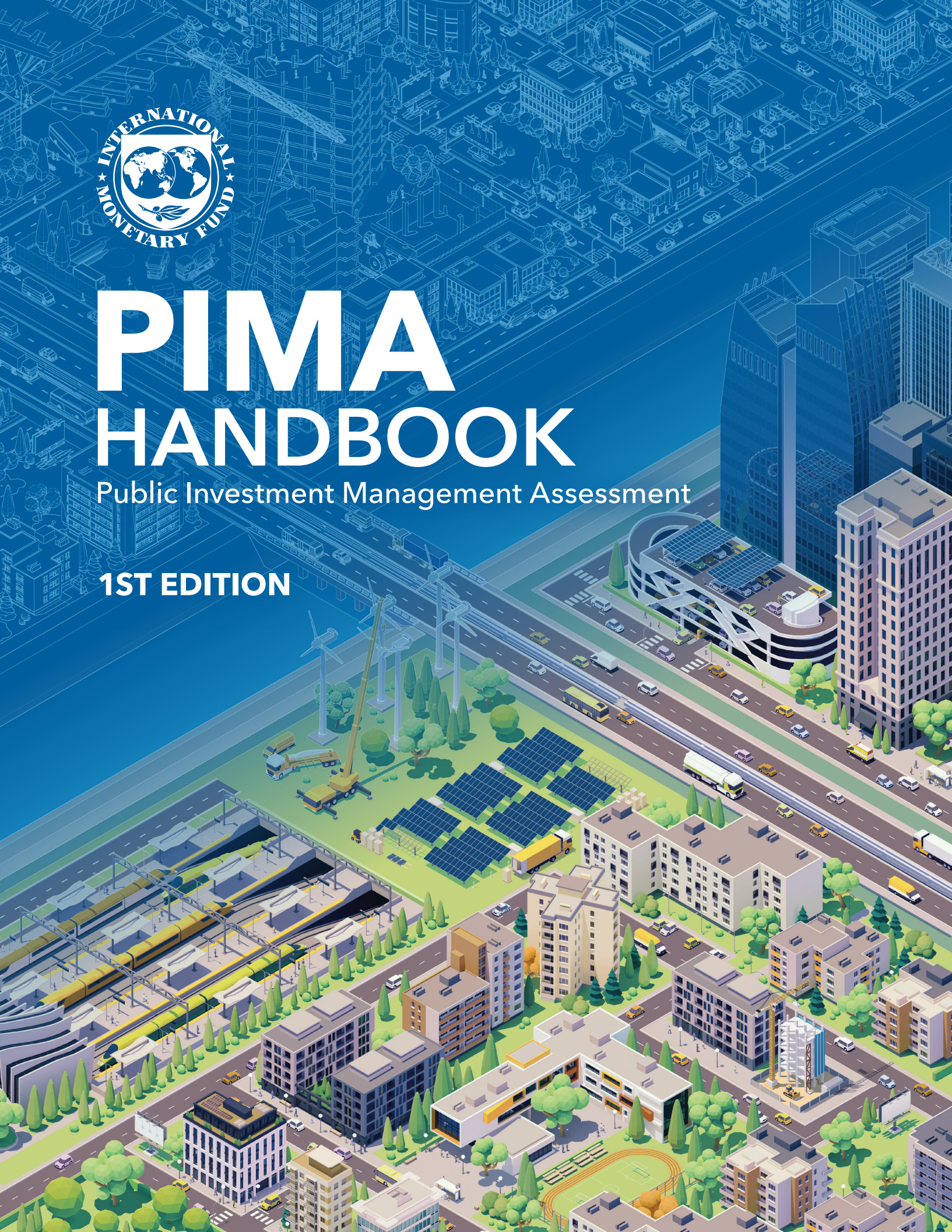

PIMA HANDBOOK

Public Investment Management Assessment

1ST EDITION

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CONTENTS

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ACRONYMS

ADB	Asian Development Bank
AE	advanced economy
CIPFA	Chartered Institute of Public Finance and Accountancy
CL	contingent liability
COFOG	Classification of the Functions of Government
DP	development partner
EBE	extra-budgetary entity
EBRD	European Bank for Reconstruction and Development
EME	emerging market economy
EP	expenditure pollicy
EU	European Union
FAD	Fiscal Affairs Department
GDP	gross domestic product
GFSM	Government Finance Statistics Manual
ICT	information and communications technology
IFAC	International Federation of Accountants
IFI	international financial institution
IPF	investment project financing
IPSAS	International Public Sector Accounting Standards
IPSASB	International Public Sector Accounting Standards Board
IT	information technology
LIDC	low-income developing country
MAPS	Methodology for Assessing Procurement Systems
MoF	ministry of finance
MTBF	medium-term budgetary framework
MTEF	medium-term expenditure framework
MTFF	medium-term fiscal framework
OECD	Organisation for Economic Co-Operation and Development
PC	public corporation
PFM	public financial management
PIM	public investment management
PIMA	Public Investment Management Assessment
PIP	public investment program
PPP	public-private partnership
SAI	supreme audit institution
SNG	subnational government
SOE	state-owned enterprise
TSA	Treasury Single Account
UK	United Kingdom
UN	United Nations

EXECUTIVE SUMMARY

This handbook is aimed at anyone who is involved in a Public Investment Management Assessment (PIMA) or who has a practical interest in public investment management. It is intended to be useful for country authorities, IMF staff, staff of other financial institutions and development organizations, and anyone who is interested in exploring different aspects of public investment management to understand how country systems are designed and how they work in practice.

Part I (sections 1 through 3) of the handbook gives a concise overview of the PIMA framework. Section I explains the importance of public investment and describes the PIMA framework. Public infrastructure is a key driver of inclusive economic growth and development, and the reduction of inequalities. The need for stronger infrastructure governance for quality investment is widely recognized. Yet, creating quality infrastructure has often been challenging. Losses and waste in public investment are often systemic.

PIMA is a comprehensive and standardized framework to assess public investment management for countries at all levels of economic development. PIMAs evaluate 15 institutions, or practices, involved in the three key stages of the public investment cycle: planning, allocation, and implementation. Each institution is analyzed along three dimensions that reflect the key features of the given institution, resulting in a total of 45 dimensions. A key feature of the PIMA is that it makes a clear distinction between institutional design (what is on paper) and effectiveness (what is in practice).

Section 2 discusses how to describe and analyze public investment trends and efficiency. It describes the datasets that are used and gives examples of how these are presented. It also outlines the methodology for analyzing the public investment efficiency and presenting efficiency gaps.

Section 3 of the handbook gives an overview of usefulness of the framework to identify key bottlenecks in public investment management and develop an action plan for reform. It describes the key issues and challenges identified in PIMAs and the main recommendations that have been made to improve public investment management, then gives examples of action plans proposed in previous PIMAs.

Part II provides a detailed practitioners' guide to apply the PIMA framework. A detailed description, explanation, and discussion of each of the 15 PIMA institutions and 45 dimensions are included in sections 4 through 8. Section 4 discusses key general issues that are common for many of the institutions and dimensions. Sections 5 through 7 provide detailed discussions of the institutions and dimensions under each of the three main pillars: planning, allocation, and implementation. Section 8 discusses how to analyze and assess the cross-cutting enabling factors.

The appendixes provide additional guidance on the PIMA framework. Appendix I contains the questionnaire that guides the PIMA assessments. Appendix II summarizes indicative scoring thresholds for institutional design and effectiveness for each of the 45 PIMA dimensions. Appendix III provides an overview of the PIMA assessment process. Appendix IV outlines a PIMA report, and Appendix V comprises a glossary of commonly used terms.

PART 1

PIMA Overview

1

Introduction

Public infrastructure is a key driver of inclusive green economic growth and development and the reduction of social inequalities (Schwartz and others 2020). Roads, bridges, electricity, railways, and airports connect markets, facilitate production and trade, and create economic opportunities for work and education. Water and sanitation, irrigation, schools, and hospitals improve people's lives, skills, and health; and with broad-based access, public infrastructure supports income and gender equality. Digital infrastructure supports economic development and inclusion. Done right, public infrastructure helps reduce pollution and build resilience against climate change and natural disasters.[1] Infrastructure investment also plays a key role in securing a green recovery after the COVID-19 pandemic (IMF 2020).

Yet, creating quality infrastructure has often been challenging. Almost all countries have their iconic white elephants—major investment projects with no or negative social returns—that never delivered on their initial promise. Infrastructure projects that were poorly designed, had large cost overruns, experienced long delays in construction, and yielded poor social dividends are common. Examples of poor project appraisal, faulty project selection, rampant rent seeking and corruption, or lack of funding to complete ongoing projects abound and not only in low-capacity countries. And even perfectly good public infrastructure may deteriorate quickly when maintenance is inadequate, which often reflects a lack of funding or political attention.

Losses and waste in public investment are often systemic. On average, over one-third of the funds spent on creating and maintaining public infrastructure are lost because of inefficiencies (IMF 2015). These inefficiencies are closely linked to poor infrastructure governance—defined as the institutions and frameworks for planning, allocating, and implementing infrastructure investment spending. Estimates suggest that, on average, better infrastructure governance could make up more than half of the observed efficiency (Schwartz and others 2020).

The need for stronger infrastructure governance for quality investment is widely recognized, and initiatives have been launched to provide guidance on good practice. Yet, most countries still lack the institutions needed to produce good infrastructure outcomes. Countries frequently stumble over key institutional issues. For example, they may struggle to finance projects in a fiscally sustainable way given limited resources. Selecting projects with the highest social and economic returns can prove difficult, as can ensuring that funding will be available throughout project implementation. Budgeting for operations and maintenance costs, ensuring that procurement is transparent and rigorous, or harnessing private sector skills, innovation, and funding without creating undue risks to public finances can also be challenging. Table I.1 gives an overview of some key publications on infrastructure governance.

The Public Investment Management Assessment (PIMA) is a comprehensive and standardized framework to assess public investment management (PIM) and infrastructure governance for countries at all levels of economic development.[2] PIMAs evaluate the procedures, tools, and decision-making and monitoring processes used by governments to provide infrastructure assets

[1] The IMF is currently piloting a PIMA Climate Change module, which will assess countries' ability to systematically reflect climate change considerations in their public investment (IMF 2021).

[2] Stringent use of the terms "governance" and "management" implies that infrastructure governance focuses on high-level, strategic, and institutional decisions whereas public investment management focuses on operational procedures and practices. See, for instance, Governance Guiding Principles, "Governance versus Management," Government of Scotland, https://www.governanceprinciples.scot/governance-vs-management. In practice, there is considerable overlap between the two terms; the PIMA framework covers both concepts.

Table I.1. Key Publications on Infrastructure Governance

Title of Publication	Source
Public Investment and Public-Private Partnerships: Addressing Infrastructure Challenges and Managing Fiscal Risks	Corbacho, Funke, and Schwartz 2008
A Diagnostic Framework for Assessing Public Investment Management	Rajaram and others 2010
What You Should Know About Megaprojects and Why: An Overview	Flyvbjerg 2014
Making Public Investment More Efficient	IMF 2015
Getting Infrastructure Right: A Framework for Better Governance	OECD 2017b
Public Investment Management Handbook for Capacity Development	Japan International Cooperation Agency 2018
Public Investment Management Assessment: Review and Update	IMF 2018c
G20 Principles for Quality Infrastructure Investment	Ministry of Foreign Affairs of Japan 2019
Well Spent: How Strong Infrastructure Governance Can Reduce Waste in Public Investment	Schwartz and others 2020
Public Investment Management Reference Guide	World Bank 2020
Strengthening Infrastructure Governance for Climate-Responsive Public Investment	IMF 2021

and services to the public. They take a systematic approach to analyzing infrastructure governance issues that allows countries to quantify and benchmark their practices against peers. The in-depth analysis, complemented with cross-country comparisons, raises awareness and builds a shared understanding among key stakeholders of required reform actions. This can help countries to develop an overarching strategy that is accessible to policy makers and development partners alike.

