literature highlights (World Bank 2013, Caselli, F 20222 and IMF 2023a) the following objectives and potential benefits of introducing MTFFs including promoting fiscal discipline, fiscal sustainability, enhancing resource allocation and planning, and contributing to transparency and accountability by:

- **Providing a strategic and structured approach to fiscal planning over a medium-term horizon.** This enables governments to align expenditures with revenues, set realistic fiscal targets, and manage public debt levels more effectively. By having a more strategic and forward-looking fiscal stance, governments are better positioned to understand, prevent and/or mitigate the risks of unsustainable fiscal policies that could lead to economic instability.

- **Establishing specific fiscal targets or ceilings over a medium-term horizon.** These include multiyear projections of revenue aggregates, limits or ceilings on total government expenditure, deficit, and debt. A key focus of the MTFF is to provide a top-down limit on total government expenditure, which would be used to guide the preparation of the annual budget for each year of the MTFF. By clearly defining these targets, governments provide a framework that encourages fiscal discipline, and a means to hold governments accountable for their fiscal performance. A MTFF may also serve as a safeguard against sudden policy changes and outside groups or lobbies having undue influence upon the fiscal decision-making process.

- **Extending the planning horizon beyond the annual budget cycle**. This enables governments to prioritize and allocate resources more effectively. It integrates the annual budget formulation cycle with a medium-term planning process to decide on current and future policy priorities more effectively, and to exercise control over budget aggregates. It helps to enable systematic consideration of the impact of current spending and tax policies on future years' budgets, as well as the potential impact of new measures. This is even more important when countries are seeking to achieve fiscal sustainability while making progress on sustainable development goals (Gaspar and others 2019).

- **Effectively communicating the government's fiscal policies**. Governments, by clearly outlining and publishing their medium-term fiscal goals, targets, and strategies, enhance the transparency and the predictability of their fiscal policies. In doing so they provide stakeholders, including citizens and investors, with a better understanding of the government's fiscal intentions. Governments are held accountable for meeting the fiscal objectives outlined in the MTFF, which can enhance credibility. Moreover, effective communication of medium-term fiscal plans helps build confidence in the government's ability to manage its finances prudently.

Governments have taken different approaches to adopting an MTFF shaped by their countries' contexts and circumstances. Regardless of the approach taken, the ability of an MTFF to achieve stated objectives depends on effective implementation. In this respect, countries still encounter many challenges, including the need for accurate economic forecasting and timely data, the lack of political commitment, failure to link MTFFs with the annual budget process, not respecting total expenditure ceilings in the annual budget process, and difficulty in dealing with uncertainty. Therefore, it is important to give due regard to considerations of flexibility in the design of a MTFF.

To be effective, MTFFs need to be an integral part of fiscal and budgetary decision making and reporting. Without this, the MTFF can remain a paper exercise**.** Addressing the challenges and effectively implementing MTFFs requires political commitment and developing the rules, processes, and procedures that support sound institutional arrangements and build technical capacity.

This note provides guidance on how to design and implement an MTFF. It addresses MTFFs from a public financial management (PFM) perspective and does not provide an in-depth discussion on forecasting models or methodologies. The advice presented is based on relevant literature and the IMF's capacity development and research. The note is divided into six sections. Section 2 places the MTFF in the context of the wider fiscal framework and discusses key MTFF components. Section 3 examines the key design choices governments need to consider in developing MTFFs. Section 4 discusses the main challenges encountered in MTFF implementation. Section 5 highlights institutional and technical arrangements that can support effective MTFF implementation and help to address challenges. Section 6 presents different examples of country approaches to implementing MTFFs by income groups. The conclusion discusses lessons learned.

2. Medium-Term Fiscal Framework (MTFF)—Context and Components

A. MTFF in the Context of Fiscal Planning and Budgeting

MTFFs originated in Australia in the 1980s, and in subsequent decades there has been widespread adoption across countries, regions, and income groups. There were 72 MTFFs worldwide by 2013 (World Bank 2013); this number has grown in the last decade. Most OECD countries and European Union members have introduced MTFFs, as have countries in economic and monetary unions such as the Eastern Caribbean Economic and Currency Union (ECCU), the West Africa Economic and Monetary Union (WAEMU), the Central African Economic and Monetary Community (CEMAC) and the East Africa Economic and Monetary Community. In other countries, MTFFs have been adopted in the aftermath of crises, for example in Latin America, as part of wider reforms included in fiscal responsibility laws (FRLs). The adoption of MTFFs in developing countries has also been driven by requirements for development loans and programs from multilateral financial institutions. Countries have taken different approaches to implementing MTFFs, influenced by their context and capacity and as a result are at different stages of MTFF implementation.

MTFFs aim to address the recognized shortcomings of annual budgeting including incrementalism, shortsightedness, and failure to consider the medium-term consequences of current year decisions. At a basic level an MTFF can be seen as an instrument to link fiscal policy, planning, and budgeting over a multi-year horizon to set current and future policy priorities more effectively and to exercise control over fiscal aggregates. Common salient features of a MTFF include: the framework covers a minimum period of the budget year plus two forward years; it provides multi-year macroeconomic and fiscal forecasts, objectives or ceilings for fiscal aggregates, a top-down limit on total annual expenditure; and it is approved at a high level by the cabinet and/or the Parliament (IMF 2022a) and is published in a report.

Box 1. Medium-Term Fiscal Planning Concepts

Policy makers use different fiscal planning instruments to pursue their policy objectives while trying to maintain fiscal sustainability. The following concepts are most used:

Aggregate expenditure ceiling. The aggregate expenditure ceiling is the limit on total expenditure for the coming year's budget or multi-years in compliance with any fiscal targets or rules. Setting an aggregate expenditure ceiling early in the budget process is an important tool of top-down budgeting to promote fiscal discipline during budget preparation, and to set budgets that comply with the government's fiscal rules or targets.

Baseline scenario. A baseline scenario is a no-policy-change projection for the fiscal variables. Typically, revenue and expenditure are projected based on macroeconomic assumptions of inflation, economic growth, and the continuation of current policies (tax rates remain unchanged, pensions are indexed according to law, and so on). A bottom-up analysis from individual sectors can inform a baseline projection, considering expenditure cost drivers (for example population growth). Baseline scenarios can be updated on a rolling basis, using next year's forecast as a basis, but an update will always be needed as macroeconomic conditions and policies change over time (Rahim and others, 2022).

Medium-term frameworks. There are two types of medium-term frameworks referred to in this Note: 1) MTFF (defined in Section 2) and 2) medium term budget framework (MTBF)/ medium-term expenditure framework (MTEF), (these two latter terms are used largely interchangeably). What distinguishes the different frameworks is the level of detail in the multi-year planning of expenditures and revenues (see Figure 1). MTBF/MTEF are developed based on the MTFF which presents aggregate expenditure ceilings. The MTBF/MTEF establishes multi-year spending plans, within the MTFF ceiling, at the sectoral/ ministerial and/or program level and produces baseline projections of revenue and expenditure at that relevant level. It sets ministerial/program expenditure ceilings and seeks to ensure that agency spending plans reflect medium-term strategic priorities. To this end, it reconciles the top-down, total expenditure ceiling (from the MTFF) with the bottom-up budgeting estimates for spending ministries. MTBF/MTEFs can also include a performance dimension focused on producing outputs and achieving outcomes. In documents and the literature, the term medium-term budget/expenditure frameworks can be used as a generic term referring to all frameworks. However, current practice and this Note, separates MTFFs from MTBF/MTEFs and focuses on MTFFs.

Source: Authors, World Bank 2013 and Rahim 2022.

Different definitions of an MTFF exist, depending on the focus. A narrower definition focuses on the quantitative aspects, the projections, and the MTFF document itself. Under this definition, the MTFF is a set of projections of key macroeconomic variables and fiscal aggregates over the medium term (3-5 years), consistent with the government's fiscal objectives. A broader definition is more comprehensive and considers the MTFF as a structural set of arrangements and procedures for the production and use of multi-annual projections. It incorporates the projections and the report, but links these to the overall budget architecture and considers the actors, procedures, and products involved (Sherwood 2015). This broader definition takes into account the importance of institutional arrangements and PFM systems for the implementation of MTFFs.

This note uses the broader definition of MTFF. It can be summarized as a set of institutional arrangements for prioritizing, presenting, reporting, and managing fiscal aggregates (revenue, expenditure, balance, and debt), generally over a three-to-five-year period (IMF 2018 and Cangiano and others 2013). The framework presents medium-term projections of key macroeconomic variables and fiscal aggregates and sets multiyear targets or ceilings for fiscal aggregates which are consistent with the government's fiscal objectives. The MTFF establishes a top-down ceiling on total expenditure, which is the starting point for the preparation of the government's annual budget.

An MTFF needs to be linked to, and to be consistent with, a country's wider fiscal planning framework and fiscal objectives. Figure 1 places the MTFF in the context of the wider fiscal planning framework.

Figure 1. MTFF in Context of Medium-Term Fiscal Planning

- Principles of fiscal management
- Fiscal rules
- Transparency requirements

- Macroeconomic objectives and forecasts
- Fiscal objectives forecasts
- Aggregate expenditure ceiling
- Fiscal space
- Fiscal risk analysis

- Spending allocations/ expenditure ceilings
- Contingency margins and reserves
- Performance indicators

- Detailed expenditure appropriations
- Other budgetary controls
- Reconciliation with the MTBF

- Detailed expenditure outturn
- Reconciliation with budget allocations
- Explanation of discrepancies

Source: IMF Staff.

The government's fiscal objectives and/or fiscal rules are the starting point for the MTFF. Fiscal policy objectives can be set in fiscal strategy reports with a medium-term horizon or more permanently in numerical fiscal rules. Numerical fiscal rules are long standing constraints on fiscal aggregates that are usually set out in fiscal responsibility laws (FRLs) or PFM laws. Numerical fiscal rules generally consist of fixed numerical limits typically focused on overall government expenditure, deficit, and/or debt. In 2021, about 105 countries had at least one fiscal rule (Davoodi 2022).

Many countries have several fiscal rules which cover debt, deficit, and expenditure. For example, EU member countries set a limit on general government debt at 60 percent of GDP and on deficit at 3 percent, with adjustment paths tailored for each country.[1] There can also be revenue objectives or targets, however these are less common, examples include those arising from a domestic revenue mobilization strategy or a medium-term revenue strategy (MTRS), especially in low income and developing countries (LIDCs). Some countries use procedural rules, which instead of having a numerical limit set in law, establish legal procedures, for setting medium-term fiscal objectives, reporting, and ensuring compliance. For example, Australia develops and publishes its MTFF, and fiscal strategy based on principles of prudent fiscal management and sustainability (see Box 4). Based on similar principles, New Zealand's legislation requires that each newly elected government establish its own fiscal objectives. Both countries place a strong emphasis on fiscal transparency for holding governments to account for their fiscal performance.

Post pandemic, many governments are at a crossroads on numerical fiscal rules and are contemplating whether to return to former rules, and at what pace, or to adopt new fiscal rules (IMF 2023a). The pandemic highlighted the shortcomings in existing rules: insufficient flexibility and poorly defined escape clauses, which made them difficult to comply with, increased complexity, and reduced transparency (Davoodi and others 2022). There is an increased interest in enabling each country to tailor rules to their individual context, which raises trade-offs between flexibility, credibility, and enforceability. In general, a greater emphasis on a more risk-based framework is recommended to ensure a pathway to debt sustainability and to build fiscal buffers (Caselli 2022). This approach reinforces the importance of MTFFs as the tool to set out the government's medium term fiscal plans.

The MTFF works best in promoting fiscal sustainability and discipline when there are clearly articulated fiscal objectives and a medium-term strategy to guide the framework. The MTFF should be the first step in the annual budget preparation process. Importantly, it produces the total expenditure ceiling for the annual budget which is consistent with medium-term resources available and the government's fiscal objective. It also estimates if the government has any room for new policies or if there needs to be reductions in spending and/or increases in taxes to be consistent with their fiscal objectives. The effectiveness of the MTFF can also be enhanced when it is supported by a MTRS[2], which outlines the future vision of the tax system and thereby supports revenue projections based on a mix of tax policy and revenue administration measures (Gaspar and Toro 2019).

A key aspect of the MTFF is establishing the total expenditure ceiling for the upcoming budget year. Good practice is to establish this ceiling early in the process, so it can guide the annual budget. This involves a distinct strategic phase of the budget process to obtain high-level political agreement on the expenditure ceiling in the annual budget and broad policy priorities. An MTFF means that budget priorities are set in a cascading manner: the total expenditure level is determined before allocations between main sectors/ministries are made. It also involves estimating the cost of new policies ensuring they are assessed relative to the medium-term priorities.

While an MTFF can be a stand-alone instrument, a medium budget/expenditure framework (MTBF/MTEF) requires an MTFF. An MTBF is based on the MTFF envelope, but it goes into a greater level of detail and coordinates top-down ceilings with bottom-up expenditure estimates from spending ministries (see Box 1). The MTBF should be reconciled with the MTFF and use a classification similar to the one used in the annual budget.

The annual budget process contains detailed annual appropriations for the current budget year and should be consistent with the MTFF (and the MTBF, if any). An updated version of the MTFF is often presented with the budget if there are changes to macroeconomic conditions. The MTFF and MTBF is integrated with the annual budget process, by having the outer year forward estimates used as the starting position for the following year's budget process and during the process outer years are systematically updated for the impact of budget year

[1] Under the new framework to be adopted in 2024, countries should restore fiscal sustainability along two dimensions: (i) debt criterion—public debt should be plausibly placed on a downward path, or, if already low, maintained at prudent levels; (ii) deficit benchmark—fiscal deficits should, if high, be reduced and subsequently be kept moderate. In line with this, member states with deficits or debt levels exceeding the framework's reference values are asked to agree with the Commission and the Council a four- or seven-year fiscal-structural plan, relying on net primary expenditure as the single operational indicator. Countries will update these plans with annual progress reports.

[2] For more details on MTRS and countries with MTRS see https://www.tax-platform.org/medium-term-revenue-strategy/countries

spending decisions and parameter changes. Having a credible annual budget supports MTFFs by ensuring that the execution of annual expenditure and revenue collection are in line with those in the approved budget and in line with the government's fiscal objectives. Deviations can occur for several reasons including introduction of supplementary budgets, revenue shortfalls and lack of budget discipline resulting in overspending. Accounting and reporting on the annual budget provide an opportunity to explain and reconcile any differences between estimates and actuals in budget expenditures and revenues.

B. Main Components of an MTFF

This section discusses the main components of an MTFF. There is variation across countries in the level of sophistication in developing these components, but it is important that the capacity exists to develop at least the basic medium-term projections. The main components of an MTFF are:

- **Medium-term projections for the key macroeconomic variables and main fiscal aggregates (revenue, expenditure, debt, and deficit).** These include projections of GDP growth, inflation, exchange rates, interest rates, commodity prices and employment amongst others. It is important that projections are realistic, accurate and internally consistent, and that key assumptions are disclosed. Based on the macroeconomic projections (including price assumptions for major commodity producers), baseline projections for revenue are produced based on existing tax policies. Baseline expenditure projections are also calculated based on existing expenditure policies (assuming no policy change). The next step is to compare the baseline projections with fiscal objectives, limits or rules (usually in terms of deficit or expenditure limits that ensure fiscal sustainability) to determine if there is room for new revenue and expenditure policies.[3]

- **A fiscal strategy, which clearly states the government's fiscal objectives and targets for the main fiscal aggregates over 3-to-5-year period and how the government policies will contribute to fiscal sustainability and macro-economic stability.** The fiscal strategy should also include the ceiling on total expenditure for the annual budget, which is binding for the first annual budget of the projection and can be indicative for the outer years. When a country has a fiscal rule, the fiscal strategy should explain how the fiscal objectives and policy measures will help comply with the fiscal rule.[4] If a government has revenue targets and an explicit medium-term revenue strategy, details on these should also be included. It is good practice to publish the fiscal strategy in a report.