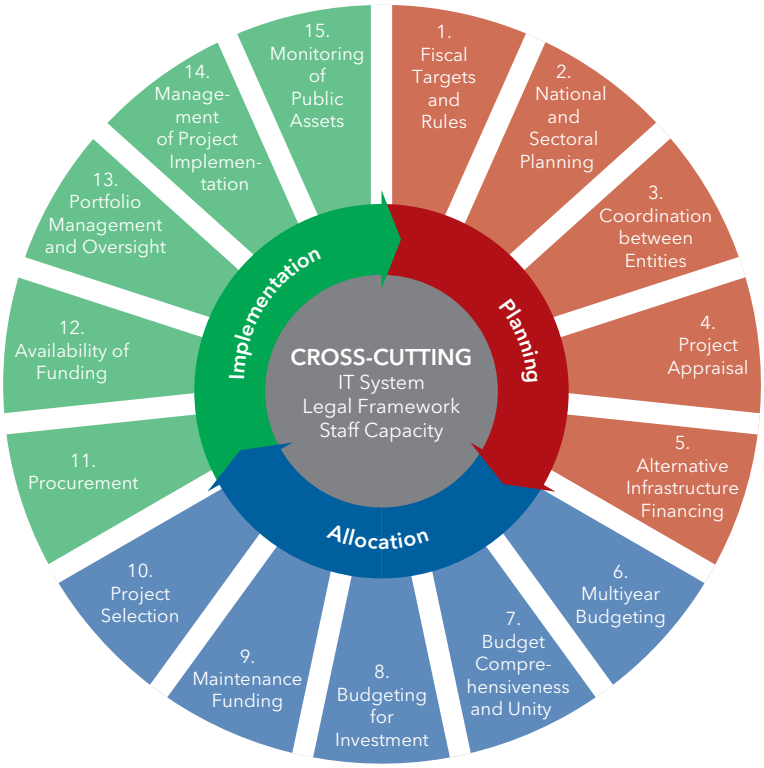
PIMAs evaluate 15 institutions, or practices, involved in the three key stages of the public investment cycle (Figure I.1): (1) planning sustainable investment across the public sector; (2) allocating investment to the right sectors and projects; and (3) implementing projects on time and budget. All three stages are critical from a macro perspective:

- *Planning*: Efficient investment planning requires institutions that ensure public investment is fiscally sustainable and effectively coordinated across sectors and levels of government and that projects are subject to rigorous appraisal.
- *Allocation*: Allocating public investment to the most productive projects requires comprehensive, unified, medium-term planning, and objective criteria for selecting projects.
- *Implementation*: Timely and cost-effective implementation of public investment projects requires institutions that ensure projects are fully funded, transparently monitored, and effectively managed throughout their implementation.

Each institution is analyzed along 3 dimensions that reflect the key features of the given institution, resulting in a total of 45 dimensions. Three possible scores are assigned to each dimension, and the average of the 3 dimensions within an institution produces a score for that institution.

To complete the analysis, PIMAs also include a qualitative assessment of three cross-cutting enabling factors that often impact the overall effectiveness of infrastructure governance institutions: the legal and regulatory framework, IT systems, and general staff capacity. For instance, poor integration of IT systems may limit data sharing on projects. Weak IT systems can have a negative impact across the project cycle, but particularly during implementation when knowing the correct status of projects, the amount of funds spent, and

Figure I.1. Overview of the PIMA Framework



Source: IMF 2018c.

the condition of individual assets is important for efficient resource use.

A key feature of the PIMA is that it makes a clear distinction between the institutional design (what is on paper) and effectiveness (what is in practice). This is important because what exists on paper may differ from the actual practice. For example, a country can establish fiscal rules to set limits on fiscal aggregates, but it might fail to consistently comply with these rules. Alternatively, a country may have developed guidelines for project appraisal, but these are only applied to few projects. In some cases, actual practices might also be stronger than the institutional design. Low scores in either one or both of these dimensions help inform the reform priorities for the country.

By covering the full public investment cycle in a comprehensive manner, the PIMA also addresses the networked nature of infrastructure governance. The benefits of having strong institutions in some areas may be jeopardized by weaknesses in other areas. For example, a country may have high-quality practices for planning public investments, but these will not be effective if insufficient funding is allocated to project preparation, or if funding gaps exist during project implementation.

The PIMA framework was established in 2015 and reviewed and updated in 2018. The 2018 update found that the framework had been well received by member countries, with several PIMAs completed and a strong pipeline of new requests in place. The PIMAs showed that there is much room for strengthening PIM in most countries, with weaknesses spread across the investment cycle. While leaving the structure of the 2015 framework unchanged, the revised 2018 PIMA framework highlights key aspects of maintenance, procurement, independent review of projects, and the enabling environment (for example, adequacy of the legal framework, information systems, staff capacity).

At present, PIMA is the most comprehensive internationally recognized framework for detailed assessment and comparison of PIM practices. There is an extensive literature on PIM issues, and several other methodologies have been applied to analyze different PIM practices and results. Also, there are comprehensive conceptual models for the analysis of PIM, as well as recommendations on good practices (Table I.1). The PIMA framework draws on and is consistent with this literature.[3] However, the specific assessment methodology and its strong macro-fiscal perspective are unique to PIMA. The only other widely used tool that includes explicit scoring of PIM practices is the Public Expenditure and Financial Accountability framework, which includes a single composite indicator for investment management.[4]

[3] PIMAs are undertaken during IMF missions in close collaboration with country authorities and often include contributors from other institutions, in particular the World Bank and regional development banks.

[4] See PEFA.org for more information about the PEFA framework.

2

Public Investment Trends and Efficiency

Public Investment Management Assessments (PIMAs) start with an overview of public investment trends in a country and discuss the outputs, outcomes, and efficiency of this investment. The investment trends include time-series data as well as cross-country comparisons with similar countries. This provides an important background for the subsequent discussion of public investment institutions. The data will also identify key differences between the countries being assessed and comparable countries, indicating the scope for changes in practices and results.

Public Investment Trends

PIMAs describe the history of public investment spending and the resulting capital stock. This is based on a standard database maintained by the IMF. The data give an overview of investment spending for the past 20–30 years, illustrating the public investment policies that have been in place during this period. The capital stock is computed as the aggregate capital spending over time reduced by a depreciation rate that varies by the country group. Box 2.1 gives an example of how these data are presented in the Georgia PIMA.[1]

The PIMA framework focuses on the management of physical infrastructure and on capital spending to acquire a physical asset or to extend the usable life of a physical asset. The PIMA definition of capital spending is broadly equivalent to acquisition of nonfinancial assets as defined in the 2014 *Government Finance Statistics Manual* (the GFSM 2014).[2] Some countries use the term *development spending* rather than *capital spending* in their budgets, to include other forms of spending with long-term impacts. Other countries may use the term *capital spending*, but with a definition that goes beyond the GFSM 2014 and PIMA definition. In such cases, the PIMA analysis will focus on those components that fall within the PIMA definition of capital spending.

The public investment database includes several parameters that can provide useful background to the PIMA assessment and illustrate the impact of the existing institutions. The available data include the following:

- Comparison between investment/capital stock and other macroeconomic and fiscal variables (GDP, deficit, debt)
- PPP investment and capital stock
- Investment and capital stock by government function
- Investment and capital stock by level of government
- Comparison of capital and current spending
- Capital budget execution rates
- Capital budget volatility
- Capital budget churn (variability in composition of capital budget)
- Country corruption index (according to Transparency International)

The choice of data to present and analyze depends on the specific circumstances of the country and the challenges it is facing in public investment. Box 2.2 provides examples of the additional data that were presented for Georgia. Figure 2.2.1 illustrates that the composition of public investment in Georgia is more skewed toward economic affairs than in other emerging market economies.[3]

The choice of comparator countries will also depend on country specificities and context. The

[1] Summary public investment data and methodological descriptions, including for the computation of capital stock, are available at, what's New in the IMF Investment and Capital Stock Dataset, IMF, updated May 2021, https://infrastructuregovern.imf.org/content/dam/PIMA/Knowledge-Hub/dataset/WhatsNewinIMFInvestmentandCapitalStockDatabase_May2021.pdf.

[2] Nonfinancial assets as defined by GFSM 2014 include intangible assets (patents, software, etc.) that are not explicitly covered by the PIMA assessment, but spending on such assets will generally be included in data for capital spending in PIMA reports.

[3] The figures in Box 2.2 include investment in defense assets, but countries vary in what they include in this category. See GFSM 2014, paragraph 7.36, for a discussion of defense assets.

BOX 2.1. Georgia Public Investment and Capital Stock

Figure 2.1.1. Investment
(*Percent of GDP*)

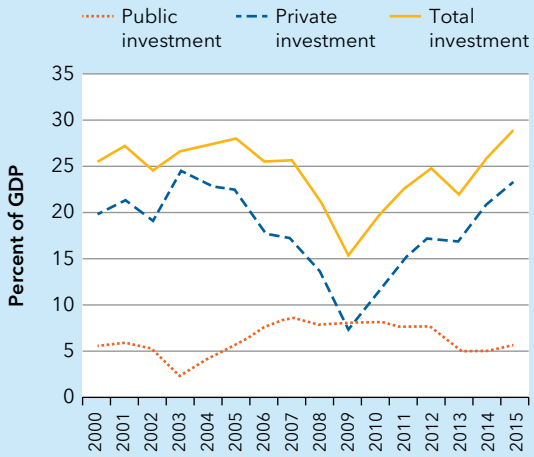


Figure 2.1.2. Investment and capital stock
(*Percent of GDP*)

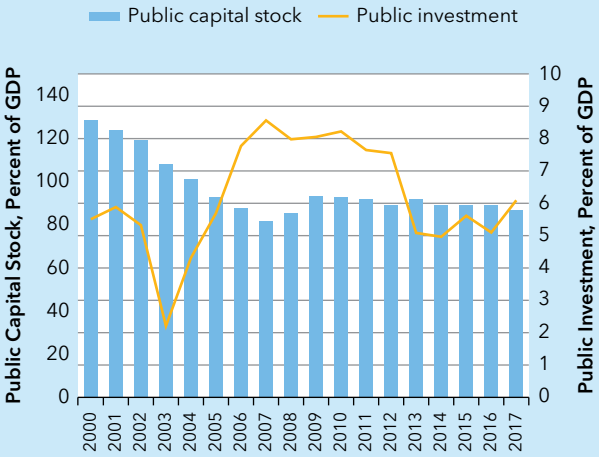


Figure 2.1.3. Capital stock
(*Percent of GDP*)

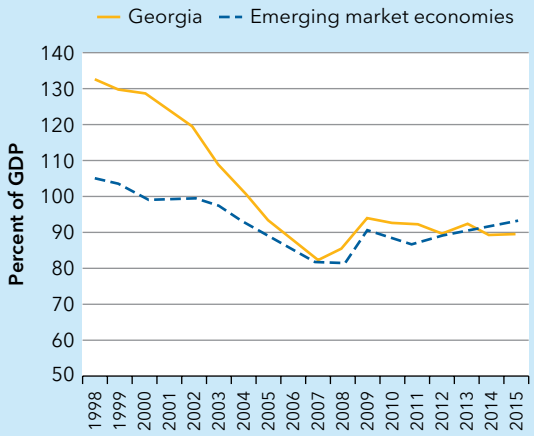
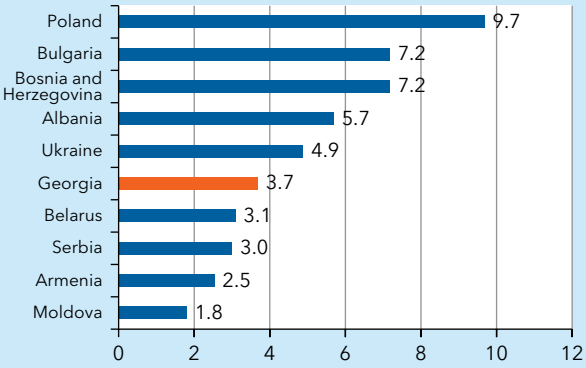


Figure 2.1.4. Capital stock per capita
(*Thousands of 2011 purchasing power party dollar-adjusted per capita*)



Source: Georgia PIMA 2018.

authorities often have clear views on the choice of comparators. They will often want to focus on countries that are similar in terms of economic development or natural resource endowment. Many countries want to be compared with countries that have advanced practices they want to emulate.

In some cases, the figures from the IMF database are complemented or updated during a PIMA. This may be because data are missing for specific time periods or certain parameters. It may also be that discussions during the PIMA process indicate that previously reported data are inaccurate. Additional data will usually be provided by the authorities or compiled from other relevant sources. In many PIMA missions, public corporations play an important role in the provision of public infrastructure

BOX 2.2. Georgia Composition of Public Investment

Figure 2.2.1. Georgia Public Investment, by Function, Last 5 Years
(*Percent of GDP*)

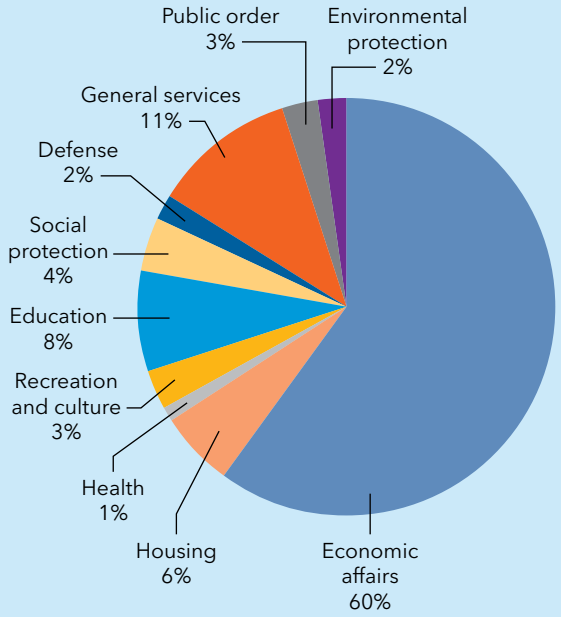


Figure 2.2.2. EME Public Investment, by Function, Last 5 Years
(*Percent of GDP*)

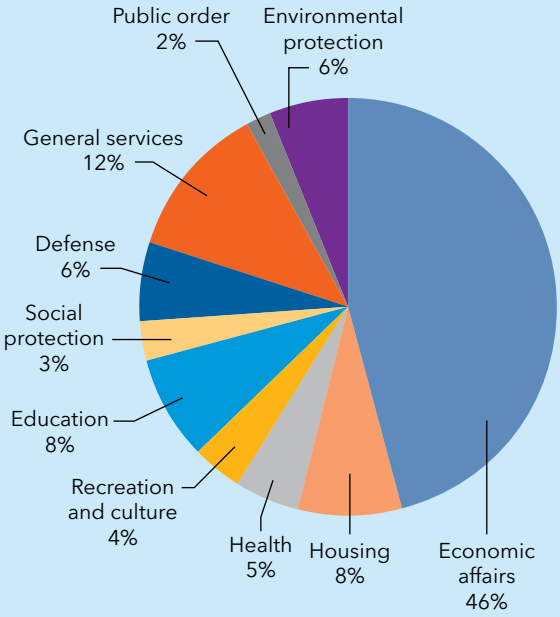


Figure 2.2.3. Composition of Public Investment
(*Percent of GDP*)

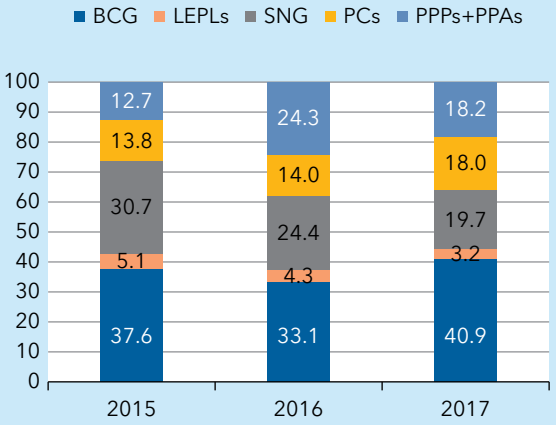
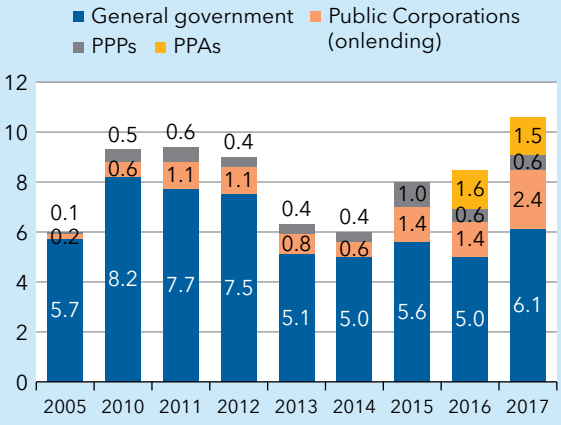


Figure 2.2.4. Public Investment, by Sector, 2005–17
(*Percent of GDP*)



Source: Georgia PIMA 2018.
Note: BCG = budgetary central government; EME = emerging market economy; LEPL = legal entity of public law; PC = public corporation; PPA = power purchase agreement; PPP = public-private partnership; SNG = subnational government.

BOX 2.3. Jordan Infrastructure Access and Quality

Figure 2.3.1. Perception of Infrastructure Quality, Jordan versus Comparators

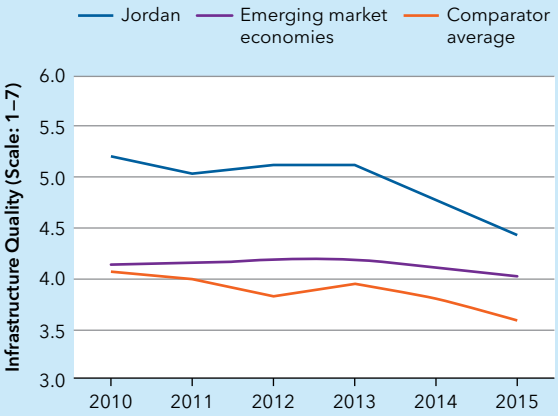


Figure 2.3.2. Perception of Infrastructure Quality (Jordan Sectoral Breakdown)

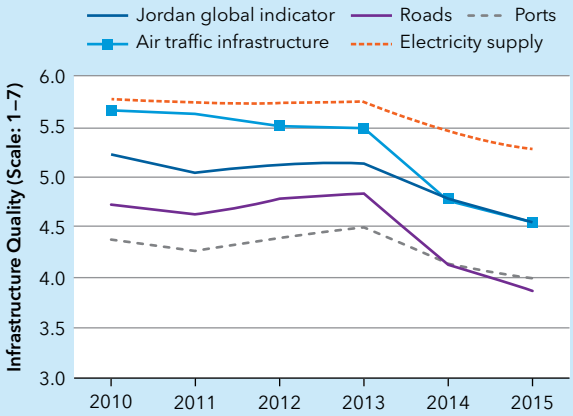


Figure 2.3.3. Infrastructure Access in Jordan versus Comparators

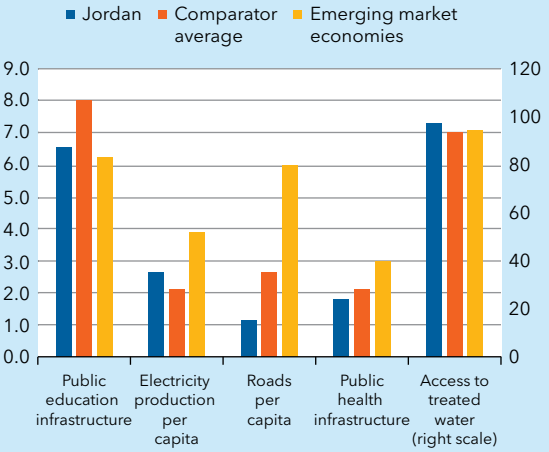
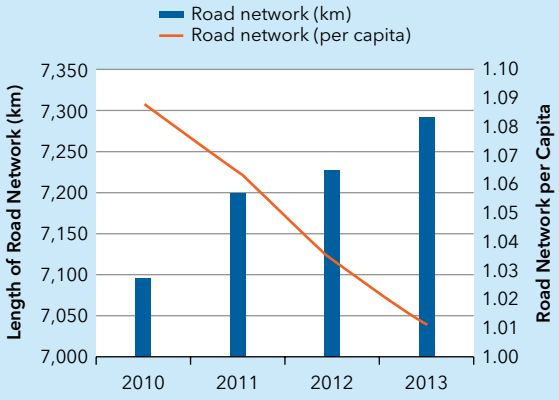


Figure 2.3.4. Increase in Road Network versus Population Growth



Source: Jordan PIMA 2017.
Note: For Figure 2.3.3, units vary to fit scale. Left scale: Public education infrastructure is measured as secondary teachers per 1,000 persons; electricity production per capita as thousands of kWh per person; roads per capita as kilometers per 1,000 persons; and public health infrastructure as hospital beds per 1,000 persons. Right scale: Access to treated water is measured as a percentage of population.

assets, and data for public corporations have been added to the basic data sets to complete the analysis. Figures 2.2.3 and 2.2.4 illustrate the important role of public corporations and PPPs in public investment.

Public Investment Outputs, Outcomes, and Efficiency

PIMAs present assessments of public investment outputs, outcomes, and efficiency for each country. This is also based on the standard database

BOX 2.4. Jordan Efficiency Frontier and Gap

Figure 2.4.1. Jordan Efficiency Frontier

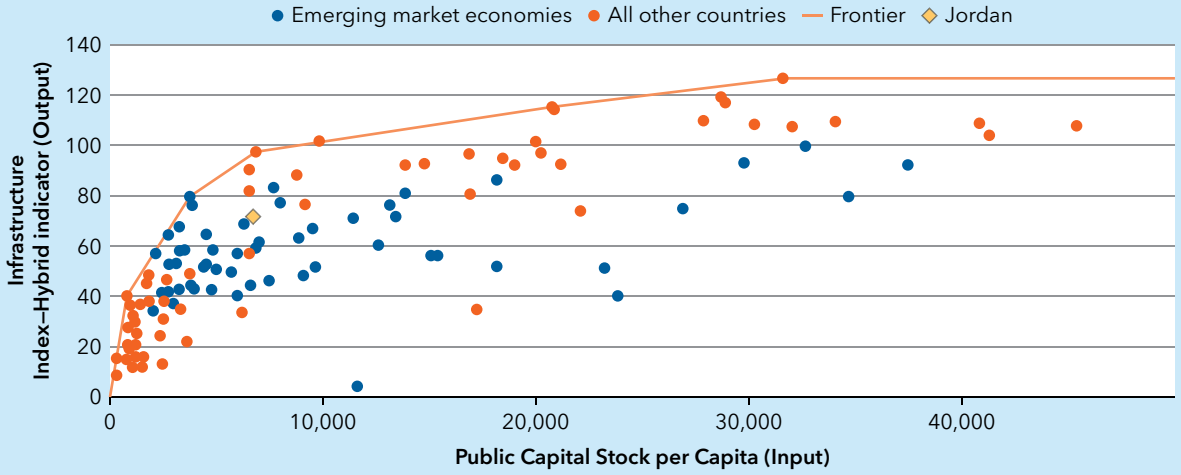
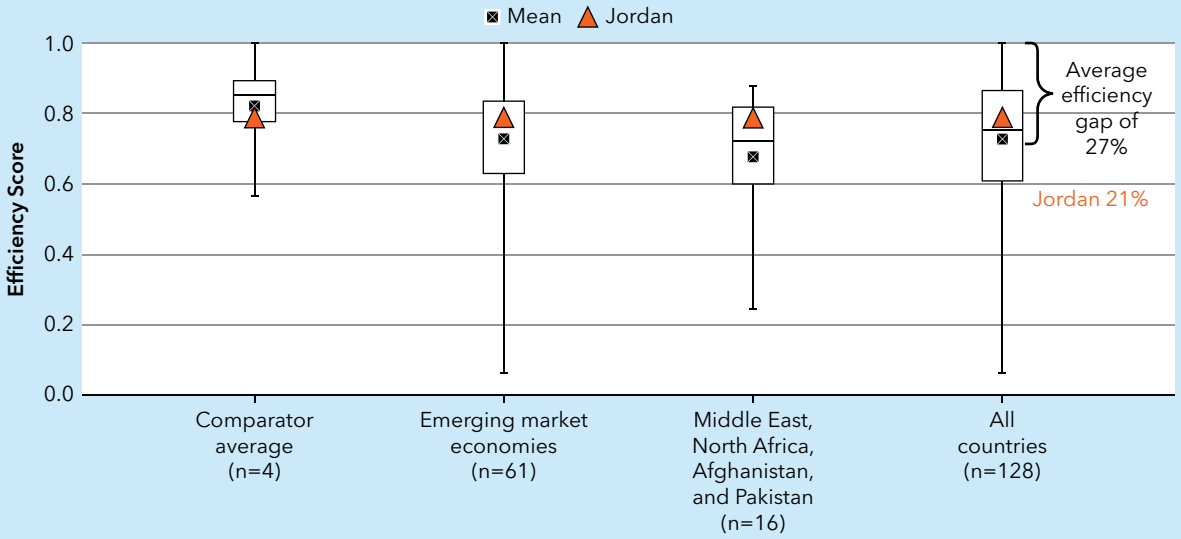


Figure 2.4.2. Jordan Efficiency Gap



Source: Jordan PIMA 2017.

maintained by the IMF. The database includes data for physical outputs of public investment, focusing on public education, electricity, roads, public health, and water, as well as for the perception of infrastructure quality in different countries. Box 2.3 gives an example of the perception (Figures 2.3.1 and 2.3.2) and the output (Figures 2.3.3 and 2.3.4) of public investment in Jordan.