- **A comprehensive assessment of fiscal risks leads to a better understanding of their potential impact on government finances.** Country capacity to conduct risk assessments vary but performing such assessments is increasingly important considering fiscal uncertainty and challenges facing countries. This is facilitated by having in place a framework for evaluating, monitoring, and managing fiscal risks. At a minimum, the MTFF/fiscal strategy report should include a quantitative analysis of macroeconomic risks that affect fiscal outcomes. This analysis could involve sensitivity analysis, alternative scenarios, and fan charts. Depending on capacity, the report could provide a quantitative or qualitative analysis of specific risks. This could include risks arising from public corporations, subnational governments, court rulings, natural disasters, financial crises, public-private partnership (PPP) projects, and guarantees. Quantifying these risks is advisable, focusing on the most probable and high-impact events. If resources and capacity are limited, a qualitative analysis could be conducted. Additionally, conducting a debt sustainability analysis is recommended to evaluate the sustainability of public finances. A key objective of including a fiscal risk assessment in the MTFF/fiscal strategy report is to integrate these risks into fiscal projections before budget

[3] The aggregate expenditure ceiling of the MTFF may be determined ex ante in the case of an expenditure rule (for example, a fiscal rule that establishes total expenditure growing at or below potential GDP growth). Otherwise, in the case of a deficit limit or target, the MTFF will derive an expenditure ceiling as a result of the projection exercise incorporating policies to remain under the deficit limit.

[4] If the fiscal rules' escape clause is activated, the MTFF should continue to be published and to report on how fiscal policy aims to return to the fiscal targets and ensure sustainability in the medium term.

preparation and in annual budget documents. This enables governments to allocate fiscal buffers in the event risks materialize and to be transparent about prevention and mitigation measures.

An MTFF is usually embedded in a fiscal strategy report, which ideally includes the three main components discussed above. The exact name of a Fiscal Strategy Report can vary with country: Pre-budget Report, Fiscal Strategy Paper (Nigeria), MFMP (*Marco Fiscal de Mediano Plazo* - Honduras, Costa Rica), MMM (*Marco Macroeconomico Multianual*, Peru), Stability Programs (Euro area countries), Programación fiscal (Ecuador) and Pre-criterios y Criterios (Mexico), or the 2022-2028 MTFF Report (Philippines). The IMF Fiscal Transparency Code and the Public Expenditure Financial Accountability Standards provide guidance on the contents of an MTFF and fiscal strategy report.

3. Design Considerations

There is no single model for an MTFF. Countries' design choices will be influenced by their context, technical and institutional capacity, existing institutional structures, and membership of monetary unions. The design choices that countries need to consider when developing an MTFF are discussed below:

- **Coverage**. A key choice is the level of government to be covered: central government, general government (central government and subnational governments) and the nonfinancial public sector (general government and nonfinancial public corporations). Ideally, coverage should be as comprehensive as possible as this promotes fiscal discipline and gives the government a better understanding of its fiscal position, and the ability to anticipate and prepare for fiscal risks. In determining coverage, it is important to match the coverage of the government's fiscal rules and/or objectives with available data. For example, since the EU's fiscal rules cover the general government, this should be the minimum coverage of member countries' MTFFs. Some countries including LIDCs and emerging market economies (EMEs) have more comprehensive coverage (nonfinancial public sector) for example Mexico and Peru. A middle ground could be to cover central government but to address indirectly fiscal issues related to the rest of the public sector through an adequate analysis of fiscal risks, notably from public corporations, social security funds and/or local government. In any case, the MTFF should cover current and capital expenditures, including public investment from externally financed projects.

- **Time horizon**. Determining the number of years the forward estimates should cover is influenced by electoral and planning cycles (for example, a rolling 4-year framework) and regulations under economic and monetary unions. It is also influenced by forecasting capacity and data provision. Typical projection horizon ranges are 3 to 5 years.

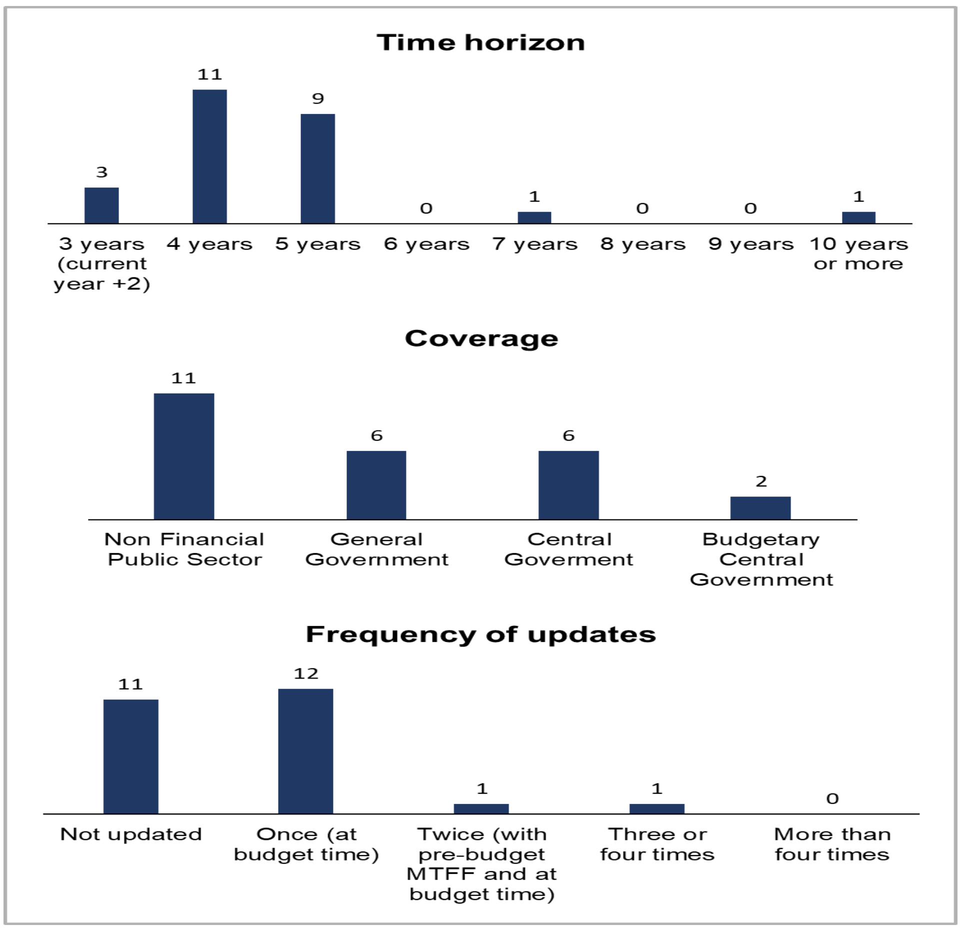
- **Frequency of revision**. Updates to the MTFF need to balance the need for flexibility with maintaining the framework's credibility. Updating too frequently reduces credibility; however, it is important that projections reflect changes in macroeconomic conditions. It is usual to formally update the MTFF twice a year: first at the start of the budget cycle and second if there are changes in macroeconomic conditions, before the budget is submitted to the legislature. If the latter takes place, it is important to explain the reasons for the changes.

- **Fixed or rolling framework**. Governments can have a fixed plan that remains unchanged for the entire period (for example, four years) or a rolling plan that adds a new year annually. Fixed plans offer predictability, while rolling plans provide flexibility to respond to macroeconomic changes. Rolling frameworks are more common with fewer countries using fixed frameworks. Only six OECD countries reported using fixed frameworks (Moretti 2023). Examples include the Netherlands and Finland which establish a four-year fixed framework for the term of each government.

- **Expenditure limits: binding or indicative**. A key part of the MTFF is establishing a top-down limit on total expenditures early in the budget process and presenting multi-year expenditure forecasts and/or limits for total expenditures with the executive budget proposal to the legislature. Limits on total expenditure for the first budget year usually become binding when approved with the annual budget. Policymakers need to choose whether limits are binding for the outer years or indicative (that is, can be modified). A few countries, including 12 OECD countries, have binding ceilings for the budget year plus the outer years (Moretti 2023). Especially with binding frameworks, it is important to consider what reserve margin or contingency is built into the framework to manage uncertainty (notably from revisions in macroeconomic forecasts). For instance, Sweden includes safety margins to allow for growth and inflation surprises based on historical averages. In determining expenditure ceilings, countries need to balance fiscal discipline with other policy objectives, such as economic stabilization and smooth operations. It is not uncommon to exclude from binding ceilings: non-discretionary expenditure such as interest spending or automatic stabilizers (unemployment benefit spending) and highly volatile items.

- **Nominal or real terms**. Most countries set their expenditure ceiling in nominal terms. When set in nominal terms it is generally easy to convey and monitor during budget execution. Ceilings set in real terms are less common as they are more complex to calculate, less transparent and predictable (For more details see Radu 2023 and Ljungman 2007). For instance, nominal ceilings have the advantage of helping curb excess demand pressure that could drive inflation, but at the cost of potentially implying large cuts in real government spending if inflation surprises on the upside. Real expenditure ceilings fully accommodate inflation surprises, which could make inflation more entrenched. Including safety margins in the budget can help mitigate the impact of inflation surprises. Due to higher inflation volatility, ceilings on real spending are relatively more common in EMEs.

Figure 2. MTFF Time Horizon, Coverage and Frequency of Update



Source: IMF Fiscal Affairs Department (FAD) Survey, 2023.

MTFFs can evolve as governments build capacity or data improves and they learn from implementing their initial framework. In practice, countries are at different levels of development; some have basic spreadsheets and others have sophisticated models. Even within the same country the effective implementation of the MTFF can vary over time, influenced by political and technical factors (for example, staff turnover). Figure 2, based on an

IMF FAD 2023 survey,[5] shows the design choices of countries in terms of coverage, time horizon, and frequency of revision of MTFFs. Annex 1 presents the contents of MTFFs for each country in the survey by income group.

4. Challenges in Implementing MTFFs

Governments implementing MTFFs encounter a myriad of challenges. Challenges to implementation derive from political and behavioral factors, weak linkages between the MTFF and the annual budget process and/or the MTBF, inaccurate or unrealistic projections, dealing with uncertainty, lack of basic PFM systems and a credible annual budget, and weak institutional and coordination capacity.

It is not possible to have an MTFF without an annual budget. Some countries, especially LIDCs, can struggle with having an annual budget in place. Without basic annual PFM systems, it is difficult to move to a medium-term focus. Even in countries with developed PFM systems it can be challenging to have a credible annual budget (where the budget outturn is consistent with the approved budget). This can reflect weak budget preparation, for instance, when prepared budgets do not reflect the true costs of programs or due to weak budget execution controls resulting in overspending. Improving the credibility of the annual budget process is important to support the implementation of all medium-term frameworks including MTFFs (Allen 2017; Harris 2013).

Shifting from an annual to a medium-term focus is challenging and requires behavioral changes of politicians and civil servants as well as changes to the annual budget processes (Raudla and others, 2022). Political considerations often dominate budgetary decision making, and short-term political cycles and pressures, can influence resource allocation. MTFFs require the commitment of politicians to medium term fiscal objectives, which can be reinforced by having public support for prudent fiscal management. In countries experiencing political instability this can be especially challenging.

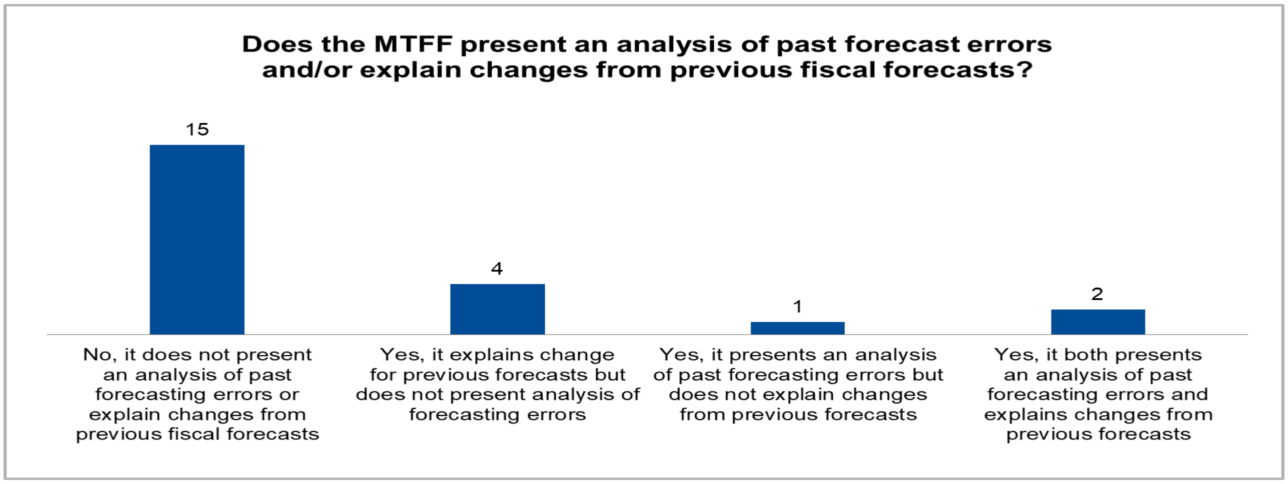
Integrating medium term frameworks with the annual budget process has proven challenging for many countries (Radu 2023). This includes challenges in ensuring that the top-down total expenditure ceiling has a real impact on budget preparation in aggregate and across various spending entities. Failure to do so makes it more difficult to stay within aggregate ceilings during budget formulation and execution. This can reflect weak strategic decision-making procedures and an inadequate budget allocation process. There can be a disconnect between the MTFFs and the MTBF in terms of coverage and consistency, and a failure to reconcile the top-down ceiling with the bottom-up estimates of ministries' spending. In some cases, countries move onto developing an MTBF without fully having put in place an MTFF.

Unrealistic projections can undermine the credibility of the MTFF and lead to difficulties in budget implementation. This can be the result of overly optimistic assumptions or forecast bias, notably for macroeconomic variables or revenue projections. This can be mitigated by greater transparency, for instance, having governments publish their assumptions and information on the accuracy of their projections, comparing their projections with independent or private forecasters, and establishing independent fiscal councils/Institutions. By 2021, 49 countries had fiscal councils (Davoodi 2022), endowed with a role in reviewing/endorsing or in a few cases producing governments' macro-fiscal projections (for example, UK). Beyond fiscal councils, a sound ecosystem of institutions within and outside government, including independent think-tanks, can help promote budget transparency (see, for example, the United States where such players have a key role in the scrutiny of assumptions underpinning federal and State budgets). It is also important for

[5] The IMF Fiscal Affairs Department (FAD) conducted a desk survey of MTFFs in 25 selected countries using a standard questionnaire. Only countries with published MTFFs were selected. Data was collected based on the published MTFFs, capacity development reports, and other secondary sources. This study includes eleven LIDCs and eleven EMEs and three Advanced Economies (AEs). The survey was elaborated with assistance from Chloe Cho, Carlos Herrero García, and Paul Tempelaere.

governments to explain in-year adjustments, deviations from previous years, and publish analysis of forecast errors. However, this is lacking in some countries, especially LIDCs and EMEs (see Figure 3).

Figure 3. Presentation of Forecast Errors in Fiscal Strategy Reports: LIDCs and EMEs



Source: IMF FAD Survey 2023

Challenges related to data availability, quality and reliability are common, which impact the accuracy of forecasts. Accurate and timely data is crucial for MTFFs. Incomplete or outdated data, especially the lack of accurate and timely data on budget execution, can compromise the credibility of medium-term projections. There can also be weak capacity to develop and maintain forecasting tools, or a lack of coordination in sharing information in a timely manner. These considerations are relevant for LIDCs, where capacity constraints are more acute.