The PIMA efficiency assessment is based on a comparison of capital stock per capita to the outputs and outcomes of this capital stock.[4] The results for different countries are plotted, and the countries that achieve the highest scores on infrastructure

[4] The methodology for assessing investment efficiency is described in Annex II of IMF (2015).

access and quality perception define the efficiency frontier. Other countries are compared with this efficiency frontier to determine the efficiency gap for each country. This gap reflects how much higher the results of capital investment could be for a given level of capital stock. Box 2.4 describes the estimation of the efficiency gap for Jordan. It is based on a hybrid indicator for public investment outputs and outcomes, combining the scores for infrastructure access and quality perception. The analysis indicates that the efficiency gap for Jordan is 21 percent, indicating that Jordan could achieve significantly better results if public investment management were as efficient as in the most efficient country with the same level of capital stock per capita.

The aggregate PIMA efficiency assessment complements the sectoral and project-based analysis. It gives a broad overview of how efficient public investment has been in a country, as well as the key drivers of existing inefficiencies. To understand the causes of this, and to design appropriate mechanisms to improve efficiency, the analysis of the detailed PIMA institutions, both "on paper" and "in practice," is essential.

3

PIMA Findings

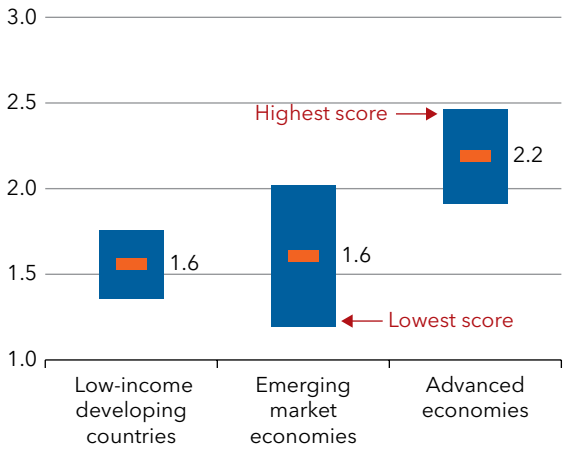
What Do PIMAs Tell Us About the Strength of Infrastructure Governance Institutions?

PIMAs provide valuable insights into the strength of institutions within and across countries (Taz, Matsumuto, and Murara 2020). As subsequently discussed in more detail, the PIMAs show the following:

- Countries generally score higher on institutional design than effectiveness, indicating that many countries are not fully translating reforms into practical actions.
- The gap between institutional design and effectiveness is most pronounced for low-income developing countries (LIDCs), reflecting weak implementation capacity even where sound design features are in place.
- Across the three key stages of the public investment cycle—planning, allocation, and implementation—the lowest effectiveness scores are generally recorded in the allocation and implementation stages, when assets are selected, monitored, and maintained.
- Countries often score more poorly in the institutions specific to public investment, such as project appraisal, project selection, and maintenance funding, compared with the more general public financial management (PFM) institutions reflected in the PIMA framework, such as fiscal targets and rules and budget comprehensiveness and unity.

Overall, the PIMA results show that advanced economies (AEs) have far stronger infrastructure governance institutions than emerging market economies (EMEs) and LIDCs. Figure 3.1 shows that, on a scale of 1 to 3, the average performance of EMEs and LIDCs is far below best practice (a score of 3). However, even AEs have a gap in performance relative to best practice, showing that they too have scope for improvement in the selected areas.

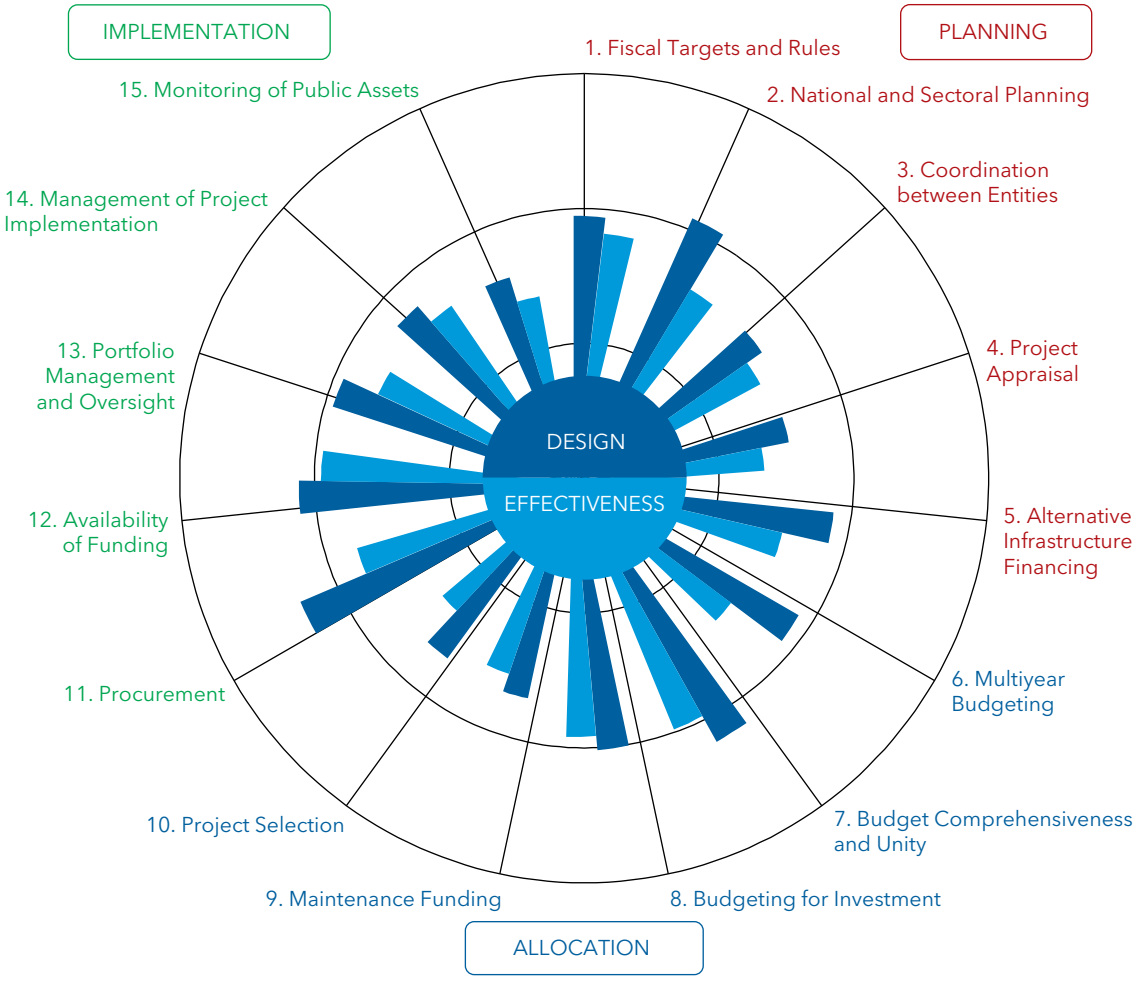
Figure 3.1. Effectiveness of Public Investment Management, by Income Group, 2015–20



Source: IMF staff calculations based on PIMA reports.

Countries score higher on institutional design than effectiveness. All countries assessed achieved an average score of 1.9 on institutional design compared to 1.8 on effectiveness. This is mostly explained by the lower performance of LIDCs and EMEs on effectiveness compared with AEs, perhaps reflecting that the latter have longer experiences in implementing robust governance systems as well as better access to strong technical and managerial skills. Figure 3.2 shows aggregate results for countries where the variation in performance seems evident from the size of the gap between design and effectiveness. Turning to Figure 3.3, EMEs appear to score lower on effectiveness compared with institutional design, while LIDCs show a similar difference between the two. Both groups show similar institutional strength in the planning and allocation stages. However, LIDCs fall behind in key aspects of implementation, for example, by failing to provide funding for investment projects in a timely manner, likely because of cash constraints.

Figure 3.2. Institutional Design versus Effectiveness, All Countries, 2015–20

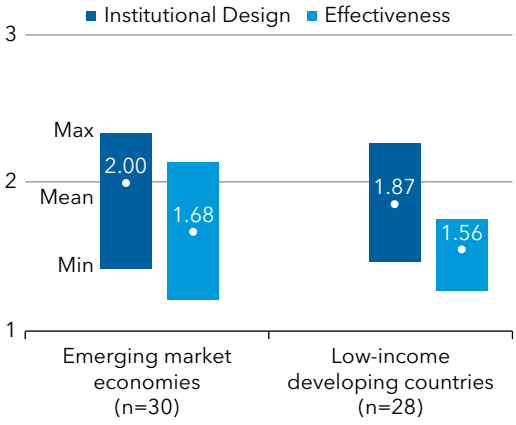


Source: IMF staff calculation based on PIMA reports.

The challenges faced by LIDCs are frequently related to capacity constraints, particularly in implementing policy reforms. LIDCs have often focused on setting up the legal and regulatory aspects of infrastructure governance, with less attention paid to implementation. They have relatively strong design features in national and sectoral planning, enacting strong public procurement laws and adopting fiscal rules, but weak capacity to undertake rigorous project appraisal and selection. For example, while Mali has relatively solid systems for project selection, it has yet to implement them fully.

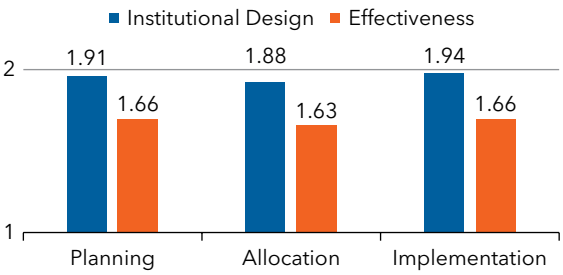
Gaps between institutional design and effectiveness are evident in all three stages of public investment (Figure 3.4). At the planning stage, most countries struggle to design and implement robust

Figure 3.3. Institutional Design versus Effectiveness, by Income Group, 2015–20



Source: IMF staff calculations based on PIMA

Figure 3.4. Institutional and Effectiveness Scores, by Stage of Investment, 2015–20



Source: IMF staff calculations based on PIMA reports.

systems for project appraisal. At the allocation stage, the lowest effectiveness scores are recorded for project selection and maintenance funding. Most countries, including AEs, also fail to apply a standard methodology for estimating routine and capital maintenance costs. At the implementation stage, the lowest scores are recorded in the monitoring of public assets.

Better scores are often achieved in the early stages of the investment cycle, when countries are setting fiscal targets and rules, and formulating national and sectoral plans. Once in place, these broad frameworks and supporting rules are difficult to translate into effective allocation and implementation because of weaknesses in project selection, maintenance funding, and the monitoring of public assets.

Project appraisal and selection stand out as two of the weakest areas. Project selection is weak across all countries, regardless of income level, while appraisal is a challenge particularly for EMEs and LIDCs. Project appraisal is technically difficult; however, the process is often rushed because of the pressure to deliver quickly, resulting in shortcuts being taken to get to procurement. When coupled with political interference during the process of project selection, the outcome can be poor in terms of quality of the works.

Monitoring of public assets also stands out as a weakness. Once the asset has been delivered, less attention is paid to maintain its quality. For example, few countries have a detailed understanding of the number of buildings they have in the public sector, the status of those assets, and the maintenance backlog. The same applies to other types of infrastructure. Inadequate information on asset status also undermines maintenance planning.

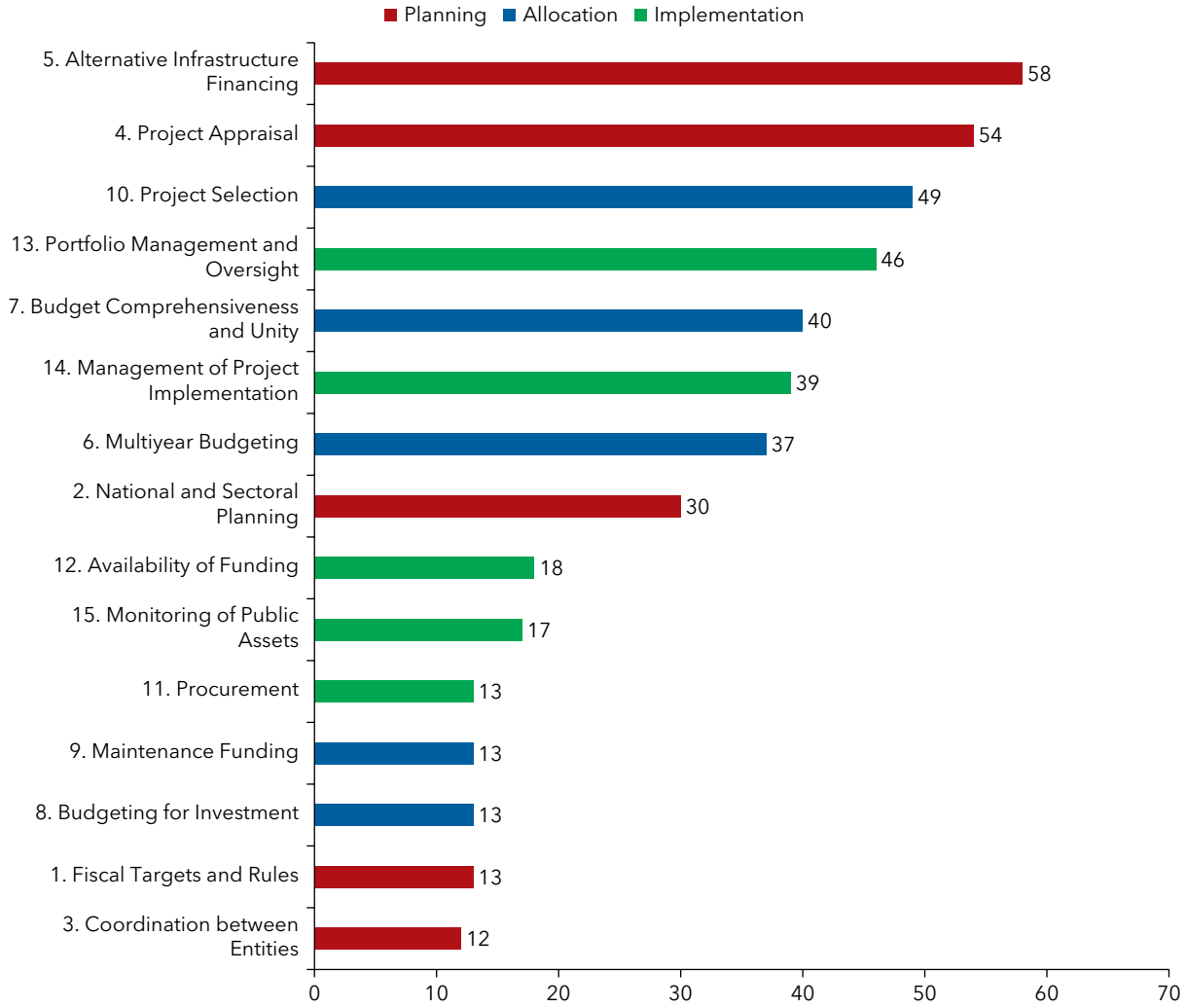
How Are PIMAs Used?

PIMAs produce a set of prioritized recommendations tailored for each country and informed by multiple information sources. While recommendations cover all stages, reflecting the variety of challenges encountered in different countries, the most common PIMA recommendation seems to concern the area of alternative infrastructure financing, as seen in Figure 3.5. Public-private partnerships and public corporation investment are often introduced as alternative ways to scale up infrastructure investment by directing resources through channels that are not restricted by traditional procurement and budget procedures. Yet, these alternative channels tend to fall outside the budget process and have become major sources of fiscal risk for national budgets possibly because of poor governance, inadequate central oversight, or weak procurement controls.

In addition, project appraisal, and project selection are featured regularly in the individual reform agenda reflecting widespread weaknesses in these areas. Improved project preparation will often be a basic building block for many of the other reforms. If projects do not have realistic cost estimates and timetables, then efforts to improve project delivery mechanisms are unlikely to succeed.

For country authorities, the PIMA report provides a basis for developing reform plans tailored to their needs and prioritized in line with their resources and institutional capabilities. The report brings together in-depth data analyses based on standard charts, and useful qualitative discussions of key issues. Also, because of the consultative approach that is followed, which encompasses government ministries and agencies, development partners, and other actors, the reform plan arising from PIMA assessments typically has broad support. Many countries have taken actions to implement PIMA recommendations. Among them, some specific examples of follow-up actions are presented in Box 3.1.

Figure 3.5. Number of PIMA Recommendations, by Institution, 2015–20



Source: IMF staff calculations based on the recommendations in PIMA reports.

PIMA recommendations and action plans need to be carefully tailored to the specific context, capacities, and priorities of each country. Some recommendations, particularly related to institutional design, may follow directly from the assessment. For example, if there is no mechanism for project appraisal at all, the establishment of such a mechanism will in many cases be an obvious solution. However, the specific approach, timeline, and detailed design will depend on the circumstances of the country. This handbook discusses how to assess the different PIMA institutions, including their effectiveness, but does not provide general recommendations for how to define reform programs. These must be developed through the in-country assessments and other analytical work.[1]

[1] A forthcoming IMF working paper will discuss public investment management in LIDCs, including how to design reform programs and prioritize measures in low-capacity countries.

Box 3.1. Examples of Infrastructure Governance Reforms Based on PIMA Recommendations

The PIMA conducted in Ireland (July 2017) found infrastructure governance practices to be of a generally high standard for both institutional design and effectiveness. Nonetheless, a number of recommendations were made to further enhance infrastructure governance practices at all stages of the public investment cycle. The National Development Plan 2018–2027, published in February 2018, presented several new measures based on the PIMA recommendations. These include (1) the establishment of an infrastructure projects steering group; (2) publication of a capital tracker, which will become Ireland's primary tool for public transparency on infrastructure projects, priorities, timelines, and performance targets; and (3) improvements in the methods of project appraisal and selection. The government has also reinforced technical processes and staff resources in the Department of Public Expenditure and Reform and other government departments dedicated to the appraisal and ex post evaluation of investment projects.

In Kenya, the PIMA conducted in January 2017 recommended the establishment of a central public investment management unit to improve the coordination among ministries and agencies. It also identified the need for a set of standard project appraisal guidelines to bring consistency across different entities. In the months that followed, both of these reforms were implemented by the government with the support of development partners. The reforms came at a time when President Uhuru Kenyatta announced a step-up in the fight against corruption, resulting in the greater transparency around large-scale procurement decisions. Such transparency was another area highlighted for action by the PIMA.

From 2012 to 2013, Mongolia experienced a rapid expansion of off-budget spending on public investment, financed by borrowing through the Development Bank of Mongolia (DBM). The level of spending, which was volatile, reached nearly 10 percent of GDP and led to a large accumulation of liabilities. In the context of declining revenues, Mongolia was unable to sustain this level of spending as it reached the limits of its borrowing capacity. Following the PIMA, the authorities transferred the off-budget projects to the state budget and introduced tighter control over borrowing by DBM for new projects. In addition, they improved project appraisal and selection through a new standard methodology and evaluation criteria, as recommended by the PIMA. This will help to improve the quality of project preparation and contribute to stronger project implementation.

Source: IMF staff compilation of information from country authorities.

PART 2

PIMA Practitioners' Guide

4

Assessing PIMA Institutions: General Issues

Some common issues and challenges apply to many PIMAs. Chapter 4 discusses the main common issues, whereas chapters 5 through 8 discuss the detailed assessment of the different institutions.

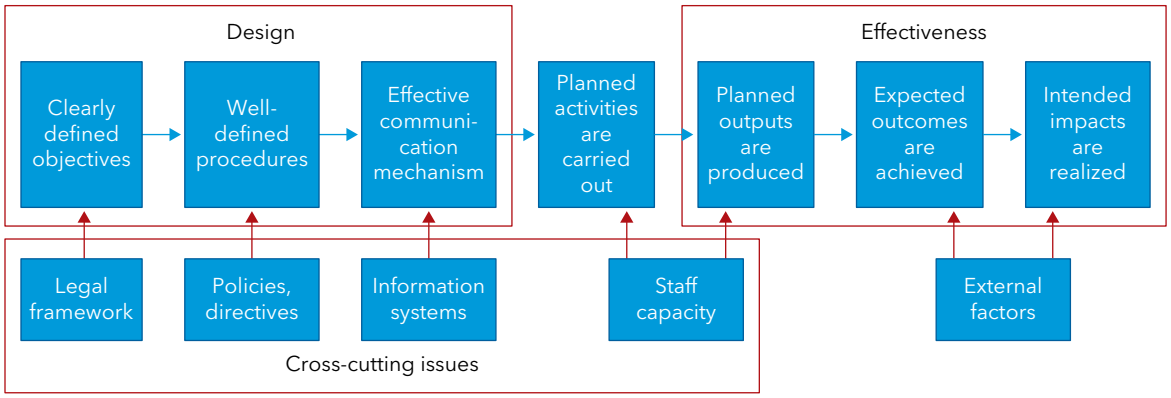
How Are Institutional Design and Effectiveness Assessed in Practice?

PIMAs assess institutional design as well as effectiveness. The analysis of institutional design looks at the formal public investment management system, including legislation and regulations, to see whether its design is in line with international good practices. The institutional design assessment describes the potential effect of the current framework, provided that it is fully applied. When assessing effectiveness, the focus is on how well the system works in practice. Are the implementing agencies fully compliant with the different rules and procedures, and does the formal framework have the intended effects on project planning, resource allocation, and project implementation?

The PIMA framework can be described in a generic theory of change or intervention logic (Figure 4.1). This theory of change spells out the main elements in the logic underlying the different PIMA dimensions. The assumption is that clearly defined objectives, well-defined procedures, and effective communication mechanisms (key elements of institutional design) contribute to the successful completion of planned activities. These activities should result in the production of planned outputs and the realization of expected outcomes and effects (effectiveness). The quality of the process and the results will depend on the important cross-cutting features, including the legal framework, policies, information systems, and staff capacities, as well as on external factors.

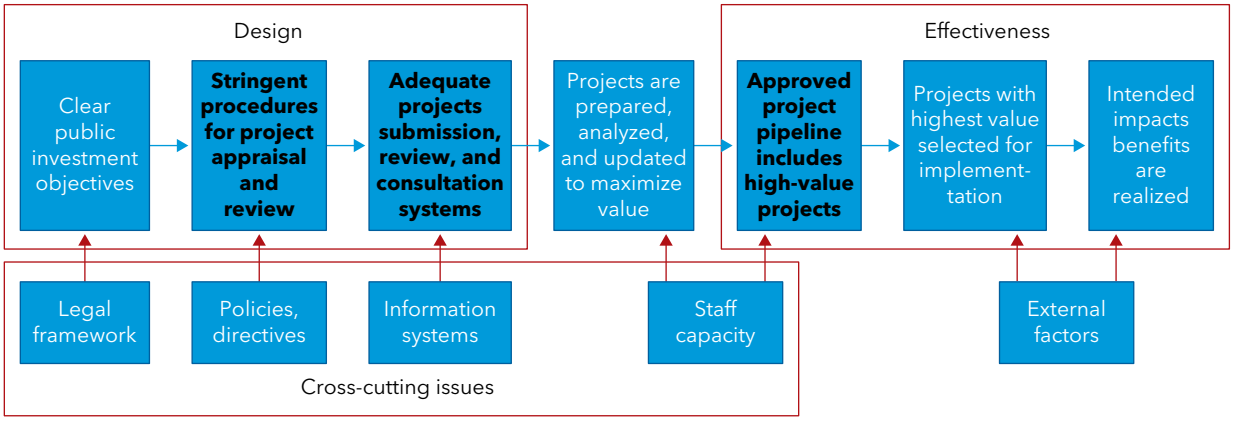
Political considerations and decisions may have important effects at different stages of the result chain. Even the best legal and regulatory frameworks will rarely produce the expected results if they are routinely circumvented in the political process. Many PIMA institutions, including Institution 4

Figure 4.1. Generic Theory of Change for PIMA Dimensions



Source: IMF staff.