Dealing with uncertainty represents a major challenge in multiyear projections and is crucial for maintaining MTFF credibility. Strategies include incorporating different scenarios or sensitivity tests in projections and focusing on how macroeconomic risks impact fiscal projections. This is especially a challenge for countries that are dependent on uncertain external revenues and resource-rich countries that must deal with the volatility in international commodity prices. Recent research provides guidance on how resource-rich countries can design their frameworks (see Basdevant 2021; Eyraud 2023). Frequent changes to the MTFF can also undermine credibility thus the need to balance flexibility with credibility.

Governments have also adopted implicit and/or explicit margins or reserves to deal with uncertainty from forecasting errors and unforeseen events. Implicit margins can take the form of using conservative macroeconomic or expenditure projections. Explicit margins or reserves can be included in aggregate expenditure ceilings, under ministerial or sector ceilings or as a general contingency reserve. The size of the reserve varies across countries and tends to increase in the outer years. One study estimated that for advanced economies, the reserve is typically about 1 percent of total expenditure for the budget year; progressively increasing in size in forward years to between 1.5 to 3 percent (Harris and other 2013). In a constrained fiscal context, the challenge is to decide on the size of the reserve and how to maintain it when there are constant calls for using resources for emergencies, such as climate-related and other challenges. It is important to establish rules on the use of reserves to improve transparency and to prevent constant calls for their use.

MTBFs tend to be more complex and take longer to implement than MTFFs due to the level of detail required. The literature and country experiences suggest that MTFFs have been more widely implemented and have promoted fiscal discipline and enhanced fiscal management (World Bank 2013; Schiavo-Campo 2009). Appropriate institutional arrangements and technical capacity are important considerations for the effective implementation of MTBFs.

Addressing the challenges outlined in MTFF implementation requires a comprehensive approach. This includes political commitment, institutional strengthening, capacity building, and effective coordination among various stakeholders. Section 5 examines how establishing essential institutional and technical arrangements can help address these challenges.

5. Institutional and Technical Arrangements for Effective MTFF Implementation

Establishing effective institutional and technical arrangements for the MTFF is crucial for its successful implementation. When introducing an MTFF, it is important to consider a holistic approach that incorporates its different dimensions—legal framework, institutional arrangements, technical arrangements, and communication strategy—and how they interlink to promote effective implementation. Each of these dimensions will be discussed in more detail in this section.

A. The Legal Basis for an MTFF

It is important to ensure that an MTFF is supported by a robust legal and regulatory framework that provides the necessary authority for its implementation. Integrating MTFFs in a country's legal framework: (i) compels the authorities to prepare and update the MTFF regularly and ensure continuity beyond political administrations, and (ii) gives the MTFF a legal status that allows it to be debated in Parliament, thereby enhancing accountability. In some cases, a government may initially wish to have an MTFF without a dedicated legal basis. For example, when an MTFF is first being developed, it may start out as an internal exercise, to give time to develop capacity or when a new government starts its term and needs to swiftly outline its fiscal policy going forward.[6]

The legal requirements mandating the production of an MTFF can be incorporated into a general PFM law or a FRL. Given the importance of an MTFF in the conduct of fiscal policy and the interactions between the executive and legislative branches, only a high-level legal document is suitable for formalizing the requirement to produce an MTFF. The decision to embed the MTFF in a PFM law or an FRL depends on a country's legal traditions and the relationship between the executive and legislative branch. In some countries, the MTFF is included in comprehensive PFM legislation, which outlines the main rules governing PFM institutions, processes, and the budget cycle. This approach is common in many Francophone countries, where the MTFF is included in organic budget laws and in some Latin American countries where the PFM law includes fiscal rules (for example, Ecuador). In other countries, the MTFF is embedded within an FRL (for example, Angola and Peru). The FRL elaborates the rules and procedures relating to three budget principles: accountability, transparency, and stability. Typically, an FRL includes fiscal rules and mandates the publication of an MTFF to present the government's fiscal targets and its strategies for achieving them. More recently, FRLs or other laws have established fiscal councils which provide an independent public assessment of the credibility of macroeconomic forecasts and assumptions, and the fiscal path outlined in the MTFF. Neither approach—FRL or overall PFM legislation—is inherently superior. However, the adoption of a FRL may attest to a greater level of political ownership of the fiscal strategy.

The overarching principles of the MTFF should be set out at the legislative level while details on its requirements and responsibilities can be part of secondary legislation. The legal framework for MTFFs can include technical elements, and/or outline institutional responsibilities within the government and/or for outside partners. However, it seems preferable to strike a balance in terms of precision and depth of the elements covered in the legislative framework. Devolving detailed elements of the process and responsibilities of an MTFF to secondary legislation (such as executive acts like decrees or decisions) allows for more operational flexibility. It is also compatible with building capacity and progressively enriching the informational content and coverage of the MTFF over

[6] The European Union's Financial Perspective which was initiated in the late 1980s is an example of a multi-year framework started without a legal basis which was created only by the Lisbon Treaty in 2008 with the introduction of the Multiannual Financial Framework.

time. This enables a gradual alignment with international standards for content and publication of MTFFs. These standards are captured by the Open Budget Survey (OBS), the IMF's Fiscal Transparency Code (FTC) and the Public Expenditure and Financial Accountability (PEFA) framework. An example can be found in the Côte d'Ivoire legal framework, where the law only defines very broadly the content of the MTFF, while a ministerial decision outlines the process whereby a dedicated committee prepares the MTFF for approval by the political leadership.

Details vary across countries. In EU countries, the details are in the EU Code of Conduct along with the templates and contents to be applied by all member countries. In Ecuador, the Organic Code of Planning and Public Finance (2020) sets the general requirements of the MTFF including the calendar, the time horizon and that the binding first year, while the regulation sets out the detailed contents. Table 1 sets out the MTFF specifications that countries define in their legal framework either in primary or secondary legislation. The most common specifications are on coverage of the MTFF and on the timeline for publishing the MTFF. The least common is a requirement on the frequency of updates.

Table 1. MTFF Specifications Defined in Legal Framework

Does the legal basis for the MTFF define the following?	Yes	No
Calendar for preparing MTFF	74%	26%
Requirement and timeline for publishing MTFF	95%	5%
Frequency of updates to MTFF	36%	64%
Coverage of MTFF (Central Government, General Government, Public Sector)	95%	5%
Requirement to present MTFF to Parliament for information or approval	59%	41%
The entities involved in preparing the MTFF	65%	35%

Source: FAD Survey, 2023.

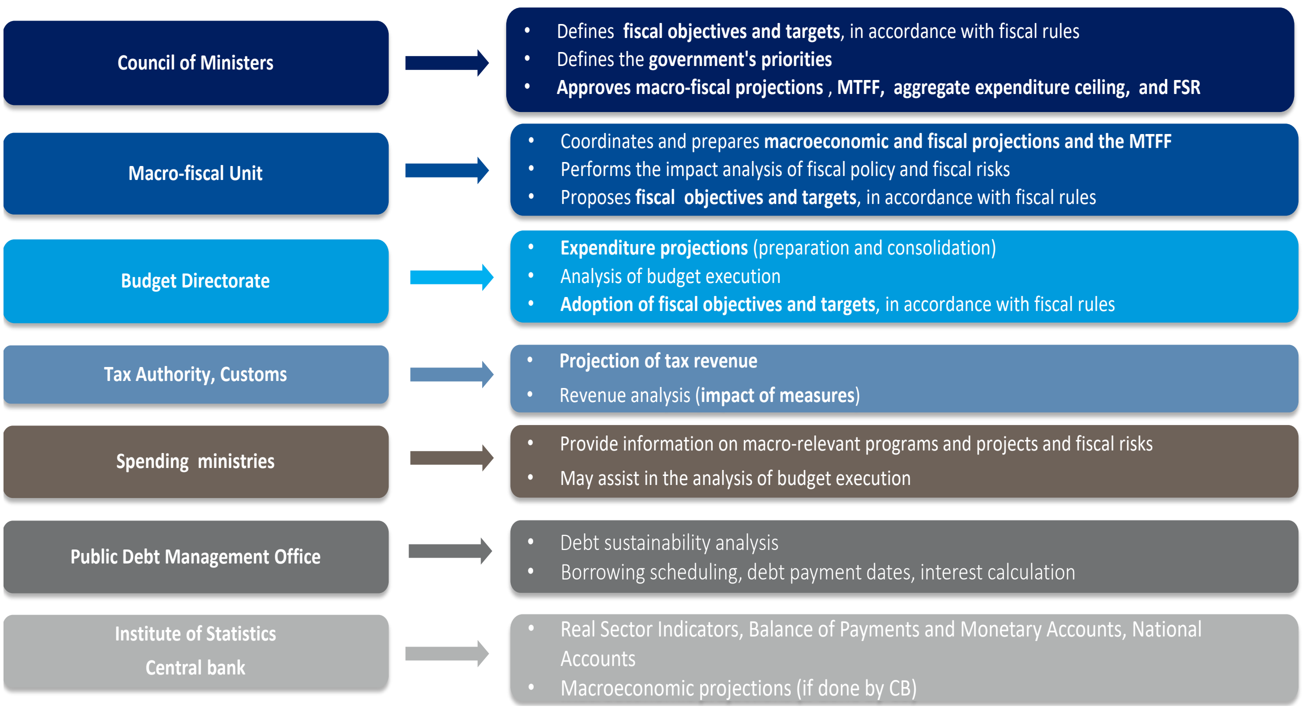
B. Institutional Arrangements

Linking the budget process and the MTFF—Enhancing Coordination

The preparation of an MTFF is by its nature a complex and iterative process, involving a range of stakeholders. Given the components outlined in Section 2, MTFF preparation needs to bring together both in-depth technical expertise (such as macroeconomic forecasting, fiscal expertise, and assessment of fiscal risks) and political ownership, as the MTFF is instrumental for the fiscal policy stance. Figure 4 outlines the main actors typically involved in the MTFF preparation process and their responsibilities, starting with the more strategic actors (political leadership and key technical actors in charge of coordination the process) alongside other actors providing inputs, which are important for the quality of the overall process.

Various organizational arrangements can be used to enhance coordination and steer preparation of the MTFF. In general, a dedicated Macro-Fiscal Unit (MFU) leads the technical work on the preparation of the MTFF, preparing macroeconomic and fiscal projections and proposing fiscal targets or aligning them to fiscal rules.[7] The MFU should have a coordinating role between the Budget Directorate and other actors, notably the revenue and non-tax revenue agencies as well as the public debt management office, which is a key partner to give assurance that the fiscal deficit can be financed and to provide information on disbursements and debt service assumptions. The MFU prepares macroeconomic scenarios, revenue and expenditure projections, and models policy impacts. Such arrangements can be found in many countries that prepare MTFFs, for example in most of Anglophone Eastern and Southern Africa countries (Battersby and Lienert 2021), European countries, and Latin American countries. In other countries, the work on the MTFF is steered from within the Budget Directorate, via a unit or division in charge of cross-cutting issues and strategic budgeting. In yet others, it is another unit in the Ministry of Finance (MoF), or the Ministry of Economy or Planning. Countries like Egypt, Saudi Arabia and Slovakia have established an MFU while in Francophone countries, the Budget Directorate often plays the leading role for the MTFF in close coordination with services in charge of macroeconomic forecasting.

Figure 4. Main Actors and Roles and Responsibilities in the Preparation of an MTFF



Source: IMF Staff.

Coordination and data sharing is essential, it can be achieved through formal or informal collaboration. This can take the form chiefly of bilateral meetings between the lead actor and other stakeholders, or a more structured cooperation through a macro-fiscal working group bringing together all stakeholders led by the unit in charge of the macro-fiscal function. The latter option has been chosen for example in Côte d'Ivoire through the establishment of a dedicated committee (the Programming Committee), which includes representatives of the Budget Directorate (lead), General Directorates for Economy, Tax and Customs, Planning and Decentralization, as well as representatives from the Central Bank, the PPP Unit and the main Social Security Funds. Formalizing the coordinating arrangements promotes understanding of the roles of each entity, as does having a calendar detailing the timing and the information to be shared with the lead unit MTFF unit. For instance, documenting the

[7] The organization of the macro-fiscal function is addressed in detail in an IMF Technical Note on the Macro-fiscal Function and its Organizational Arrangements, which lays out various options with work steered by one or several departments within the MoF, collaborative work between the MoF and the Ministry of Planning and the involvement of outside institutions including fiscal councils.

process in a manual may also help to clarify the responsibilities (for example, in Costa Rica). However, most countries do not have such formal stipulations in place.

Aligning MTFF with the budget cycle and budgetary decision making

The cycle of MTFF preparation needs to be aligned with the overall budget preparation process. The MTFF feeds into the budget process, as it is instrumental in establishing the aggregate budget ceiling. To enable proper top-down budgeting, this information must be provided early enough in the budget cycle, so that spending entities are informed of their sectoral ceilings.

The Cabinet/Council of Ministers has a key role to play in the process. The cabinet should define the government's fiscal objectives and/or targets (in line with fiscal rules, if the government has them), which guides the MTFF, and sets out government's fiscal strategy and key priorities. It should approve the MTFF, the aggregate expenditure ceiling, and the fiscal strategy report (FSR). In some countries, a separate Fiscal Policy Committee has been established to engage politicians at the highest levels in these decisions, to promote fiscal management, and to coordinate with key ministries across government. For example, in Thailand and Malaysia the Fiscal Policy Committee is chaired by the Prime Minister (PM) and in Malaysia it is supported by a Secretariat in the Treasury (MoF).

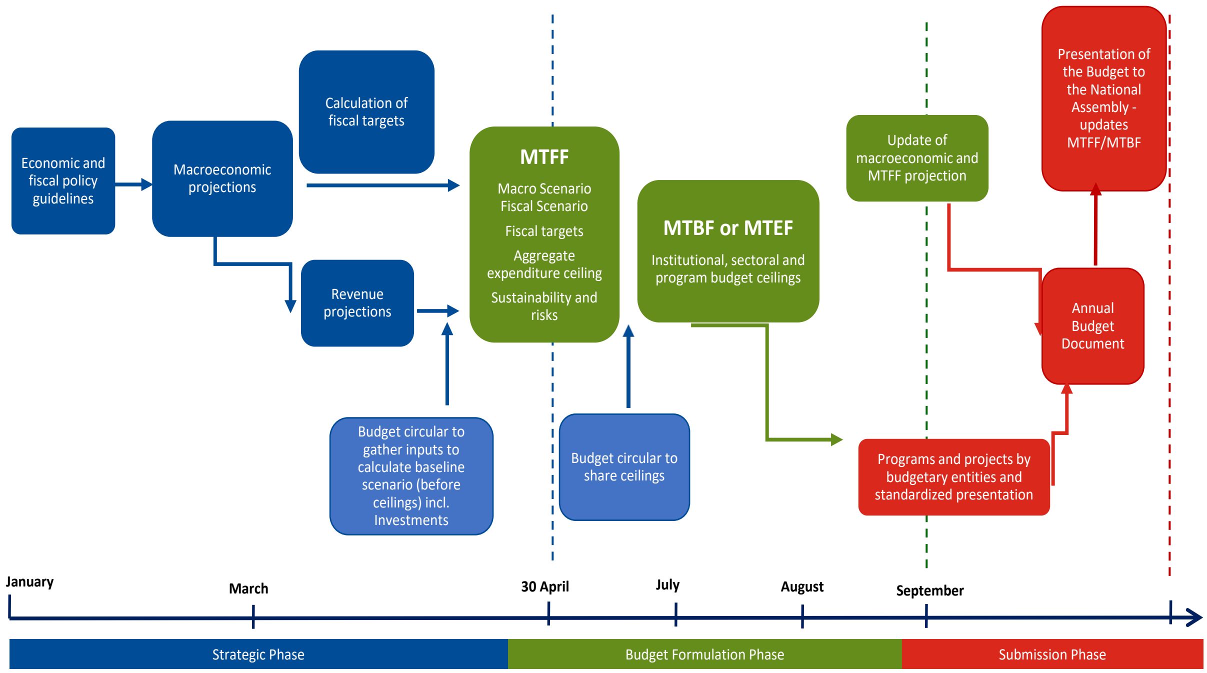
The aggregate ceiling on expenditures once established and agreed with Cabinet needs to be respected in the budget process. Having Cabinet/PM approval guarantees a degree of commitment to the MTFF's aggregate fiscal targets/limits beyond the MoF. Spending ministries and agencies also become committed to these targets/limits and the overall fiscal policy stance in the MTFF. It puts the MoF in a stronger position to start the budget negotiation within a "top-down" budgeting process, whereby overall constraints are considered prior to the allocation of sectoral ceilings. A reserve can be set aside in the initial ceiling to deal with challenges from spending ministries. In case of major changes in the aggregate expenditure ceiling, before the budget proposal is sent to the legislature, an explanation should be provided in the MTFF update.

The calendar of the MTFF preparation and publication needs to be aligned with the budget cycle. The MTFF should be prepared and published several months before publication of the Executive's Budget Proposal and before providing the budget ceilings to the sectors. Figure 5 shows a timeline for linking the MTFF to the different stages of the budget cycle including the strategic, budget formulation, and approval phases.

The publication date of the MTFF should allow enough time to incorporate the final outturn of the preceding fiscal year. For example, in the WAEMU / CEMAC frameworks, the MTFF is expected to be available by the end of June, enabling enough time for the final outturn data to be available, and the Budget proposal is published in early October, leaving around three months to proceed with the detailed breakdown of the aggregate ceiling between ministries or policy areas. The Euro area requires its members to publish the MTFF report (Stability Program) before the end of April and its update in October (Draft Budgetary Plan) just after the budget submission is evaluated by the EU Commission.

Updates to the MTFF may be needed during the later phases of the budget preparation process. Between the time of the initial MTFF report and the submission of the Budget proposal, new developments (for example, changes in the economic environment) can require an MTFF update to ensure full consistency between the revised MTFF and the published Budget proposal or the enacted budget. It is important to ensure traceability of the changes made. Some countries choose to update MTFFs within the fiscal year. However, this blurs the distinction between a "framework" (a fixed set of objectives with a normative dimension, based on assumptions taken at a set point in time) and a "forecast" (which evolves and reflects all information available at a given point in time).

Figure 5. The MTFF and the Budget Cycle



Source IMF Staff.

C. Technical Arrangements

Multi-year macroeconomic and fiscal forecasts are at the core of the MTFF. Forecast methodologies vary depending on institutional capacity and data quality. High quality data and strong institutional capacity allow for the use of sophisticated models. This section provides a general overview of a spreadsheet-based projections tool.

It is common for countries to develop their MTFF projections tool within a spreadsheet environment, especially when data and capacity is limited, although other types of tools can be considered. Box 2 describes how to set up an MTFF spreadsheet. The starting point of a MTFF is a set of macroeconomic projections over a multi-year horizon. This tool brings together historical macroeconomic data, fiscal data and forecasts prepared or published elsewhere and uses formulas to forecast fiscal and potentially other variables two or more years into the future (Box 2). MTFF spreadsheets tend to be built-from-the-ground-up and tailored to country-specific definitions and terminology, rather than being an “off-the-shelf” template. It is particularly important to use classifications for revenues, expenditure and financing that are used across government, for example, the classification used in the budget documentation or fiscal statistics. This helps consistency and understanding by senior management and other stakeholders. Other econometric tools can be used to complement the analysis.

Box 2. The Basics for Setting Up an MTFF Projection Tool

MTFF projection tool can be designed along the "Inputs, Calculations, Outputs" format. This layout, applicable to most spreadsheet models, clearly defines different parts of the spreadsheet, making it easier to follow, to update, and to spot errors and inconsistencies. In practice this design can be implemented through having:

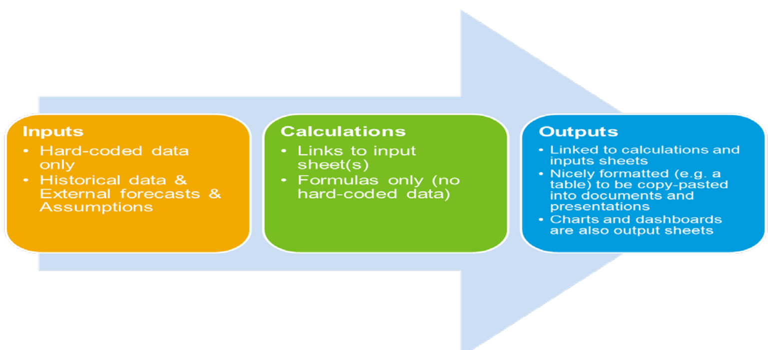
"Input" sheets containing for all relevant variables hard coded historical data and macroeconomic forecasts as illustrated in the figure below for macroeconomic assumptions, revenues, expenditures, and financing data.

"Calculations" sheets that are linked to the Input sheets and contain the formulas that produce the projections. These sheets are made for revenue, expenditure and financing. It is good practice to separate the baseline forecast from the policy scenario, showing the impact of policy measures in a separate sheet. There will be iteration between the impact of these policy measures and the macroeconomic variables forecast.

"Output" sheets that link to the Input and Calculation sheets and are formatted into tables and charts that can be copy-pasted into reports and presentations. This concept and other spreadsheet good practices are illustrated and detailed in Annex 3.

While each country will have its own priorities (that is, a resource-rich country may put more effort in forecasting its production of a given commodity and associated revenue), efforts should focus on producing projections for the main fiscal aggregates (revenue and expenditure with an economic classification, deficit, primary balance, borrowing and debt) as these are key inputs into the annual budget preparation process.

Figure 6. Inputs, Calculations, and Outputs Model



Source: IMF Staff.

Data consistency is important within an MTFF projections tool. A MTFF spreadsheet is a framework, meaning all parts are linked together to form a consistent whole. In practice, this means that within the MTFF spreadsheet there should only be one set of GDP, inflation, exchange rate and any external forecasts, included in the MTFF estimate using the same assumptions. Failure to adhere to this principle can yield inaccurate results. Over time developing feedback loops, whereby, for example, changes to government spending impacts on GDP, can be considered, helping to further improve framework consistency.

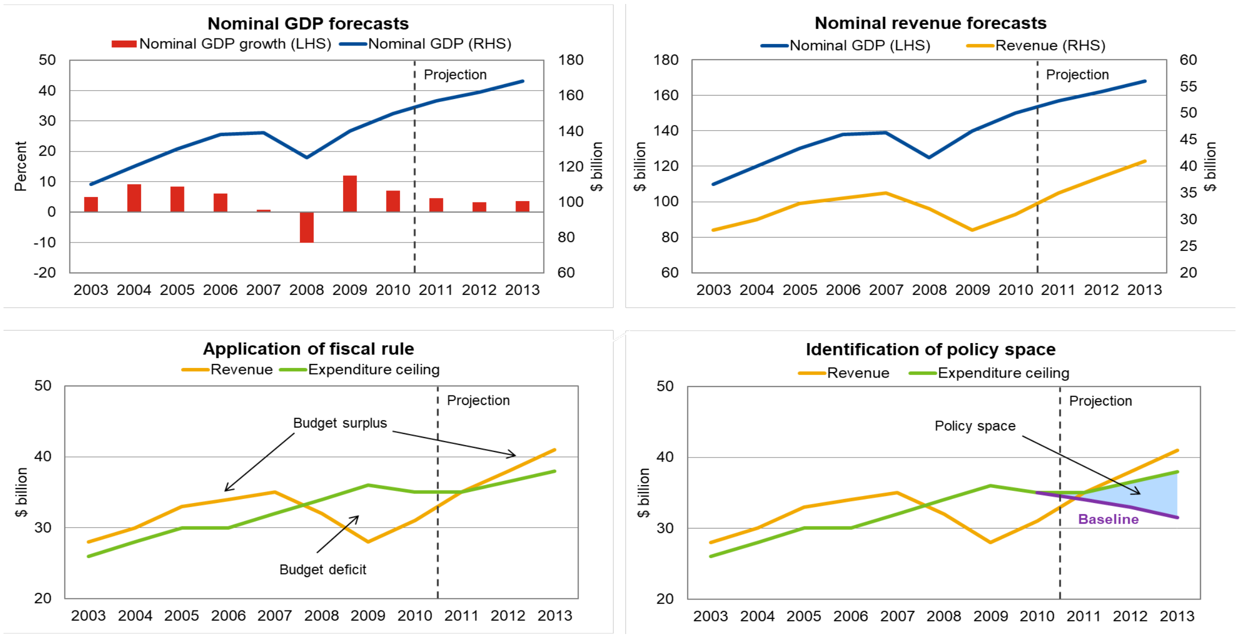
Consistency is also important across government. If, for example, the Ministry of Planning is responsible for producing GDP forecasts, and the Central Bank for inflation, each institution should be using the same set of source data, and through discussion and agreement, the same assumptions. Coordination between analysts in different institutions is vital to ensure consistency both within the MTFF and across other economic and financial modelling being done elsewhere in government. (See Section 5b for discussion on coordination options).

Forecasting fiscal variables into the medium term is a key part of a MTFF spreadsheet. The forecasts can be divided into six stages as summarized in Table 2, illustrated in Figure 7 and discussed in detail in Annex 3.

Table 2. The Stages of Developing a Basic MTFF Spreadsheet

Stage 1: Forecasting baseline revenues	**Stage 2: Forecasting baseline expenditures**	**Stage 3: Forecasting the debt stock and interest payments**
Government revenues (tax and non-tax) Grants from development partners	Wages and Salaries Use of Goods and Services (including operations and routine maintenance spending). Subsidies and current transfers. Capital expenditure.	Net borrowing (target) and the debt stock Scheduled repayments of existing debts. Interest payments (linked to the debt stock).
Stage 4: Fiscal balance and Financing	**Stage 5: Policy scenario**	**Stage 6: Realism assessment and risk analysis**
Primary and overall fiscal balance or borrowing needs. Sources of financing for new borrowing.	Calculated as the difference between the baseline revenue and baseline expenditure compared to the agreed deficit and expenditure ceilings. Iteration for new policies and new capital projects to calculate the policy scenario. Compare to the debt limit (if any) and iterate again with new policies and new projects to calculate the policy scenario. Alternatively, a policy choice could be to save and build buffers.	Are the forecasts plausible - in particular forecasts for gross financing and the ability for government to borrow the required resources? Risk analysis - sensitivity analysis to determine which variables and assumptions are most critical. Scenario analysis to test fiscal outcomes under a plausible 'worst case' scenario of lower growth, higher inflation, higher interest rates, and other adverse events.

Figure 7. Expenditure Ceilings, Baselines, and Policy Choices



Source IMF staff.

Stakeholder engagement is critical for a successful framework. If senior management trust the framework and request that it is updated and used to inform decision making, this provides incentives for technical staff to maintain the MTFF spreadsheet (Box 3). Conversely, MTFFs established through a development partner project to meet an externally imposed benchmark can prove difficult to sustain once the project ends and demand for its output ceases. This is especially the case when local staff do not have the skills or there is a lack of ownership of the MTFF (Allen 2017; Schiavo-Campo 2009).

The size and complexity of the MTFF spreadsheet should be determined considering the government's capacity, number of staff, and rates of staff turnover. Low staff turnover allows for more complexity, and a larger staff allows for more components (Battersby 2019). While a larger and more elaborate MTFF spreadsheet *may* increase its usefulness and accuracy, this can come at a cost to its usability and sustainability. Thus, care needs to be taken to balance these tradeoffs.

As with any spreadsheet tool or model, training, user manuals, step-by-step guides and similar materials are essential to building institutional memory. Documenting the spreadsheet, having staff create narrated screen recordings showing how to use the spreadsheet, using cell notes and other methods to explain where data comes from and how a formula works, all help to retain institutional knowledge and mitigate the risks of staff turnover. The most challenging part of updating an MTFF spreadsheet is when moving to the next financial year, and how to do this needs to be carefully documented. Online training for staff involved in MTFF spreadsheet development is available on the IMF website.[8]

[8] The IMF has online training available on fiscal forecasting that goes into more detail on many of the topics discussed in this section. These materials are available on the Edx platform under IMFx (edx.org/school/imfx).

Box 3. Common Technical Features of Successful Frameworks

Frameworks that are embedded in standard routines of the MoF tend to have some or all of the following features:

Technical elements

- **They use appropriate technology** typically preferring the openness of spreadsheets rather than using 'closed' bespoke software.
- **Spreadsheets follow an "inputs – calculations – outputs" approach** helping to organize the file so that new users and a wider audience can understand how the forecasts are made (see Box 2).
- **The budget projections are directly linked with the MoF's chart of accounts or fiscal statistics** using a format well understood by senior management and others in government helps build traction and understanding.
- **They are set up to allow sensitivity analysis to be modelled**. This typically means that the user only needs to change one or two cells to model the impact of a change in GDP growth or inflation forecast.
- **They are often "homemade."** Creating a home-grown solution involves an important learning and discovery process that builds ownership and understanding that can be lacking in standardized or templated solutions.

Stakeholder engagement and coordination

- **Formal processes exist**, for example, Macro-Working Groups or regular sets of bilateral meetings. Typical stakeholders outside the MFU include the MoF's revenue agency, budget and debt departments, the statistics office, planning ministry if needed and the central bank.
- **Circulated versions of the framework are limited**. A limited number of versions of the framework and its forecasts should be circulated to other stakeholders during the year. This helps ensure everyone is working with the same set of numbers, reducing questions and confusion.
- **Appropriate timing**. The framework should consider the release of data (for example, national accounts, final budget outcomes) and the demands of the budget calendar, so that macro-fiscal forecasts are ready to guide the budget preparation process, such as setting the overall annual and multiyear expenditure ceiling.

D. Communication of the MTFF

Publishing the MTFF in a fiscal strategy report (FSR) enhances the transparency of public finances. Over time, this can increase trust in the government's ability to manage its finances, and this can have a positive impact on macro-fiscal outcomes.[9] The FSRs should offer clarity on the government's fiscal policy intentions, promoting informed public debate on the medium-term outlook and policy choices. FSRs should be analytically robust, consistent in content and format, after initial capacity building, and user-friendly to ensure effective communication. The quality of FSRs varies across countries, in terms of content and presentation. As governments build capacity, more content can be added (See Section 2b) and quality and presentation can be improved.

It is important to have a sound communication strategy in place before the FSR's publication. This may include presentations by the head of government to the legislature, press releases, and meetings with key stakeholders (for example, national media and investors). Effective communication of government's fiscal strategy and plans can help bolster credibility, especially when combined with a clear commitment to deliver on plans, a good track record of fiscal performance, and strong fiscal institutions (End and Hough 2022). Research suggests that

[9] Research highlights the role of fiscal transparency in generating more favorable economic outcomes (Hameed, 2005), and better market borrowing conditions (Arbatli and Escolano, 2015). When governments effectively communicate their fiscal plans to the public this enhances credibility, especially when combined with strong fiscal performance, fiscal rules, and strong fiscal institutions. Improved credibility in turn is associated with more favorable sovereign financing conditions (End and Hough 2022). For a discussion on how the use of fiscal rules tends to lower sovereign spreads and how rules act as a commitment device and signal future policy actions (Eyraud 2018)

markets reward credibility with more favorable borrowing costs (End 2000 and End and Hough 2022). This provides an incentive for political leaders to pay attend to fiscal credibility but also to ensure that they have realistic fiscal plans which are implemented. To this end, it is important that the government be committed to implementing its fiscal plans and that the MTFF and the FSR be perceived as key policy decisions within the government, fostering discussion, endorsement, and commitment to implementation within the cabinet, rather than being viewed as merely technical exercise.