Figure 4.2. Illustrative Theory of Change for PIMA Dimension 4.a



Source: IMF staff.

(Appraisal), emphasize the importance of independent review and transparency. This measure will reduce the risks of undue political influence. PIMA scores for effectiveness should reflect the actual outcomes of relevant processes, including the results of political interventions. Broader governance challenges can be addressed under the IMF's new framework for enhanced engagement on governance (IMF 2019).

Similar theories of change can be specified for each dimension in the PIMA framework. Figure 4.2 provides an example of a theory of change for Dimension 4.a: Are major capital projects subject to rigorous technical, economic, and financial analysis?

The PIMA questionnaire largely focuses on the institutional design and highlights selected elements in the underlying theory of change. For Dimension 4.a, the questionnaire's definition of a high score is as follows: *Major projects are systematically subject to rigorous technical, economic, and financial analysis, and selected results of this analysis are published or undergo independent external review*. This definition mainly relates to procedures and systems for project submission and appraisal, and to some extent to the publication of appraisal results (bolded text in Figure 4.2). Some parts of the theory of change for one dimension may be dependent on other dimensions. For Dimension 4.a, the outcome of the appraisal process (selection of high-value projects) is covered by Institution 10, and the realization of project benefits (the intended effect) is influenced by several PIMA institutions.

The assessment of effectiveness must be based on the analysis of the results that are achieved and will often go beyond the specific questions in the PIMA questionnaire. Effectiveness is related to, but not synonymous with, compliance. Compliance with formal rules should contribute to ensuring that the planned outputs and outcomes are realized. Weak compliance may be an important factor when explaining weak effectiveness, but compliance will often be insufficient to ensure effectiveness. The analysis of effectiveness should therefore not be limited to the verification of compliance. This handbook discusses relevant indicators for the assessment of effectiveness under each of the PIMA dimensions.

Assessments are based on current legal frameworks and current practice. Design scores should be made on the basis of literal interpretation of the dimension criteria. For example, if existence of a law, regulation, or policy is a scoring criterion, full credit should be given if it has been approved by the parliament even if it has not yet been implemented. The absence of results from the new legislation so far should be covered under the effectiveness assessment. If a law is under consideration, this can be mentioned in the narrative but should not impact the score on institutional design.

This handbook mentions several government documents and datasets that will be useful for a PIMA assessment. The documents will often be most useful for assessing institutional design and are listed under this heading, while the suggested datasets are listed under

the effectiveness assessment. However, both documents and datasets will generally contribute to an understanding of both institutional design and effectiveness.

What Data and Data Sources Are Typically Available?

Effectiveness assessments should be evidence based. For each PIMA dimension, this handbook suggests what might be useful datasets for the assessment of the dimension, in particular for the effectiveness assessment, and gives suggestions for how these datasets may be used. The suggested quantitative thresholds are indicative, and assessment teams must cross-check these against other indications of effectiveness. There are several different categories of data that may be useful in this regard:

- Time series of budget data, for instance, aggregate capital spending by sectors.
- Data related to specific projects, for instance, how estimates have developed over time.
- Comparative data, for instance, maintenance allocations compared with capital stock.
- Case studies, for instance, summaries of external audit reports of project delays and cost overruns.

Lack of specific data can be an indication of low effectiveness. If data are not available at the time of the PIMA, this is important information in itself. To ensure the effectiveness of a process or a system, it will generally be necessary for relevant government bodies to generate and analyze the performance data. If such data are not available, it is an indication that the performance is not being monitored and that effectiveness is limited. Similarly, if there is inadequate information about or documentation of institutional features, including legislation and regulations, this would lead to a low score on institutional design.

Time series should cover at least three years. Effectiveness assessments should be based on practices over three years, so they are not unduly influenced by spurious developments in one specific year. If data are available, a five-year perspective may add additional depth to the assessment, but this is not a requirement.

PIMA focuses on capital spending; the development budget should not be used as a proxy for capital spending unless there is no reasonable alternative. Capital spending or expenditure is commonly defined as spending to acquire a physical asset or to extend the usable life of a physical asset.[1] Under accrual accounting, capital spending is capitalized in the balance sheet. Many countries have a development budget rather than capital budget. A development budget commonly includes current as well as capital spending. Most countries with development budgets also identify capital spending as projects either within the development budget or in the economic classification, and this should be the basis of the assessment whenever possible. Each PIMA report should clarify which components of the budget have been covered by the assessment.

How Are Externally Financed Projects Assessed?

A high level of external financing may contribute to the fragmentation of practices under some institutions. This applies to institutions 2 (Planning), 10 (Selection), and 12 (Funding). For these dimensions, the PIMA questionnaire includes specific questions on the treatment of externally financed projects, and these may affect the scores for both institutional design and effectiveness.

Practices for project development, appraisal, selection, and monitoring may also differ based on whether a project is externally financed or domestically financed. This applies to three dimensions under institutions 4 (Appraisal), 11 (Procurement), and 14 (Project Implementation). International financial institutions (IFIs) and development partners (DPs) often have their own rules for project preparation and approval, which must be applied to projects when they contribute to the financing. This is not explicitly reflected in the PIMA questionnaire. External financing should not affect the institutional design scores for these three institutions, which should reflect the institutional framework established by national laws and regulations. However, practices related to externally

[1] Current spending that contributes to the creation of a government asset, for instance, project monitoring by own staff, may be included in the capitalized value of the asset. This will depend on national accounting standards.

financed projects may in a few cases have impacts on effectiveness assessments.

Some IFIs, in particular the major development banks, have rigorous project methodologies. However, many other financial institutions and bilateral DPs have less rigorous approaches. External financing schemes are often more focused on establishing a financial mechanism than on the specific projects to be financed under this scheme. In these cases, the DPs' appraisal of the financial mechanism will not constitute appraisal of the specific investment projects. In some cases, IFIs and DPs carry out appraisal of specific investment projects only after a financial mechanism has been approved. Project development and management by IFIs and DPs will focus on the priorities and preferences of the institution, which are not always fully aligned with the government's priorities and preferences.

In some cases, the PIMA effectiveness assessment may be influenced by the financing source. This would require that the share of major projects implemented by IFIs or DPs that apply stringent project development and management criteria, consistent with government priorities, is large enough to reach the relevant thresholds for better practices.[2] If this is the case, the PIMA should provide documentation of which share of major projects are subject to systematic, rigorous, and consistent development, appraisal, selection, and management, and how this reflects the government's priorities and preferences. The share of different IFIs' and DPs' financing of the capital budget should be presented, together with a summary description of the project management practices that are applied by each major financing source. The specific thresholds that need to be met for a higher effectiveness assessment are discussed under the relevant institutions.

PIMA reports should specify the role of external financing of public investment and how this has been treated. If external financing arrangements have impacted any scores, this should be clearly specified and explained in the report. Issues related to assessments of projects with external financing are discussed in more detail under the relevant institutions and dimensions. Table 4.1 gives an overview of potential impacts.

[2] Thresholds are discussed in the next section of the handbook.

How Do We Define Major Projects?

Many dimensions of the PIMA institutions focus on major capital projects. The definition of major projects varies across countries and the assessment should generally be based on the national definition. However, the assessment team should verify that this definition is reasonable and consistent with national practices.

- The most common definition of a major project is in terms of total project costs. All projects above a certain threshold (for example, 100 million currency units) are defined as major. National rules determine the thresholds and the definition of total project costs (for example, investment costs or lifecycle costs).
- It is common that projects that are particularly complex and entail high risks are also defined as major projects, even if total costs are lower than the general threshold. In some countries, there are lower thresholds for certain project types (for example, IT investments).
- Some projects are defined as major projects for political reasons. They may be part of government main priorities, have important regional impacts, or be particularly visible to the public.
- In some countries, all projects with external financing or projects procured as public-private partnerships are defined as major projects, even if total costs are below the general threshold. These projects will often entail high risks and be politically important.

The number of major projects and their share of the total public investment will vary between countries. In many countries the number of major projects under preparation and implementation range from 30 to 100. Their share of the total investment budget will often be in the range of 50–75 percent.

How Do We Apply the Indicative Scoring Thresholds?

The PIMA questionnaire uses general terms to refer to the share of projects being subject to specific

Table 4.1. Possible Effects of External Financing on PIMA Scores

PIMA Dimension		Possible Effect of External Financing
2.a	Does the government prepare national and sectoral strategies for public investment?	A high score (institutional design or effectiveness) requires that externally financed projects are fully reflected in national and sectoral strategies.
4.a	Are major capital projects subject to rigorous technical, economic, and financial analysis?	If there are many externally funded projects and these are subject to rigorous analysis, this may affect the overall share of major projects that meet the requirements of this dimension (effectiveness).
10.a	Does the government undertake a central review of major project appraisals before deciding to include projects in the budget?	A high score (institutional design or effectiveness) requires that the central review process include externally financed projects.
11.a	Is the procurement process for major capital projects open and transparent?	If there are many externally funded projects and these are procured through open and transparent processes, this may affect the overall share of major projects that meet the requirements of this dimension (effectiveness).
12.c	Is external (donor) funding of capital projects fully integrated into the main government bank account structure?	The score (institutional design or effectiveness) depends on the degree of integration of external financing in the government bank accounts.
14.a	Do ministries/agencies have effective project management arrangements in place?	If there are many externally funded projects and these are based on effective project management practices, this may affect the overall share of major projects that meet the requirements of this dimension (effectiveness).

Source: IMF staff.

practices for many institutions and dimensions. This handbook recommends interpreting these terms in the following manner:[3]

- *All* refers to 90 percent or more (by value).
- *Most* refers to 75 percent or more (by value).
- *Majority or many* refers to 50 percent or more (by value).
- *Some* refers to 25 percent or more (by value).
- *A few* refers to less than 25 percent (by value).
- *Little or no* refers to less than 10 percent (by value).

This handbook suggests thresholds that may be used in the PIMA assessments. The recommendations related to institutional design are largely based on qualitative thresholds. Recommendations related to effectiveness are also qualitative, but there are also suggestions for quantitative thresholds in Appendix II.

The thresholds for institutional design focus on the legal basis for relevant provisions. Legal requirements are embedded in law. Regulatory requirements are included in regulations, typically issued by the the cabinet, the council of ministers, or the president. Other formal requirements include ministerial regulations and guidelines, including from the Ministry of Finance or Ministry of Planning. Government documents with lower legal status than regulations will generally be covered in the assessment of effectiveness. However, in some

[3] If the use of value to classify project shares gives skewed results—for instance, if there is one mega-project that dominates the results—the assessment team can choose to base the analysis on the 10 largest projects.

cases, these documents may also affect institutional design. This is specified under the relevant institutions—for example, Dimension 4.b assesses the use of central appraisal methodology, which would not necessarily be defined in the regulatory framework.

The suggested thresholds for effectiveness are indicative and should not be used mechanistically. The PIMA assessment team must verify that the proposed thresholds are appropriate for the country being analyzed and adjust the assessment when this is justified. These thresholds are for guidance and should not be applied indiscriminately. In many cases, mission teams will need to compile data from different sources or estimate some of the parameters that are included in the thresholds (or both). The key underlying assumptions for such compilation and estimation should be specified in the report. Relevant considerations for effectiveness assessments are discussed under the different institutions. Examples of quantitative thresholds for effectiveness are summarized in Appendix II.

Some thresholds include two conditions, both of which should be met to achieve the relevant score. If one of the threshold conditions is not met, the score will be one step lower, even if the other threshold condition meets the benchmark for the higher score. For example, high effectiveness on Dimension 5.c requires that "the review process covers at least the largest public corporations (PCs) measured by assets or the PCs covering most of the total PC assets and a consolidated report is published." If it is not published, then the consolidated report and effectiveness score will be medium, even if the coverage of the review process is consistent with the first condition for a high score.