Reporting and monitoring on the government's fiscal performance is crucial. Following FSR publication, ongoing monitoring and reporting on forecasts versus outcomes allows assessment of forecast reliability and fiscal performance. MoFs traditionally oversee reporting and analysis, including monitoring annual budget execution and multiannual projections versus initial targets. Conducting monthly or quarterly reporting and analysis of budget execution and formal mid-year budget reviews provide opportunities to assess the budget outturn against the initial budget and fiscal targets, and to adjust as required. Deviations against the previous set of forecasts or forecast changes should be analyzed and published in a dedicated section of the FSR. As noted in Section 4, this can be an important gap in monitoring, especially in some EMEs and LIDCs.

The legislature and fiscal councils can play important roles in monitoring fiscal performance. Legislatures should hold governments accountable for fiscal performance, through legislative discussions and hearings. In several countries, functions of fiscal councils include assessing or endorsing government forecasts, providing an opinion on the MTFF, and monitoring compliance with fiscal strategies and/or rules. However, a fiscal council is not a panacea to ensure government accountability. This depends on the council's capacity level, the availability of expertise and resources, and the level of public interest. In low-capacity countries, it often falls to the supreme audit institution, the legislature, and the media to hold governments accountable.

6. Country Examples—MTFFs at Diverse Capacity Levels

This section highlights the salient experiences of MTFF implementation across AEs, EMEs and LIDCs. The discussion also touches upon experiences of resource-rich countries and members of currency unions. Annex 1 contains details on the contents of MTFF in select countries by income group based on data from the IMF Fiscal Affairs Department 2023 Survey. Annex 2 discusses the requirements and experiences of economic and monetary unions (EU, ECCU, WAEMU and CEMAC).

A. Advanced Economies

AEs have long-standing experience with the implementation of MTFFs and MTBFs. In the late 1980s and early 1990s, only a few AEs followed Australia's lead in this budgetary reform. From the mid 1990s, more OECD countries began to develop MTFFs and EU countries established medium-term frameworks for fiscal planning to support fiscal targets set as pre-conditions for monetary union.

AEs with firmly established medium-term fiscal and budget frameworks have typically adopted a single, harmonized classification system for multi-year projections, annual budgets, and final accounts (Harris and others 2013). In the United Kingdom (UK), multi-year departmental expenditure limits, annual ministerial budget estimates, and final departmental accounts are all presented in accrual terms. In addition, OECD countries have been increasingly using spending reviews to complement the multi-year budgeting process, which helps to identify savings measures to expand the policy room available for new priority expenditures. Box 4 provides a summary of selected AE experiences in implementing MTFFs. AEs continued to evolve and innovate their MTFF approach. In the UK, for example, the Independent Office of Budget Responsibility (UK Fiscal Council) is responsible for producing the official economic and fiscal forecasts. In Sweden, the government incorporates climate targets in the budget, while Australia produces an intergenerational report that assess the long-term sustainability of policies.[10]

Box 4. Select Advanced Economy Country Examples

Australia's fiscal policy framework is laid out in the Charter of Budget Honesty Act 1998 (Commonwealth of Australia 2014). The framework provides for "constrained discretion," advocating a principles-based approach rather than a numerically oriented, rules-based fiscal framework. The Charter lays out procedures for setting fiscal objectives based on its "Principles of Sound Fiscal Management". The fiscal objectives comprise the medium-term fiscal strategy, which is defined in a "Fiscal Strategy Statement" as part of the annual budget documents. The government publishes its fiscal strategy and prepares estimates for the budget year and the following three financial years, on a rolling basis (OECD 2019). There is extensive reporting required to transparently present the fiscal outlook, including the budget itself, a Mid-Year Economic and Fiscal Outlook, and a final budget outcome report (Dizioli and others 2017). There is also reporting on the fiscal situation when an election is called and costing of proposed measures in political parties' platforms during elections. Fiscal strategy documents include fiscal risk assessment such as macroeconomic risk and fiscal risks to revenues and expenditures. Moreover, the Intergenerational Report provides an assessment of the long-term sustainability of policies, with an explicit consideration of demographic issues. Budget balance policies have been at the center of all successive Governments' fiscal strategy statements since 1996. Overtime, policies related to levels of (net) debt, levels of net (financial) worth, caps on the tax share of GDP, or a cap on expenditures, among others, have been included.

In **Sweden,** a MTFF has been applied to virtually all aspects of budget preparation since 1997 (Ljungman 2007). The MTFF's three-year horizon has enabled better fiscal discipline using fiscal targets and advanced forecasting models. Emphasis is placed on ensuring the consistency and quality of forecasts. An integrated computerized budget management system has significantly improved the capacity to produce complete medium-term forecasts of all central government revenue and expenditure five or six times a year. The organic budget law enabled the government to propose to the Riksdag (unicameral parliament) a ceiling on central government spending and made mandatory the presentation of a medium-term fiscal scenario setting expenditure ceilings for future years (Helio 2021). The MoF's Economic Affairs Department develops macroeconomic and revenue forecasts, while the Budget Department is in charge of expenditure forecasts. Since 2007, Sweden's independent Fiscal Policy Council analyzes the quality of the official fiscal forecasts, whether budget policy targets are being met, and medium-term fiscal sustainability issues. Importantly, Sweden's Climate Act (2018) establishes that the government's climate policy must be implemented in a manner that enables climate targets and budgetary targets to interact. The act requires the government to present a climate report in its budget bill each year and draw up a climate policy action plan every fourth year to describe how the climate targets are to be achieved (Aydin and others 2022).

The **UK** has an MTFF to support debt sustainability and affordability (Renteria and others 2022). The MTFF, which is developed prior to budget preparation, aligns budget preparation with the government's fiscal sustainability goals and public investment plans. The Charter of Budget Responsibility stipulates how the MTFF works and the interaction between the Treasury and the Office of Budget Responsibility (OBR) during the budget process. The OBR produces independent detailed five-year forecasts for the economy and public finances twice a year, which the government uses to produce its budget documents. OBR produces economic and fiscal forecasts through an iterative process which includes the Treasury producing a 'scorecard' of costings of the Chancellor's policy measures.[11] The Treasury, using OBR's forecasts, works with departments to prepare a budget proposal that differentiates between multi-year current and capital spending. OBR also plays a role in costing annually mandated expenditure. In addition to publishing its forecasts, the OBR publishes fiscal risks and sustainability reports, which assess the long-term trajectories of major fiscal aggregates and a public sector balance sheet providing a view on the overall sustainability of public finances. Instead of setting numerical debt targets or limits, the Charter includes a fiscal mandate. In February 2023, the Government set itself a new mandate for fiscal policy: to have public sector net debt (excluding the Bank of England) as a percentage of GDP falling by the fifth year of the rolling forecast period. Moreover, the MTBF comprises a set of 25 to 30 ministerial spending ceilings, which are used to enforce aggregate spending control and define broad ministerial priorities and are set for a two- or three-year period in nominal terms (Harris and others 2013). A broader range of items, including interest expenditure, social security entitlements, and unemployment benefits, are not covered by any medium-term expenditure commitments.

[10] See Caselli F, A. Lagerborg, and P. Medas (2024) for a discussion on integrating climate considerations into MTFFs.

[11] For more details on the process see https://obr.uk/forecasts-in-depth/forecast-methodology/#process.

B. Emerging Markets Economies

Following the development of MTFFs in the AEs, various EMEs established MTFFs as part of wider fiscal and PFM reforms. Since the 2000s, EMEs in Latin America have been implementing MTFFs, in many cases accompanied by FRLs (Filc and Scartascini 2010). These include resource-rich countries such as Chile, Colombia, Mexico, and Peru. As discussed in Section 5, FRLs and PFM Laws contained provisions establishing numerical fiscal rules and mandating MTFFs and enhanced fiscal reporting.

While the objectives of fiscal policy in resource-rich countries are similar to other EMEs, dependence on fiscal resource revenue raises a number of specific issues for fiscal policy. These require the adaptation of fiscal frameworks to incorporate the special characteristics of these revenues (Ossowski and Halland, 2016). Specifically, key elements of fiscal frameworks for resource-rich countries should include fiscal strategies to deal with short-term resource-related volatility, managing resource-related fiscal risks and development of strong PFM practices. Important features of PFM practices for resource-rich countries comprise a strong and credible MTFF, which, in turn, requires the ability to produce robust and realistic forecasts and conduct risk analysis, combined with robust budget execution, cash and debt management, and accounting and reporting (Basdevant and others 2021). Also, the coverage of the MTFF could be expanded from general government to non-financial public sector to capture natural resources related public corporations.

Box 5 presents the experiences of various EMEs, including resource-rich countries, where PFM reforms and legislation support the design and implementation of MTFFs. The country examples underscore some notable aspects. Chile is known for its resource-rich framework and has been largely successful in shielding its budget from resource price volatility. Colombia is noteworthy for its MTFFs over 10-year projections and comprehensive fiscal risk analysis. The Costa Rica example illustrates the development of an MTFF overtime and the garnering of political support. The Thailand example highlights the use of a Fiscal Policy Committee to secure high-level political engagement and promote inter-ministerial coordination. Poland demonstrates efforts to integrate national development plans with the MTFF. South Africa is a successful example of strong budget transparency and linking the MTFF to the MTBF.

Box 5. Select Emerging Market Economy Country Examples

In **Chile**, the Financial Management Law requires the MoF to develop a MTFF. The MTFF is derived from the structural balance rule which has helped insulate Chile's budgets from volatility in resource prices by netting out the cyclical impact of key variables that affect central government income, the level of economic activity, and the prices of copper and molybdenum. The MTFF is prepared by the MoF and has been published since 2000. The main macro-fiscal projections for a four-year period are presented in the third quarter Public Finance Report (PFR), which is submitted in late September to the legislature along with the draft budget. In addition, the MTFF is updated every three months as part of the quarterly PFR to reflect changes in macroeconomic parameters and (possibly) to the fiscal objective, with the most updates in the third quarter report. The MTFF includes macroeconomic assumptions and income and expenditure projections. It also includes details on specific issues such as commodities and copper markets, which are of high important to the Chilean economy. It presents the projection of the budget balance of the consolidated central government, which incorporates the structural fiscal surplus target. An aggregate ceiling for maximum expenditure compatible with the structural balance rule is calculated based on projections for total cyclically adjusted revenue (Curristine and others 2021). The aggregate expenditure ceilings set for the outer years covered by the MTFF are indicative. The MTFF expenditure ceilings are complemented by expenditure baselines (or committed expenditures) for central government, presented at the aggregate level and maintained by the Budget Directorate. These expenditure baselines are presented over the same timeframe as the MTFF in the quarterly PFR and correspond to the amount of spending perceived as necessary to continue the operation of public services, based on present commitments. The combination of the MTFF ceilings and "committed expenditures" enables the assessment of the fiscal policy room.

In **Colombia,** under the 2003 Fiscal Transparency and Responsibility Law, there is a legal obligation to prepare and submit a MTFF for a period of 10 years with the draft annual budget. The 2023 MTFF provided projections for 2023-34, thus for the first time covering a 12-year period. The MTFF guides the preparation of annual budgets and other instruments, such as the MTBF, the annual Financial Plan, and Annual Investments Operating Plan. The content of the MTFF is legally regulated and includes an analysis of macro-fiscal results observed in the previous fiscal period and medium-term macro-fiscal forecasts. It also contains an analysis of the international macroeconomic context and its effects on national economic activity and the fiscal situation, and a description of the fiscal strategy. In 2011, Law 1473 2011 established fiscal rules and an independent fiscal council, Comité Autónomo de la Regla Fiscal, this was modified in 2021 by the new Social Investment Law. The fiscal council's mandate includes monitoring compliance with fiscal rules, providing the calculations of oil and economic cycles for the structural balance rule, and publishing its technical opinion on the MTFF. The 2021 Law revised the fiscal rule to include a debt limit (71 percent of GDP) and a debt anchor (55 percent of GDP) and a primary structural balance formula, depending on the distance to the anchor. A fiscal risk assessment is also published as a chapter of the MTFF that includes macroeconomic risks, pensions, guarantees, court rulings, PPPs, and natural disasters with quantification. The government also conducts analysis pertaining to the macro-fiscal program including stress-testing and scenario analysis for external and internal shocks (Salazar 2013). This analysis feeds into projections for revenues, expenditures, and debt dynamics, with scenario analyses modeling how these indicators fare under different scenarios. The MTBF has been prepared since 2006, and its estimates are based on the expenditure ceilings established in the MTFF, in line with the fiscal rule.

Costa Rica is a successful example of the development of an MTFF process underpinned by strong political support. The aim of the MTFF is to provide for a clear debt reduction strategy in line with the fiscal rule and improve the credibility of the budget process with a top-down approach. Building on previous efforts to enhance economic and fiscal forecasting capacity, in 2021 Costa Rica published its first MTFF (*Marco Fiscal de Mediano Plazo*) for the central government. In 2022, following IMF technical assistance (TA), the coverage of the MTFF was extended to the Non-Finance Public Sector. The MTFF's general requirements and calendar were included in the 2018 Fiscal Responsibility Law and regulation. Since then, the MoF has counted on a small core technical group, attached to the Minister of Finance's office, to produce the MTFF in close coordination with the directorates of budget, revenue, treasury, debt, and accounting amongst others. The technical group has developed a comprehensive institutional coordination process, underpinned by a transparent and detailed calendar indicating when inputs will be received from other units that are accountable for producing their section of the report. To mitigate the risk of staff turnover, officials have documented the models in manuals. This process has enabled the production of the MTFF in a timely manner. The MTFF has become a reference document for stakeholders, informing the fiscal strategy for the whole government and how the fiscal rule is implemented. The MTFF provides a full picture of Costa Rican public finances, including 5-year projections of the NFPS with an overall fiscal strategy and fiscal risks analysis. The MTFF report is published in March/April every year ahead of the budget process and updated in August/September with the annual budget documents for the central government. The IMF has continued to provide TA on macroeconomic modelling linking the fiscal sector and the real, external, and monetary sectors. This enabled the MoF to simulate reforms and shock scenarios. The MTFF includes a chapter on fiscal risks, which recently incorporated an analysis of climate transition risks.

In **Poland**, the annual EU Convergence Program (CP) is the MTFF report. The Public Finance Act (PFA) stipulates the requirement for a multi-annual financial plan to be drawn up in the CP in compliance with EU fiscal legislation and guidelines (Hanson and others 2022). It contains the macroeconomic outlook, medium-term fiscal prospects and scenarios, planned discretionary measures, and projected fiscal aggregates four years ahead. It includes a high-level narrative on capital spending and medium-term projections of capital spending and other expenditure components but does not distinguish between ongoing and new projects. According to PFA, the multi-annual financial plan shall constitute the basis for the draft budget law for the following financial year. The fiscal anchor is supported by comprehensive operational fiscal rules. The main operational rule is the national stabilizing expenditure rule, which is set out in the PFA and aims to stabilize the fiscal deficit at the medium-term objective. In addition, while multi-year budgeting is still under development, multi-year programming of capital investment has been around for much longer. The Council of Ministers (CoM), which determines the manner and procedure for financing investments from the State Budget, requires budget entities to submit multi-annual programs for the implementation of their sector strategies for the CoM's review and approval. The programs, some of which span 10 years or more, are reviewed by an inter-ministerial committee, including the MoF.