Assessments should be based on the data for at least three years and shares should be based on the total value or cost of investments. The relevant threshold should be met in the majority of the years: at least two of three years when data cover a three-year period. Many indicators refer to shares of total investments and this should generally be interpreted as shares of the value of investments.

Institution scores are the simple average of dimension scores. A low dimension score has a numerical value of 1, medium has 2, and high has 3. The color coding used in the PIMA report follows normal mathematical rounding rules. Scores of 1.00–1.49 are shown as red (low score), 1.50–2.49 as yellow (medium score), and 2.50–3.00 as green (high score).

What is the Scope of the PIMA?

The PIMA focuses on investments by the central government sector. Institutions 3 and 5 cover the coordination with other levels of government and public corporations, as well as interfaces with the private sector. Dimensions 2a and 7b ask about the coverage of PCs in planning and budget disclosure. The assessments under the other institutions, including the cross-cutting issues, will generally be based on central government practices.

In some countries, SNGs or PCs are major contributors to public investment, and the PIMA mission team may choose to expand the assessment to cover practices in these sectors, either generally or for selected institutions. If this is done, the report should clearly specify where the scope of the assessment has been expanded and how this has impacted the findings.

5

Planning Sustainable Levels of Public Investment

Efficient public investment requires robust planning processes. Investment planning institutions must ensure that public investment is fiscally sustainable and effectively coordinated over time, across sectors, and across levels of government; that project proposals are based on stringent analysis; and that all possible financing and delivery modes are covered by the planning process.

Institution 1: Fiscal Targets and Rules

Does the government have fiscal institutions to support fiscal sustainability and to facilitate medium-term planning for public investment?

The purpose of Institution 1 is to gauge the presence of mechanisms that smooth total public investment spending across the economic cycle and promote long-term fiscal sustainability. Excessive volatility in investment spending undermines the efficiency of public investment. The assessment focuses on the existence of fiscal policies; it does not require stating a preference for any specific fiscal policy or the share of spending that public investment should occupy.

The three dimensions under this institution start with high-level objectives and become progressively more operational:

- The first dimension asks whether there are long-term fiscal targets or limits to promote long-term debt sustainability. These targets or limits generally focus on an end point, without laying out the annual fiscal steps to get there.
- The second dimension asks about fiscal rules that set limits to fiscal aggregates to achieve sustainability objectives. Fiscal rules help determine short-term annual fiscal aggregates, which should be consistent with the projections of the medium-term fiscal framework (MTFF).
- The third dimension assesses whether there is an MTFF to align fiscal policy and budget preparation.

Dimension 1.a: Is there a target or limit for government to ensure debt sustainability?

QUESTIONNAIRE

Low	There is no target or limit to ensure debt sustainability.
Medium	There is at least one target or limit to ensure central government debt sustainability.
High	There is at least one target or limit to ensure general government debt sustainability.

DEFINITION OF KEY TERMS

Term	Definition
Target	A long-term variable stated as a number to be reached.
Limit	A long-term variable stated as a number that should not be exceeded.
Debt sustainability	The ability of a country to service its debt without a major change in existing revenue or expenditure policies.

INSTITUTIONAL DESIGN

The purpose of this dimension is to ascertain the existence of fiscal targets or limits to ensure debt sustainability. Several different targets or limits might contribute to ensuring debt sustainability. Possible targets include public debt/GDP, change in public debt/GDP, Net debt-creating flows/GDP, and overall deficit, excluding net interest payments/GDP (that is, primary deficit).

- A low score on this dimension indicates that there are no specific targets or limits to ensure debt sustainability. This may be because fiscal policy documents contain no targets or limits at all. Alternatively, there could be some targets or limits in fiscal policy documents, but these have no formal status or are changed frequently and do not contribute to long-term sustainability. For instance, if a limit only appears in a technical appendix to the budget and changes each year, it is not an actual constraint on medium- to long-term policies.
- A medium score implies that there is at least one target or limit in place for central government. These would have a clear formal status to reflect the government's commitment to debt sustainability and will typically be stable over time. However, the targets or limits do not need to constitute a legally binding fiscal rule (this will be discussed under Dimension 1.b).
- For a high score, at least one target or limit should cover all or most of the general government. GFSM 2014 defines general government as comprising central government plus subnational governments (SNGs), and social security funds and not-for-profit institutions controlled by them. There are

examples of countries that have encountered major fiscal crises caused by unsustainable borrowing practices by SNGs. Ideally, targets or limits to ensure debt sustainability should apply to all SNGs. This will usually be the case for targets and limits imposed by the central government on SNGs.

In some countries, targets and limits may also be established separately by SNG legislative organs. To qualify for a high score on Dimension 1.a, most of the general government expenditure should be covered by at least one target or limit adopted by the central government and by SNGs at the level below central government.

IMPORTANT DOCUMENTS

Documents	Uses
Budget system law Public debt management law Fiscal responsibility law or similar legislation on SNG debt SNG financial laws	Assess specificity and status of debt targets
Fiscal policy statements Fiscal strategy reports and MTFF reports	Assess how debt targets are reflected in fiscal policies

EFFECTIVENESS

The effectiveness of a target or limit to achieve debt sustainability must be judged by the actual developments in the debt position and debt-related risks. The detailed requirements will depend on the specific nature of the target or limit. A debt sustainability analysis will provide support for this assessment. It is also commonly discussed in IMF Article IV reports.

- Low effectiveness implies that the target or limit has not contributed to an improved debt position. The mechanism is ineffective if, after three years, there is no significant change in the trend line that existed before imposition of the target or limit and the debt level remains outside the range considered sustainable. If the debt level has moved further from the target since it was established, the target is also ineffective.
- Medium effectiveness implies that the debt target has contributed to moving debt closer to the target, but it is still not within the target range. For this score, the debt target should have contributed to closing at least half the gap between the initial debt level and the target. Alternatively, if the debt level fluctuates around the target, the target should have been met at least once the past three years.
- High effectiveness means that the debt level is within the target or limit. The assessment is further strengthened if data for the past three years show that the debt levels have been within the target or limit the whole period, or if there has been a clear movement toward meeting the target. If the debt is outside the target or limit most years, but meets it in the most recent year, the reasons for this should be identified. Box 5.1 gives an example of how Ireland's debt rule and other fiscal rules have been effective in reducing the debt over the past few years.

USEFUL DATA SERIES

Data	Questions to Address
Public debt/GDP	How has debt developed over time? Is the debt path consistent with targets and fiscal policies?
Fiscal aggregate outturns (revenues, expenditures, balances) compared with projections and approved budgets For central government or general government as required by rules and targets	What are the underlying drivers of debt developments?
Debt sustainability analyses	What is the expected impact of debt targets on long-term sustainability?
IMF Article IV reports	Has the country shown progress compared with previous assessments of debt sustainability?

Box 5.1. Ireland Debt Rule and Other Fiscal Rules

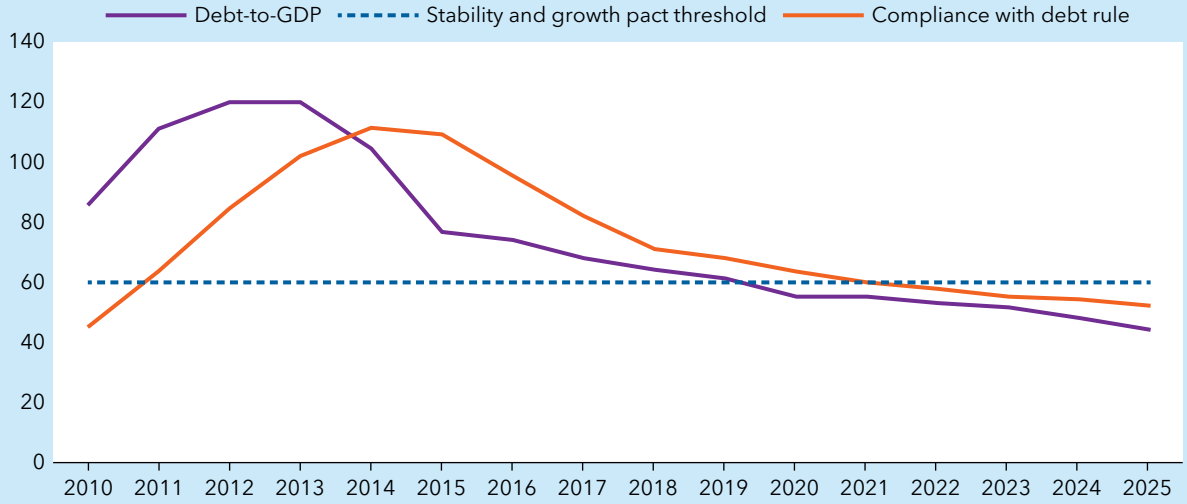
Ireland's fiscal policy is guided by the European Union framework, which includes a range of fiscal rules regarding the fiscal deficit, the structural deficit, spending growth, and debt levels. The rules are codified in the 2012 Fiscal Responsibility Act and include

- A debt rule limiting debt to 60 percent of GDP, or if debt exceeds 60 percent of GDP, an annual pace of reduction of no less than 1/20th of the difference between the actual debt ratio and the 60 percent of GDP limit.
- A budget balance rule, requiring a general government budget balance or surplus, which is tighter than the Maastricht limit of a deficit of 3 percent of GDP.
- A medium-term objective of achieving a structural budget deficit of no greater than 0.5 percent of GDP or, if the structural deficit exceeds 0.5 percent of GDP, an annual reduction is required, the size of which depends on the cyclical position of the economy (0.6 percent of GDP for 2016 in Ireland).
- An expenditure benchmark that limits the annual growth in general government primary expenditure to potential GDP growth, as assessed over a 10-year period (defined as the past 5 years, the current year, and a projection for the next 4 years).

The fiscal rules have contributed to a significant reduction in the level of public debt in Ireland in recent years. Debt-to-GDP was reduced from close to 120 percent in 2012 to slightly below the 60 percent threshold in 2019 (Figure 5.1.1).

Figure 5.1.1. General Government Debt and Compliance With Debt Rule in Ireland

(Percent)



Sources: Government of Ireland 2019; Ireland PIMA 2017.

Dimension 1.b: Is fiscal policy guided by one or more permanent fiscal rules?

QUESTIONNAIRE

Low	There are no permanent fiscal rules.
Medium	There is at least one permanent fiscal rule applicable to central government.
High	There is at least one permanent fiscal rule applicable to central government, and at least one comparable rule applicable to a major additional component of general government, such as an SNG.

DEFINITIONS OF KEY TERMS

Term	Definition
Permanent fiscal rule	A lasting numerical constraint on a fiscal aggregate aimed at providing a credible commitment to fiscal discipline, usually set in law or constitution, and in place for at least three years.
Comparable rule	Occurs when a permanent fiscal rule is in place, which has the potential to be as effective as a fiscal rule adopted by the central government. It does not mean that the rule must be the same as that adopted by the central government.
Major additional component of general government	GFSM 2014, paragraph 2.58, defines general government as comprising central government plus SNGs, and the social security funds and not-for-profit institutions controlled by them.

INSTITUTIONAL DESIGN

This dimension assesses whether there are specific and permanent fiscal rules to guide fiscal policies. A fiscal rule is numerical and can be applied to different fiscal aggregates. Common examples of fiscal rules are the debt rule, budget balance rule (including overall balance, cyclically adjusted and structural, and over the business cycle), expenditure rule, and revenue rule. The choice of rules is generally based on the specific country circumstances rather than theoretical considerations. There is overlap between this dimension and Dimension 1.a, in cases when the fiscal rule is a debt rule.

Debt rules and budget balance rules are most common internationally. Table 5.1 gives an overview of different types of fiscal rules currently operational in different countries and the legal basis for these rules.

- A low score on Dimension 1.b implies that there are no permanent fiscal rules. This could be because rules are completely lacking. It could also be that rules are formally in place, but that these have changed frequently and cannot be seen as permanent. Numerical rules differ from "procedural rules" that set standards on public financial management related to budget monitoring, reporting, and correction mechanisms. Procedural rules include budget timetables and deadlines as well as setting rules and enforcing expenditure ceilings at the ministry level. Only numerical rules qualify as fiscal rules for the purpose of this institution.
- A medium score indicates that there is at least one fiscal rule for the central government. This rule is numerical, and it has a clear formal and legal basis in law, regulation, or international treaty. A policy statement in the budget documents, without a clear legal basis, does not constitute a fully fledged fiscal rule.[1] However, if it has been consistently applied over several years, a policy-based rule may still be very effective.