South Africa is internationally regarded for its budget transparency and documentation, coming first in the 2019 Open Budget Survey and second in the 2021 Survey. Among other factors, this success has been attributed to strong political buy-in for reforms, championed by the Minister of Finance who carried broad political support. Since 1998, the MTFF (called Medium Term Strategic Framework, or MTSF) elements have been mostly published in the Medium-Term Budget Policy Statement (MTBPS). The MTBPS is tabled in Parliament by the Minister of Finance 2-3 months before the budget and contains the macro-economic assumptions underpinning the government's fiscal policy. The MTBPS outlines the overall objectives for the next three years and projected revenue and expenditure for the next three years. It presents the macroeconomic situation and highlights government spending priorities and the size of the spending envelope for the next MTBF and the annual budget. A fiscal risk statement is also provided as an annex to the document. When the budget itself is tabled to Parliament, budget documents include medium term forecasts of revenues, expenditure, and financing over 3 years, estimates for the current year, and outturns for 3 previous years. Material changes to the budget require legislature approval. South African models develop baselines (no-policy change) and policy scenarios, top-down fiscal projections are complemented with bottom-up budgeting estimates ensuring coordination between the MTFF and the MTBF.

In **Thailand**, the government has elevated its MTFF to sit within a legislative framework and strengthened the top-down approach to budgeting by broadening the responsibilities of the Budget Bureau. The 2018 Fiscal Responsibility Act (FRA) mandates the establishment of the Fiscal Policy Committee with responsibility for fiscal policy management, including preparing and revising the MTFF and setting fiscal rules. The committee is chaired by the Prime Minister and comprises of the Budget Bureau, the MoF, the Bank of Thailand (BOT), and the National Economic and Social Development (NESD) Council. The MoF is responsible for revenue and financing and the Budget Bureau for expenditure allocations. The NESD Council and the BOT are responsible for macroeconomic forecasts. The MTFF is used as the master plan, drawing from the National Strategy (30-year development vision), for fiscal and budget management which covers fiscal planning, budget proceedings and the administration of public debt (Blazey and others 2021). The National Strategy is translated into NESD plans, which cover a five-year period and guide the allocation of resources in the annual budget planning process. The MTFF is a rolling plan with estimates for at least three outer years and is considered in the annual budget expenditure preparation. It includes fiscal objectives and policies, macro-fiscal projections, and fiscal and financial obligations. A fiscal risk statement is published on the MoF website and debt sustainability analysis is prepared by the Committee on Fiscal Risk Management. The statement and analysis are prepared annually in March and include macroeconomic and fiscal risks and risks related to the operations of state agencies, as well as advice on the management of risks. The coordination between the BOT and the NESD Council is an element in the quality assurance process to test the judgements on materiality of a risk.

C. Low Income Developing Countries

Similarly, several LIDCs have adopted legislation, which underpins their annual budget and PFM systems and includes MTFFs. For instance, the PFM laws in Rwanda and Uganda require MTFF documents to be included in the budget documentation (Battersby and Lienert 2021). Instead of adopting "permanent" quantitative fiscal rules for ensuring macro-fiscal stability, these countries' laws incorporate a procedural approach similar to that adopted in Australia and New Zealand, however, there are variants in the way they constrain fiscal policy aggregates. For Rwanda, the law allows the government to change the MTFF's fiscal policy aggregates every year. In Uganda, a Charter of Fiscal Responsibility must be adopted soon after elections, and the Parliament is the final authority for approving the multi-year objectives for fiscal aggregates. For countries in economic and monetary unions, the directives of these unions such as CEMAC and WAEMU can require the production of MTFFs as well as wider PFM reforms (See Annex 2).

For LIDCs implementing MTFFs, it is important to start with the basics, get the right capacity and processes in place, and sequence and tailor reforms (Diamond 2013)**.** Specifically, LIDCs should ensure that the basic PFM systems are in place before attempting to implement more sophisticated arrangements (Gupta 2014). Transitioning from annual budgeting to medium-term budgeting involves tailoring the approach to the country context and adopting a sequenced approach. The selected LIDCs examples in Box 6 illustrate key features and considerations in the implementation of MTFFs. The Uganda case highlights the successful development of an MTFF and its linkage between monetary union criteria and national commitments. The Benin case emphasizes the importance of MTFFs for fiscal transparency. The Cambodia case provides an example of the process involved in developing an MTFF.

Box 6. Selected Low Income and Developing Country Examples

Benin has made rapid progress in reforming its budget documents and processes, and in enhancing transparency, with its Open Budget Survey results moving from 1 in 2012 to 65 points in 2021. The MTFF is included in the Multi-Annual Budgetary and Economic Programming Document published ahead of budget preparation. The Organic Budget Law (article 59) requires the government to produce this document every year and submit it to Parliament before May 30, outlining a medium-term fiscal path spanning the current year plus least three years. It provides projections of revenue, expenditure, balance, and debt aggregates and distinguishes between current expenditures and investment expenditures. In practice, the document is published systematically in June (initial version) and in December (final version with figures from the initial budget following adoption in Parliament). The June MTFF effectively informs the preparation of the annual budget, with limited deviations reflecting late-year updates in economic or budget execution forecasts (see Wendling and others, 2023). Strong ownership of the MTFF process at the level of the General Directorate for Budget (DGB) and its link to the program budgeting reform through a fully-fledged MTBF were helpful in achieving results. In practice, work on the MTFF serves as a basis to determine three-year envelopes which are sent by the DGB to line ministries when the budget call circular is issued. Based on these indicative envelopes, line ministries finalize their DPPDs (multiyear expenditure programming documents) to reflect their own strategic plans and present their expenditure plans for the next three years by program, administrative, economic and functional classification, and by source of funding. A high level of transparency vis-à-vis the Parliament and the wider public has increased traction for these reforms.

In **Cambodia**, over the last decade, the Ministry of Economy and Finance (MEF) has been building its macro-economic and fiscal forecast capacity with IMF TA support. The PFM reform strategies currently under implementation emphasis medium-term fiscal planning. The General Department of Policy (GDP) of the MEF is clearly identified as the entity driving the MTFF process. GDP and the General Department of Budget (GDB) coordinate their activities and work together to provide the budget with a fiscal envelope. An annual macroeconomic and fiscal policy macro-framework, containing medium-term macro-fiscal forecasts, is produced annually by GDP and published. GDP staff has been working to improve its forecasting models, in collaboration with the IMF. In addition, GDP has been working on the preparation of a MTFF document, which expands on the macro-framework and includes a chapter on the medium-term fiscal strategy (including a medium-term fiscal anchor) and a narrative assessment of fiscal risk. The current MTFF document does not specify requirements for compliance with the envisaged fiscal rules and there is no commitment to publish monitoring reports. Moreover, the Public Finance System law requires the preparation of Budget Strategy Plans, which are three-year rolling plans that ministries and agencies need to prepare annually through a top-down approach by linking their policy priorities to sectoral goals and National Strategic Development Plan.

In **Uganda,** debt sustainability is guided by general government fiscal rules for debt and the deficit and the MTFF is published (Tandberg and others 2022). Under the Charter for Fiscal Responsibility (CFR), Uganda committed to a government deficit rule of no more than 3 percent of GDP, and a 50 percent of GDP ceiling on the present value of debt for both central and local government. This is consistent with the East African Community (EAC) convergence criteria. An MTFF is prepared twice a year to guide fiscal policy through the annual budget process. Fiscal forecasts from the MTFF are published in the Budget Framework Paper and include a breakdown of current and development expenditure. The updated CFR accounts for oil revenue volatility and has annual deficit targets inbuilt. A fiscal risk statement is included in the annual Budget Framework Paper. The PFM legal frameworks require reports on fiscal risks (annually), and pre- and post-election fiscal update reports. The Uganda MoF (2022), "Charter for Fiscal Responsibility FY2021/22 – FY2025/26" states that the fiscal risk statement shall contain the main sources of annual risks to the fiscal objectives of Government, such as macroeconomic risks, natural resource revenues, loans and guarantees and capacity constraints and include a strategy for managing the fiscal risks. In the African region, Uganda is seen as positive example of the impact of MTFFs on improving fiscal discipline (Comelli and others 2023).

7. Conclusion and Lessons for Sound MTFF Implementation

Elevated government debt levels and escalating spending demands have brought MTFFs to the forefront, underscoring their pivotal role in fostering fiscal sustainability and discipline. Countries are at different stages of introducing a medium-term perspective to their public finances and developing MTFFs, with varying levels of sophistication. Progress in MTFF implementation is not always straightforward, with political and economic changes often affecting the process. Despite the widespread adoption of MTFFs, implementation hurdles persist.

Below are ten lessons based on the literature and IMF's capacity development and research which can help countries develop and implement MTFFs.

1. **Securing political commitment at the highest level is essential for the effectiveness of an MTFF.** This commitment is instrumental in ensuring that the MTFF genuinely guides budget preparation and promotes fiscal discipline, rather than being a mere formality. Clearly defined medium-term fiscal objectives, endorsed either through legislation or political leadership, are crucial for guiding the MTFF and budget preparation and ensuring government-wide alignment. Communicating to politicians how an MTFF relates to achieving objectives and/or fiscal rules and the government's policy priorities in a fiscally sustainable manner could help build support. Establishing a committee with high-level political participation to discuss and approve the fiscal strategy and the MTFF, and/or having cabinet endorsement is essential. This practice promotes ownership of the MTFF at the highest level.

2. **Building robust institutional and technical arrangements, alongside comprehensive capacity-building measures, is important**. A holistic approach is needed encompassing the following dimensions: legal frameworks, building strong institutional arrangements, linking MTFFs with the annual budget process, technical capacities, and developing communication strategies. This approach entails understanding the linkages between these dimensions, which is important not just for countries introducing MTFFs but also for countries with developed MTFFs to understand where there are gaps in their current procedures.

3. **Adopting a sequenced approach tailored to the country's context.** This involves gradually building capacity and sophistication over time. An MTFF should be customized to the country's specific context, including the initial PFM conditions and the technical and institutional capacities. Developing an MTFF can start with building up forecasting and analytical capacity. The progression from an MTFF projection spreadsheet to the more detailed and complete MTFF report takes time. As the MTFF sets the overall ceiling for the MTBF/MTEF it is key to have a credible MTFF in place before moving to an MTBF, which presents its variables at a more disaggregated level and needs to incorporate bottom-up information from the sectors.

4. **Including the MTFF in a country's legal framework promotes continuity and enforceability.** The general MTFF principles can be contained in higher-level legislation, while the details of MTFF procedures can be covered in secondary legislation. This approach provides stability but also promotes flexibility in operational details, enabling adjustments as MTFFs build capacity.

5. **Developing technical forecasting capacity is vital.** Producing multi-year macroeconomic and fiscal projections in a timely manner is a key component of an MTFF. Building this forecasting capacity can take time, especially in low-capacity environments. In these contexts, starting with basic forecasting tools and building more sophisticated models over time can be advisable. Countries can start with macroeconomic projections and then develop baseline forward estimates for fiscal aggregates. Even countries that have had MTFFs for many years are continuing to enhance their capacity in fiscal risk analysis and in developing long-term projections, which are still limited even in AEs.

6. **Reliable and available data determines the accuracy of forecasts.** Setting up a MTFF can often be a powerful driver for improvements in data quality, for example, by having standardized procedures and timetables for data collection and sharing. In addition to training to develop technical skills, it is

also important to promote consistency across government and agreement on the data and assumptions used in forecasting and on technical terminology. The frequency of MTFF revisions varies across countries. While revisions help update the MTFF to reflect macroeconomic changes, revisions that occur too frequently can undermine credibility. A good practice is to update the MTFF twice a year: first to guide budget preparation, when it is published several months before the executive's budget proposal in a pre-budget FSR, and second, at the time when the finalized budget is to be published with the budget documents. Other internal updates may take place during the year.

7. Establishing institutional arrangements that link the MTFF to the annual budget process helps ensure its integration into budgetary and fiscal policy decision-making. These arrangements include linking the MTFF with the budget calendar, processes, and reports. Establishing a dedicated organizational structure, such as a MFU in the MoF, setting out key stakeholders' roles and responsibilities, and establishing formal coordination mechanisms between stakeholders, such as macro-fiscal working groups, are important. It is also important to have a strategic budget phase to ensure that total expenditure ceilings are approved at the highest level; this promotes fiscal discipline. It helps to ensure that the MTFF is published before the preparation of the annual budget process and before ceilings are submitted to the sectors, and that allocations to new expenditures or revenue policies reflect government priorities, taking into account their budgetary medium-term impact.

8. Developing a communication strategy and engaging key stakeholders promotes understanding of the government's fiscal strategy and plans among citizens, investors, and financial markets. This is especially important in periods of fiscal uncertainty and high debt and deficit when having a clearly articulated medium-term fiscal plan and fiscal objectives builds confidence in the government's fiscal management. The FSR and other budget documents can be enhanced over time as capacity increases to include more aspects such as expanding coverage of fiscal risks.

9. Having processes and procedures for monitoring and reporting is essential to hold the government accountable for its fiscal performance. Regular assessment of progress towards fiscal targets enables governments to identify bottlenecks or challenges and to adjust policies accordingly to stay on track. It also helps them to convey and explain their fiscal plans and strategies in a clear and cogent way and highlights their ability to make medium-term plans. The quality of the MTFF can be improved by comparing government forecasts with those of independent forecasters, reporting on forecasting errors, and reporting and explaining in-year adjustments and deviations from previous years' projections. Legislatures and fiscal councils have a key role in holding the government accountable, monitoring adherence to fiscal objectives and rules, and evaluating governments' macro-fiscal forecasts. However, their ability to do so is dependent on having resource capacity and accurately reported information on budget execution.

10. The path towards successful MTFF implementation can be gradual, progressively building a multifaceted approach, acknowledging the intricate interplay between technical, institutional, and political dimensions. It is important for governments to commit to implementing a credible MTFF and cultivate public support for fiscal objectives, reinforce institutional capacity, and nurture a culture of fiscal responsibility and transparency. This helps to enhance accountability for fiscal performance. Specific institutional arrangements will naturally vary based on a country's governance structure and institutional capacity, necessitating regular reviews, and monitoring to adapt to changing circumstances.

Annex 1. Contents of MTFFs in Selected EMEs, AEs, and LIDCs Countries

Information presented in this Annex is based on the FAD 2023 MTFF survey.

Selected Advanced Economies

MTFF	France	Italy	Spain
Document Name	Stability Program 2023-2027	Stability Program 2023	Update of the Stability Program 2023 - 2026
Coverage	GG	GG	GG
Horizon	Five years	Five years	Four years
Publication dates	April	April	April
Published before budget	Yes	Yes	Yes
Fiscal Council Review	Yes	Yes	Yes
MTFF Content			
MT macroeconomic scenario			
Macroeconomic Projections	Yes	Yes	Yes
Macroeconomic Assumptions	Yes	Yes	Yes
MT fiscal scenario			
Fiscal strategy and policy measures	Yes	Yes	Yes
Clear and measurable fiscal objectives	Yes	Yes	Yes
Projections of fiscal aggregates for revenues, expenditures, balance, debt	Yes	Yes	Yes
Compliance with fiscal rule	Yes	Yes	Yes
Fiscal sustainability			
Fiscal risks	Macro and specific risks (2)	Macro and specific risks (2)	Macro and specific risks (2)
Macroeconomic risks: Type of analysis	Sensitivity	Sensitivity; Scenario; Probability	Sensitivity
Specific risks: Type of analysis*	Qualitative; Quantitative	Qualitative; Quantitative	Quantitative
Debt sustainability Analysis	Yes	Yes	No
Deviations from previous projections	Yes	No	No

*Specific fiscal risks listed in the relevant survey question included 11 potential options.

Selected Emerging Market Economies

	Emerging Market and Middle-Income Economies										
MTFF	**Brazil**	**Chile**	**Colombia**	**Costa Rica**	**Dominican Republic**	**Ecuador**	**Guatemala**	**Mexico**	**Peru**	**Poland, Republic of**	**South Africa**
Document Name	2023 Budget Law	Public Finance Report (Third Quarter of 2022)	Medium-Term Fiscal Framework 2023	Medium-Term Fiscal Framework 2023 - 2028	Medium-Term Fiscal Framework 2023-2027	Fiscal Programming 2023-2027	Medium-Term Fiscal Framework 2023-2027	General Criteria of Economic Policy 2024	Multiannual Macroeconomic Framework 2024 - 2027	Multiannual State Financial Plan for 2023-2026	2022 Medium Term Budget Policy Statement
Coverage	NFPS	CG	NFPS	NFPS	CG	NFPS	BCG	NFPS	NFPS	GG	GG
Horizon	Three years	Five years	Ten years	Five years	Five years	Five years	Five years	Seven years	Five years	Four years	Four years
Publication dates	April	September	June	March	April	April	September	September	August	April	October
Published before budget	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Fiscal Council Review	No	No	Yes	No	No	No	No	Yes	Yes	No	Yes
MTFF Content											
MT macroeconomic scenario											
Macroeconomic Projections	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Macroeconomic Assumptions	Yes	Yes	No	No	No	No	Yes	Yes	Yes	Yes	Yes
MT fiscal scenario											
Fiscal strategy and policy measures	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Clear and measurable fiscal objectives	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Projections of fiscal aggregates for revenues, expenditures, balance, debt	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Compliance with fiscal rule	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No	No
Fiscal sustainability											
Fiscal risks	Macro and specific risks (5)	Macro risks only	Macro and specific risks (5)	Macro and specific risks (7)	Macro and specific risks (5)	Macro and specific risks (3)	Macro and specific risks (6)	Macro and specific risks (4)	Macro and specific risks (6)	Macro and specific risks (2)	Macro and specific risks (3)
Macroeconomic risks: Type of analysis	Sensitivity; Scenario; Probability	Scenario	Scenario	Scenario	None	Sensitivity	Sensitivity; Scenario	Sensitivity	Sensitivity; Scenario; Probability	Sensitivity	Sensitivity; Scenario
Specific risks: Type of analysis*	Qualitative; Quantitative	n/a	Qualitative; Quantitative	Qualitative; Quantitative	Qualitative	Qualitative		Qualitative; Quantitative	Qualitative; Quantitative; Likelihood	Qualitative; Quantitative	Qualitative; Quantitative
Debt sustainability Analysis	Yes	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Deviations from previous projections	No	Yes	Yes	No	No	No	No	No	Yes	Yes	Yes

* Specific fiscal risks listed in the relevant survey question included 11 potential options.

Selected Low Income Developing Countries

	Low Income Developing Countries										
MTFF	Bangladesh	Benin	Burkina Faso	Cameroon	Congo, Democratic Republic of the	Congo, Republic of	Côte d'Ivoire	Guinea	Honduras	Madagascar, Republic of	Mali
Document Name	MT Macroeconomic Framework within the Medium Term Macroeconomic Policy Statement	Multi-Annual Budgetary and Economic Programming Document 2024-2026	Multi-Annual Budgetary and Economic Programming Document 2024-2026	MT Economic and Budgetary Programming Document 2024-2026	Medium-Term Budgetary Framework 2023-2025	Medium-Term Budget Framework (2023-2025)	Multi-Annual Budgetary and Economic Programming Document 2024-2026	Multi-Annual Budget Programming Document (DPBP 2024-2026)	Medium-Term Macro Fiscal Framework (MMFMP) 2024 - 2027	Report Defining the General Conditions of the Economic and Financial Situation	Multi-Annual Budgetary and Economic Programming Document 2023-2025
Coverage	CG	NFPS	NFPS	CG	GG	CG	NFPS	CG	NFPS	BCG	NFPS
Horizon	Three years	Four years	Four years	Four years	Four years	Four years	Four years	Four years	Five years	Three years	Four years
Publication dates	June	May	April	June	September	June	June	June	April	October	April
Published before budget	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Fiscal Council Review	No	No	No	No	No	No	No	No	No	No	No
MTFF Content											
MT macroeconomic scenario											
Macroeconomic Projections	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Macroeconomic Assumptions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MT fiscal scenario											
Fiscal strategy and policy measures	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Clear and measurable fiscal objectives	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Projections of fiscal aggregates for revenues, expenditures, balance, debt	Yes	Yes	Yes	Yes	Yes, excluding debt	Yes	Yes	Yes	Yes	Yes	Yes
Compliance with fiscal rule	No	No	No	No	No	No	No	No	Yes	No	No
Fiscal sustainability											
Fiscal risks	No fiscal risk report	Macro and specific risks (1)	Macro and specific risks (4)	No fiscal risk report	Macro and specific risks (7)	Macro and specific risks (0)	Macro and specific risks (11)	Macro and specific risks (0)	Macro risks only	No fiscal risk report	Macro and specific risks (4)
Macroeconomic risks: Type of analysis	n/a	Scenario	Sensitivity; Scenario	n/a	Sensitivity; Scenario	None	Sensitivity; Scenario; Probability	None	Sensitivity; Scenario	n/a	None
Specific risks: Type of analysis*	n/a	Qualitative	Qualitative	n/a	Qualitative; Quantitative; Likelihood	None	Qualitative; Quantitative; Likelihood	Qualitative	n/a	n/a	Qualitative
Debt sustainability Analysis	Yes	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No
Deviations from previous projections	No	Yes	No	No	Yes	No	No	No	No	No	No

* Specific fiscal risks listed in the relevant survey question included 11 potential options.

Annex 2. Examples of MTFFs in Currency Unions

Fiscal strategies in a currency union entail different considerations. Specifically, the fiscal foundations of a currency union should be underpinned by common fiscal rules (current numerical ceilings and other elements of design and enforcement), shared standards for PFM systems including MTFFs and fiscal coordination mechanisms.

This Annex highlights the experiences of European Union (EU), Eastern Caribbean Currency Union (ECCU), Central African Economic and Monetary Community (CEMAC) and West African Economic and Monetary Union (WAEMU) in the implementation of MTFFs. Each union has its unique context and challenges. The EU countries provide an example of established medium-term frameworks for fiscal planning to support fiscal targets. On the other hand, the ECCU presents an example of the challenges of economic reliance on tourism and agriculture, and vulnerability to natural disasters. The experience of CEMAC illustrates the challenges of implementing fiscal framework in oil-rich member countries, while the case of WAEMU highlights the challenges of fiscal coordination in LIDCs.

In the **EU,** medium-term fiscal planning has become more prominent since the adoption of related EU provisions[1]. The multi-annual objectives are set in terms of key budgetary aggregates, over at least three years. Most EU Member States have indicative frameworks where the national medium-term plans can be revised every year to reflect changes in forecasts. A few EU Member States have MTFFs for fixed periods, for example the Netherlands and Finland where the national targets set over the planning horizon for various budgetary aggregates cannot be revised. All Member States must comply with an expenditure rule that translates into ceilings. However, the link of the annual budget with the medium-term plan remains *de facto* weak, and conditions for revisions and for providing explanations in case of revisions or deviations from medium-term plans are not specified (Radu 2023). A possible avenue for further progress is to improve the reporting on fiscal costs and risks from climate change and related disasters, still limited at this stage in the budgetary frameworks of EU Member States.

In the **ECCU**, fiscal frameworks were initially guided by the regional deficit and debt targets (IMF 2022b). In 1998, the Eastern Caribbean Central Bank (ECCB) Monetary Council provided guidance to ECCU countries to achieve a public debt ceiling of 60 percent of GDP and an overall deficit target of 3 percent of GDP by 2020. However, these targets were only indicative and not legally binding, with many countries had difficulties in meeting them. The deficit target was subsequently abandoned, and the debt target was postponed twice. Currently, the ECCU debt-to-GDP ceiling stands at 60 percent to be achieved by 2035. In response, some countries have enhanced FRLs to strengthen PFM, but under different legal basis. For example, some countries enacted changes in their FRLs with Parliamentary approval including Anguilla (2013), Grenada (2015), and Dominica (2021). Others had reforms approved by a parliament resolution and with Cabinet approval including St. Vincent and the Grenadines (2020) and Antigua and Barbuda (2021). In all cases, these frameworks are anchored on a medium-term debt target with relatively similar operational targets, except for Anguilla. In addition, ECCU countries face idiosyncratic challenges as it is one of the world's most vulnerable regions to

[1] EU Regulation No 1466/1997 (the preventive arm of the Stability and Growth Pact) first introduced the concept of country specific medium-term objective and required Member States to submit annually to the Commission their medium-term budgetary plans in the form of Stability or Convergence Programs (SPs / CPs). The 2011 Directive sought to overcome the "ownership deficit" associated with SPs / CPs by setting minimum requirements for national MTFF/MTBFs. Since the adoption of the Directive, the EU Regulation 473/2013 and the Treaty on Stability, Coordination and Governance (2012) have sought to complement and reinforce the medium-term perspective in national budgetary planning. Currently, the EU framework is under revision and a new "*Regulation of the European Parliament and of the Council on the effective coordination of economic policies and multilateral budgetary surveillance"* will enter into force in 2024, repealing Council Regulation (EC) No 1466/97. With the revision, the SPs/CPs will be replaced by medium-term fiscal-structural plans, with the same contents and calendar (submitted to the EU Council and Commission by 30 April) as the former SPs /CPs and attaching the opinion of their fiscal council. The new Regulation is adding a focus on explaining green investments and reforms to reduce debt. Each Member State shall submit to the Commission an annual progress report on the implementation of its national medium-term fiscal-structural plan, by 30 April each year at the latest. The assessment of the Commission shall be published as has happened till now.

natural disasters and is heavily reliance on tourism and agriculture. Rule-based frameworks can help create policy room for building resilience from natural disasters and shocks. Currently, post COVID many of these countries are revising their fiscal responsibility frameworks.[2]

In **CEMAC**[3], the fiscal policy in member countries is designed and implemented by individual MoF (IMF 2016). As such, each country sets its own fiscal deficit target based on national priorities. The Directive on Transparency and Good Governance plays a key role as the general framework for all the other directives and sets the context including (i) the attribution and responsibilities of each public institution; (ii) the requirement that the budget law be encapsulated into a medium-term fiscal policy framework; and (3) the elaboration and presentation of the budget law. The currency union's fiscal surveillance framework combines a budget balance rule with a debt rule. Three of the four primary convergence criteria are of a fiscal nature: (i) central government basic fiscal balance, defined as total revenue (net of grants) minus total expenditure, excluding foreign-financed capital spending is required to be in balance or surplus; (ii) the debt rule requires central government total debt to be kept below 70 percent of GDP; and (iii) governments should not accumulate arrears. While secondary criteria include several fiscal targets, they are less directly aimed at the stability of the monetary union. Since 2002, the basic fiscal balance has been used as the main indicator to track fiscal convergence. In 2008, the CEMAC Commission introduced two supplementary criteria: (i) the basic structural balance, based on oil revenue calculated using a 3-year moving average; and (ii) the non-oil basic balance (as a percent of non-oil GDP). Importantly, the implementation of MTFF needs to address the pro-cyclicality of fiscal policy, which is particularly pronounced in CEMAC countries where oil income dominates the business cycle. It is important to strengthen the capacity of key fiscal institutions to enhance budget preparation, produce reliable data and forecasts, as well as implement laws and rules.

In **WAEMU**[4], the regional surveillance framework adopted in 1996 aims at ensuring the sustainability of national fiscal policies and their consistency with the common monetary policy (including the fixed exchange rate regime). It also envisaged a gradual convergence by member countries to a number of criteria related to macro-fiscal aggregates including the fiscal deficit, public debt, and inflation (Antonio and others 2022). However, repeated fiscal slippages and historically large stock flow adjustments contributed to the surge in the WAEMU public debt (Can and Laws 2023). Fiscal rules have been weakly enforced over the years thus contributing to weak compliance with the convergence criteria by member states. Debt has also accumulated significantly over the past decade, amid high fiscal deficits over time and prevalence of debt-creating operations, such as arrears, which were not captured by fiscal deficits. A sound framework for PFM is essential for regional fiscal coordination. The reform of the WAEMU PFM directives in 2009 introduced the obligation for Member States to prepare a MTFF that can inform the annual budget preparation process. This obligation is found in Directive 06/2009 on finance laws (articles 52 and 57). The MTFF is captured in a "document for pluriannual economic and fiscal programming" that corresponds to the definition of a MTFF (aggregate projections for revenue and expenditure for at least three years, based on precise economic assumptions, and covering not only the State but also the wider public sector). This document (known in French as DPBEP—document de programmation budgétaire et économique pluriannuelle) is to be adopted by the Council of Ministers before the end of the second quarter of the calendar year, thereby ensuring its capacity to underpin the final phase of the preparation of the annual budget (usually submitted in October). Ideally, Directive 06/2009 states that the MTFF report should cover the same time span as the MTBF/MTEF report. Regional convergence was temporarily achieved at the aggregate level in 2019, the fiscal framework was suspended in 2020 due to the pandemic. The WAEMU Commission is currently conducting a review of the fiscal framework.

[2] Dominica and Grenada have developed a Disaster Resilience Strategies with IMF support.

[3] CEMAC is made up of six States: Gabon, Cameroon, the Central African Republic (CAR), Chad, the Republic of the Congo and Equatorial Guinea.

[4] WAEMU is a currency union, with members consisting of Benin, Burkina Faso, Cote d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, and Togo. It coordinates some regional policies and addresses other common challenges among member countries. The Central Bank of West African States (BCEAO) issues a common currency, the CFA Franc, pegged to the euro and conducts a single regional monetary policy.

Annex 3. Details on Developing a Basic MTFF Projection Tool

This Annex sets out the principles behind developing a credible entry-level MTFF projection tool where no such tool exists. This technical input can typically be implemented through a spreadsheet, although other approaches can be considered. This Annex has been designed for low-capacity environments where data availability and staff resources may be limited.

Historical forecast error analysis

A useful starting point for developing an MTFF projection tool is to conduct some historical forecast error analysis. Forecasting can be a complex and time-consuming exercise, whilst resources, both time and analytical capacity, can be limited. To improve forecasting accuracy, it is more efficient to focus analytical efforts on the revenue and expenditure items that are both large, and historically have had the largest forecast errors. Comparing past forecast “vintages” to the final actual outturn, expressed as a percentage of GDP, can identify which items fall into this category. Forecast error analysis is most important for revenue items (which are largely outside of government’s control) but can also be useful for expenditure and financing items (over which the government has more control, but where outturns can still deviate from forecasts). Two types of error can be calculated: i) the mean average error – if this is significantly different from zero then it suggests an optimism or pessimism bias in the forecasts, and ii) the mean absolute error, which ignores the + or – sign of the error, if this is large it suggests the item is difficult to forecast accurately.

Mean average error: $\sum_{i=1}^{n} \frac{y_i - x_i}{n}$ Mean absolute error: $\mathrm{MAE} = \frac{\sum_{i=1}^{n} |y_i - x_i|}{n}$

Where: y_i = prediction x_i = true value n = total number of data points

Table A3.1. Different Types of Forecast Error

	Close to or equals zero	Significantly different from zero (for example, > 0.5% of GDP)
Mean average error	Suggests no optimism or pessimism bias	Suggests systematic bias is present
Mean absolute error *	Suggests existing forecast techniques work well	Suggests that item is difficult to forecast accurately

* Note that it is mathematically impossible to have a zero mean absolute error and a biased mean average error

Forecast error analysis - which forecasts to test?

Finance ministries and other institutions can produce many different versions of forecasts over the course of the year – forecasts produced early in the fiscal year, forecasts at the time of a supplementary budget or mid-year review, revised forecasts produced after new fiscal and economic data is released – and these forecasts can have a multi-year time horizon (for example, forecasting 3 or 5 years into the future). These are called different forecasts “vintages”. But which forecast vintages to use in the error analysis? As a rule, it should be the vintages that are used to inform senior level decision making: typically, these would be the forecasts that are published in the budget documentation, and possibly also the forecasts produced at the beginning of the budget preparation cycle, as part of a fiscal strategy paper, if they exist.

The Stages of Developing an MTFF Projections Tool

Stage 1: Forecasting baseline revenue

Government revenues (tax and non-tax)

Forecasts for revenues can be very simple, very complex, or somewhere in between. A good starting point is to identify the five most significant "large-and-difficult-to-forecast" revenue items from your forecast error analysis, consider what is the revenue base for each item (the economic activity on which the revenue is levied) and calculate the historical relationship between the revenue base (for example, nominal GDP) and the revenue item (for example, VAT collections). Calculating the average historical revenue buoyancy can help determine if the revenue item grows at the same rate, faster than or slower than the revenue base, and this buoyancy estimate can be used in the forecast. Note that this approach requires that there are forecasts for the revenue base, which is not always the case – whilst it may be preferable to use "disposable household income" as the revenue base for VAT receipts, if there is no forecast for this variable available it may be necessary to use, for example, nominal GDP, for which a forecast is available, as a proxy revenue base. For smaller revenue items, and those items where there is no clear link to economic activity, simple trend or average forecasts can be considered. For revenue items where collections are less than 0.1 percent of GDP, and for items with no clear link between collections and economic performance (in particular small non-tax items) simple forecasting assumptions, for example assuming the collections change in line with nominal GDP or increase following a linear trend of the previous five years collections can be appropriate.

An important advantage of linking revenue forecasts to the underlying economic forecasts, rather than using for example simple trends, is that it allows the analyst to undertake meaningful risk analysis. A well specified MTFF allows the impact of a change to the economic growth forecast or change to commodity price forecasts to immediately feed through to the revenue forecast, and hence the impact on the overall balance, levels of government debt and other variables of interest. The projections tool can then be used to undertake sensitivity analysis on the macroeconomic forecasts and to create "best case" and "worst case" scenarios that are central to fiscal risk analysis. Using forecasts based on simple linear trends or using a fixed growth rate does not allow for such analysis.

Changes to tax rates and other revenue policy changes, for example those included in a Medium-Term Revenue Strategy, can be modelled in an MTFF. Depending on the level of complexity of the tax system, and the importance of the revenue item as a share of total revenues, modelling the impact of tax policy changes on tax receipts can be a simple or a very complex task. As a minimum the analyst should consider both the first-round and second-round effects of a policy change. The first-round effects are estimated on the basis that the behavior of economic agents does not change – for example households purchase the same quantity of tobacco products after an increase in tobacco duties. The second-round effects attempt to estimate the change in behavior, for example using an estimate for demand elasticity for cigarettes taken from an international study and including this in the revenue forecast.

Grants from development partners

Development partner grants can be very volatile and challenging to forecast. Some grants are linked to specific projects, that may or may not include counterpart funding from the government. Other grants are not tied to specific projects and can be classified as budget support. The options to forecast grants are to use a simple average or trend forecast, or to assume grants are a fixed percentage of GDP. If grants are a significant source of resources for the budget, it can be worth doing a manual assessment for each grant. Step 1 is to classify each grant to determine if non-receipt of the grant would create a financing gap. Step 2 is to assign a probability based on judgement for the likelihood of the grant being received. A risk adjusted grants forecast can then be estimated, as illustrated in Table 2 below.

Table A3.2. Example of a Manual Assessment of Development Partner Grants

						Value			*Risk adjusted*	
Grants	***Type***	***Project type***	***Likelihood***		***2023/24***	***024/25***	***2025/26***	***2023/24***	***2024/25***	***2025/26***
Grant 1	Project	Independent	Medium	0.5	50.0	50.0	50.0	25.0	25.0	25.0
Grant 2	Project	Counterpart	Low	0.25	65.0	80.0	80.0	16.3	20.0	20.0
Grant 3	Project	Counterpart	High	0.75	30.0	30.0	30.0	22.5	22.5	22.5
Grant 4	Budget support		High	0.75	25.0	25.0	25.0	18.8	18.8	18.8
Grant 5	Project	Independent	Certain	1	45.0	45.0	0.0	45.0	45.0	0.0
Total grants					215.0	230.0	185.0	127.5	131.3	86.3

For counterpart and budget support grants it may be worthwhile to put aside a contingency fund allocation to cover spending obligations should the grant not be received. This would help to mitigate the risks from non-receipt of grants. The size of this allocation can be determined through subtracting the risk adjusted value of the grant from its headline value. Corresponding reductions in other budget lines would then be needed to ensure that the overall size of spending does not change.

Stage 2: Forecasting baseline expenditures

MTFF projection tools should focus on forecasting "baseline" spending. A key idea behind the concept of "baselines" is that even if policies remain unchanged, the cost of delivering them can change – how much will it cost to provide the same services to society given changes in population, prices, and other cost drivers? To help illustrate the concept below are some examples of simple baseline expenditure forecasting methods (see Rahim 2022).

Expenditure type	Formula & example	Budget Year 1	Budget Year baseline forecast
Personal emoluments (Wages and Salaries)	change in civil servant headcount * fixed percentage salary increase.	= 100,000	= 100,000 * (1-0.01) * (1+ 0.03) = 101,970 (1% decrease in headcount, 3% increase in salary level)
Use of Goods and Services	population growth * inflation	= 50,000	= 50,000 * (1+0.013) * (1+0.08) = 54,702
Subsidies and transfers	population growth * energy price inflation	= 30,000	= 30,000 * (1+0.013) * (1+0.15) = 34,948

The more disaggregated the expenditures in an MTFF, the more sophisticated the forecasts of baseline spending can be. Whilst beyond the scope of this Note, medium-term expenditure frameworks (MTEFs), that separate out expenditures by each line ministry and other spending agencies, often involve asking line ministries for their medium-term estimates of baseline spending, potentially allowing for more accurate "bottom-up" baseline expenditure forecasts (For more details See Rahim and others 2022).

Forecasts for capital spending should try to distinguish between existing (committed and ongoing) projects[5] from new (uncommitted) projects. There are also likely to be minor projects and capital purchases that will need to be considered in aggregate when forecasting baseline capital spending. The forecast for total capital spending would include "baseline" capital spending and allocations for new projects if there is room compared to overall ceilings.

Table A3.3. Forecasting Capital Spending

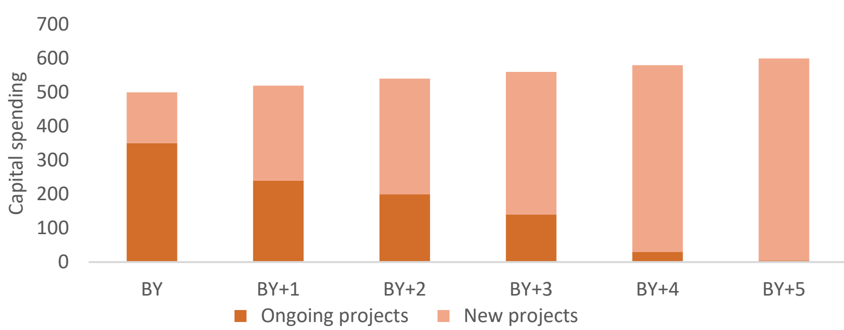
	BY	BY+1	BY+2	BY+3	BY+4	BY+5
Capital spending	500	520	540	560	580	600
Ongoing projects	350	240	200	140	30	5
New projects	150	280	340	420	550	595

"Top down" number determined by revenue forecast, fiscal anchor

"Bottom up" data from line ministries' project implementation schedules

"Top down" minus "Bottom up"

Figure A3.1. Distinguishing Between On-Going and New Capital Projects



An MTFF projections tool should link capital spending to operations and maintenance (O&M) expenditure. Capital projects, when complete, create additional pressures on recurrent spending. Looking at operational costs: new schools require teachers and other staff, incur costs for energy, require teaching materials and create other spending needs. A new water pipeline is likely to require energy to pump the water. New police stations require staffing, equipment, and so on. These costs should be identified at the point of capital project approval and should be treated as existing policy for those that are already approved. Specifically, in the case of maintenance costs, good practice suggests that existing policy should aim at preserving the current level of the capital stock (in other words maintenance spending would be equal to depreciation) and the baseline maintenance spending can therefore be estimated on this assumption. Table 4 summarizes some, now dated, estimates for operations and maintenance costs for different types of capital project, based on analysis of Asian Development Bank and World Bank projects. A worthwhile area of research, in particular for governments scaling up their capital expenditure programs, is to estimate O&M costs for their specific country.

[5] However, for many countries is it challenging to quantify committed capital spending for each year in the forecast as there is no central database of major projects. In these cases. typical methods to forecast capital spending include maintaining capital spending at a fixed proportion of total spending, or as a percentage of GDP, or using total capital spending as a balancing item, discussed below.

Table A3.4. Example Operations and Maintenance Costs from Different Types of Capital Expenditure

Sector	R coefficient (ADB projects)	R coefficient (World Bank projects)	Average
Agriculture	2.3%	4.7%	3.5%
Education	2.9%	7.4%	5.2%
Energy	4.7%	1.3%	3.0%
Environment	7.4%	1.7%	4.6%
Health	7.3%	3.0%	5.2%
Telecommunications	4.3%	0.3%	2.3%
Transportation	1.9%	2.5%	2.2%
Urban Development	1.6%	1.7%	1.7%
Water supply/sanitation	5.4%	4.4%	4.9%
Average all sectors (weighted)	4.3%	3.5%	3.9%

Source: From Recurrent Expenditure Requirements of Capital Projects, World Bank 2002

Stage 3: Forecasting the debt stock and interest payments

Debt stock

MTFF projection tools are able to forecast the debt stock. Most numbers in an MTFF are flow numbers – however there is one stock number that is often of interest – the stock of debt - and forecasting this into the future is possible. Typically, the debt stock can be forecast by adding net borrowing to the previous year's debt stock. When debts are held in multiple currencies, it is recommended to sub-divide the debt stock into domestic and foreign, and assumptions on exchange rate movements are then also needed.

$$\textit{Formula: } debt\_stock_{BY} = debt\_stock_{BY-1} + net\_borrowing_{BY}$$

Some government debts can be hidden. Examples include expenditure arrears and other liabilities of government may impact on debt sustainability - for example defined-benefit pension liabilities, government backed loan guarantees and the debts of public corporations - that may also not fall within the government's standard definition of public debt. Nevertheless, efforts should be made to identify and quantify these liabilities and incorporate the major ones into a fiscal framework, either within the MTFF itself, or as part of a fiscal risk management process.

Interest payments

Forecasting interest payments can be one of the most technically complex parts of an MTFF. Interest payment forecasts are based on the calculation $debt\ stock_{BY} * average\ interest\ rate_{BY}$. However, the debt stock is itself a function of interest payments – in other words higher interest payments lead to a higher fiscal deficit, and hence more borrowing and debt. This creates a debt-interest loop which manifests itself as a circular reference in the MTFF spreadsheet. Typically, this requires the use of a goal seek to 'close' the framework after all the other parameters on revenues and spending have been set. Greater accuracy on interest payments can potentially be achieved by disaggregating debts in to domestic and foreign, short and long term, concessional or open market and other categories.

Stage 4: Fiscal balance and Financing

Whilst most MTFFs focus on the “above-the-line” forecasts for revenues and spending, “below-the-line” forecasts for financing are also important. Financing covers the government’s transactions in financial assets and liabilities, and typically describes how a government will finance its fiscal deficit, that is, with Treasury bills, long-term bonds, or concessional foreign financing. Financing also includes forecasts for debt repayments, and hence can describe both gross and net financing needs. Key for the MTFF is that net financing should equal the fiscal deficit. It is also suggested that the sign conventions used in the financing section match those used elsewhere in the budget documents (for example a (+) positive sign signifies borrowing, (-) negative signifies repayments). Forecasts for new borrowing can follow the policy objectives set out in any government debt strategy - for example attempts to shift borrowing away from Treasury bills and towards financing sources with longer maturities and lower interest rates. Often short-term domestic borrowing is used as the balancing item to fill any financing gap and is set as a residual.

Stage 5: Policy scenario

The policy scenario will be calculated as the difference between baseline revenue and expenditure compared to the agreed deficit and expenditure ceilings that ensure fiscal sustainability. This room for new policies can be positive or negative and can be estimated in an MTFF projections tool with i) forecasts of baseline spending, and ii) fiscal target or limit in place that constrains the size of the fiscal deficit or expenditure. Negative space typically suggests that, if a government is to comply with its fiscal rules or fiscal strategy limits, increases in revenues and/ or cuts to spending will be necessary.

Balancing items and residuals

An MTFF constrained by a fiscal anchor requires one or more items to be determined as a balancing item or residual. The balancing items need to be those over which the government has considerable control, otherwise the framework risks being seen as lacking credibility. Expenditure items (rather than revenue items) are hence common “above-the-line” balancing items, in particular capital spending on new projects and goods and services spending – and these items are usually adjusted to ensure compliance with the fiscal anchor. For financing (“below-the-line”), the balancing item is often the source of funds that are easiest for government to access, typically treasury bills and similar short-term instruments. In all cases the realism in these residual forecasts needs to be assessed – for example is a 40 percent cut in goods and services spending, so as to comply with the fiscal rule, realistic, or would such a cut lead to expenditure arrears by spending ministries?

Feedback loops

Large changes in government spending can impact on GDP. Fiscal expansion or consolidation measures will impact on future rates of change and levels of GDP, that in turn can have impacts on future government revenues as well as changing the denominator for percent of GDP calculations. Attempts should be made to adjust GDP forecasts for these changes with iteration. As a starting point these adjustments can be made manually through adjusting the forecast real rate of growth for the “Public Administration” or “Government” sub-sector. More advanced projection tools can attempt to automate this feedback loop.

Stage 6: Realism assessment and risk analysis

The realism of the financing forecasts needs to be assessed. As mentioned under Stage 5, the financing gap is usually set to zero by adjusting the most accessible form of financing – often short-term Treasury bills. The size and rate of increase in this type of borrowing should be assessed for realism – is there the appetite for large increases in government debt in the domestic market? What impact would this have on interest rates? These assessments should be informed by expert judgement, including speaking with the relevant experts in the debt office and central bank.

Sensitivity analysis

It is good practice to perform sensitivity analysis to understand the "riskiest" variables in the framework. Once a fiscal framework has been set - and deemed to be based on reasonable and realistic assumptions - sensitivity analysis, whereby one input variable is adjusted to see the impact on the overall framework, can be undertaken. For example, what impact does a lower GDP forecast, higher inflation, higher interest rates, or change in commodity prices have on the size of the deficit in the budget year, or on the path of the debt-to-GDP ratio? Such analysis can then identify which variables (and their forecasts) are most critical to the achievement of fiscal targets, and which only have a small impact. At its simplest sensitivity analysis can be conducted on a + / - 1 percentage point variation in each variable, however applying "shocks" measured in standard deviations allows the same sized shock to be applied to different variables.

Scenario analysis

An extension of sensitivity analysis is scenario analysis. Scenario analysis combines shocks to several macroeconomic variables so to measure the overall impact on fiscal outcomes. It can be useful to present plausible "best case" and "worst case" scenarios (for example by varying GDP growth, inflation) to give the reader a better understanding of the margins of error around the central forecast. Summary results of both sensitivity and scenario analysis can be presented in a Fiscal Risk Statement forming the core of the Macroeconomic Risks section.

Box A3.1: Online Training Resources on Fiscal Forecasting

The IMF has available free online training on fiscal forecasting that goes into more detail on many of the topics discussed in this Note. These materials are available on the Edx platform under IMFx (edx.org/school/imfx). Courses and modules of note are:

- Public Financial Management (PFMx): Module 5: The Medium-Term Budget Framework
- Revenue Forecasting and Analysis (RFAx): All modules
- Projecting Public Debt – The Public Debt Dynamics Tool (DDTx): All modules

The courses include videos, transcripts, and multiple-choice questions to test understanding, and are available in several languages.

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