[1] Only rules with targets fixed in legislation and fiscal arrangements for which the targets can be revised on a low-frequency basis (for example, as part of the electoral cycle) and binding for at least three years are considered as fiscal rules. Medium-term budgetary frameworks or expenditure ceilings that provide multiyear projections but can be changed annually are not considered to be fiscal rules (Lledó and others 2017).

Table 5.1. Fiscal Rules, by Legal Basis: International Practices
(Number of countries)

	Expenditure	Revenue	Budget balance	Debt	Total
Political commitment	1	2	2	4	9
Coalition agreement	4	8	4	4	20
Law	21	4	41	28	94
International treaty	28	–	47	53	128
Constitution	3	1	8	2	14
Total	45	14	78	75	212

Source: IMF Fiscal Rules Dataset 2017.

- A high score requires that there also is a comparable fiscal rule for a major part of general government, for instance, SNG. To be effective tools at the general government level, fiscal rules should cover all or most of the general government. Ideally, fiscal rules should apply to the whole general government sector, as is the case in the European Union (EU). To qualify for a high score on Dimension 1.b, most of the general government expenditure (75 percent or more) should be covered by fiscal rules adopted by the central government and SNGs at the level below central government. This is equivalent to the requirement for a high score on design under Dimension 1.a.

IMPORTANT DOCUMENTS

Documents	Uses
Fiscal responsibility law or similar	Assess specificity and status of fiscal rules
Fiscal policy statements and fiscal strategy reports	Assess how fiscal rules are reflected in policies

EFFECTIVENESS

The effectiveness of fiscal rules depends on how consistently they are applied at the fiscal planning and budgeting stage and whether budget outturns are in line with the rules. The rules should be reflected in medium-term budget estimates and in annual approved budgets and the outturns will be documented in the annual fiscal execution reports. If fiscal rules are not observed during the budget process, they are not effective. In addition, if the rules are applied at the budgeting stage but fiscal forecasts are consistently optimistic, the fiscal rule is not effective. A fiscal rule without any correction mechanism will not be effective when projections fail to materialize. Because budget outturns are subject to significant uncertainty, the effectiveness thresholds for budget outturns should be somewhat higher than for budget allocations.

In most countries, the main fiscal rule can be a debt rule, a budget balance rule, or an expenditure rule. As operational rules, the assessment under this dimension should focus on the balance or the expenditure rule. The discussion of thresholds for effectiveness of fiscal rules will therefore focus on budget balance and expenditure rules.

- *Low effectiveness* implies that the fiscal aggregates in the budget and budget outturns deviate from the limits established by the fiscal rule, without explicit justification by escape clauses. If the approved budget balance deviates from the fiscal rule or the

final budget outturn deviates significantly, then effectiveness is low.

- *For medium effectiveness*, the budget outturn deviates to some extent. Medium effectiveness may be attributable to escape clauses that are broad and undermine the credibility of the fiscal rule. Some fiscal rules give governments extensive powers to deviate from the fiscal rule when they deem this to be necessary, even in the absence of external shocks or emergency situations. Frequent application of escape clauses over several years may be a sign that the fiscal rule is not effectively disciplining fiscal policies. Mission teams must assess whether adjustments to or suspensions of fiscal rules in exceptional circumstances, such as the 2020/21 COVID-19 pandemic, have undermined the effectiveness of the rules.
- *High effectiveness* indicates that fiscal rules are stringently followed when budgets are prepared and that budget outturns are in line with the rules. This will generally require that the rule includes a correction mechanism to capture deviations from the projections and adjust policies accordingly. Escape clauses may be used in special cases but should not undermine the credibility of the fiscal rule. In case of past deviations being corrected the effectiveness may be high. Box 5.2 illustrates how Bulgaria's fiscal rule framework has helped ensure fiscal sustainability during 2002–17.

USEFUL DATA SERIES

Data	Questions to Address
Fiscal aggregate outturns (revenues, expenditures, and balances) compared with projections and approved budgets (for central government or general government as required by fiscal rules)	Is there evidence of optimism bias?
Length of time that fiscal rules have been in place, and periods in which rules were suspended or ignored	Has the frequent use of escape clauses undermined the credibility of the rule?
Share of general government expenditure covered by fiscal rules	How comprehensive is coverage of fiscal rules?
Review independent opinions on fiscal rules	Is there a report from an independent institution on the effectiveness of the fiscal rule?
Change in central and/or major SNG fiscal variables since introduction of fiscal rules	What is the impact of the rules on fiscal aggregates?
IMF Article IV reports	Has the country shown progress compared with previous assessments of assessments of fiscal rule formulation and compliance?

Box 5.2. Public Finance Act in Bulgaria

In Bulgaria, the Public Finance Act and the annual state budget define a clear set of fiscal rules and provide a good foundation for fiscal planning and sustainability (Table 5.2.1). The Public Finance Act complies with relevant European Union regulations and presents tighter constraints on some indicators.

Table 5.2.1. Fiscal Rules in Bulgaria

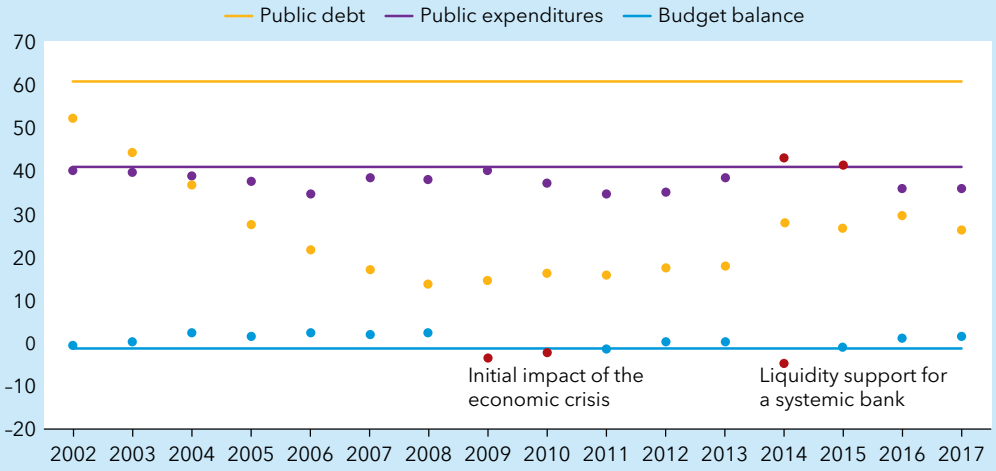
Type of Rule	Coverage	Value	Reference in the Public Finance Act
Annual budget deficit	Consolidated fiscal program on a cash basis	≤2 percent of GDP	• Article 27 (4) • Stability and Growth Pact (set at 3 percent)
Medium-term objective for the structural budget deficit	General government	≤0.5 percent of GDP	• Article 23
Nominal level of the consolidated debt as of the end of the fiscal year	General government	≤60 percent of GDP	• Article 29 • Stability and Growth Pact
Expenditures	Consolidated fiscal program on a cash basis	≤40 percent of GDP	• Article 28
Annual growth of public expenditures	General government	≤potential GDP growth	• Article 26 (1)
Medium-term objective for the budget balance	Local government	0	• Article 30
Expenditure growth for local activities	Local government	≤Average expenditure growth for local activities in the past 4 years	• Article 31
Annual payments under the municipal debt	Local government	≤15 percent of the average annual amount of own revenues plus total equalizing subsidy in the past 3 years	• Article 32
Commitments for expenditures	Local government	50 percent of the average expenditures in the past 4 years	• Article 94 (3), 2

Sources: Authors' analysis of the Bulgarian Public Finance Act.

The fiscal rules have been effective in guiding fiscal policies, and the rules are largely adhered to. As Figure 5.2.1 shows, from 2002 to 2017, deviations were limited to the 2009 financial crisis and a 2014 banking crisis.

Figure 5.2.1. Adherence to Fiscal Rules in Bulgaria

(Percent of GDP)



Sources: Bulgaria state budget and Public Finance Act; Eurostat; and IMF staff assessment.

Dimension 1.c: Is there a medium-term fiscal framework to align budget preparation with fiscal policy?

QUESTIONNAIRE

Low	There is no MTFF prepared before budget preparation.
Medium	There is an MTFF prepared before budget preparation but it is limited to fiscal aggregates, such as expenditure, revenue, the deficit, or total borrowing.
High	There is an MTFF prepared before budget preparation, which includes fiscal aggregates and allows distinctions between current and capital spending and ongoing and new projects.

DEFINITIONS OF KEY TERMS

Term	Definition
Medium-term fiscal framework (MTFF)	To qualify as an MTFF, it must (1) cover a minimum period of the budget year plus two forward years; (2) be approved at the level of cabinet or above; and (3) over its duration, the expenditure fiscal aggregates or the deficits must be viewed as a ceilings.
Budget preparation	Refers to preparation by line ministries of their detailed annual budget proposals. The start of budget preparation is the date of issuance of the annual budget instructions, or its equivalent.
Distinction between current and capital spending	The definition of current (or recurrent) and capital spending refers to the current and capital budgets, as defined in each country. Any guidance provided in an MTFF must be aligned with the presentation of the detailed budget and budget law.
Ongoing and new project	An ongoing project is one that was the object of appropriations for construction (not for appraisal or feasibility) approved in a prior budget (a budget for a prior fiscal year or a budget for the current fiscal year approved before passage of a supplementary budget), but the project construction is not completed. New projects are those relating to construction that may be proposed for the first time in the budget currently under preparation.

INSTITUTIONAL DESIGN

This dimension assesses whether there is an MTFF to guide the preparation of the central government budget. The strength of the MTFF depends on its specificity and whether it represents a limit to the annual budget. This is confirmed most clearly in the legal framework addressing the MTFF and in the annual budget instructions. It may also be confirmed that a constraint was intended by the cabinet when approving the MTFF.

- A low score indicates that there is no MTFF prepared and approved prior to budget preparation. In some countries there is no MTFF at all. In other countries an MTFF is presented in budget documents, but it is not approved before budget preparation. This MTFF is a result of the budget process rather than a framework to guide budget preparation.
- A medium score indicates that an aggregate MTFF is prepared but does not differentiate current and capital spending or identify the fiscal space for new investment projects. An MTFF of this type does discipline the overall budget process but has limited direct impact on the level and composition of capital spending.
- For a high score, the MTFF also indicates the allocation to capital versus current spending and how the capital spending envelope should be distributed between ongoing and new projects. This MTFF will provide clear guidance on the development of the capital budget.

IMPORTANT DOCUMENTS

Documents	Uses
Budget system law or similar	Clarify the legal basis for the MTFF
Fiscal policy statements	Assess the linkages between fiscal policies and MTFFs in subsequent years
MTFF document	Analyze scope, level of detail, and consistency of MTFFs over subsequent years
Budget documents	Assess consistency between MTFFs and budgets

EFFECTIVENESS

If the MTFF is effective, the deficit and the capital budget allocation in the approved annual budget should be close to the approved MTFF. In many countries, macroeconomic conditions change quickly, and updated forecasts are often made late in the budget preparation process. Therefore, revenue and expenditure estimates may change compared with the MTFF estimates. However, fiscal policy relating to deficits as a percentage of GDP should not change significantly based on updated forecasts, unless there is a fiscal shock.

- Low effectiveness indicates that the MTFF has little impact on the approved budget. In some countries, the budget process largely ignores the framework established by the MTFF. In other cases, the MTFF is the formal starting point for the budget deliberations, but the final budget is quite different. If the final capital budget is significantly higher or lower than the capital allocation in the MTFF, then effectiveness could be rated as low.
- Medium effectiveness implies that the MTFF to some extent constrains the approved budget. If the final capital budget is somewhat higher or lower than the capital allocation in the MTFF, effectiveness could be rated as medium.
- High effectiveness indicates that the budget document is consistent with the allocations that were indicated in the MTFF, in particular for capital spending. If the final capital budget is largely in line with the capital allocation in the MTFF, effectiveness could be rated as high. There may be adjustments related to new developments in the time period between the MTFF and the budget. If these are clearly explained and documented in the budget documents, a somewhat higher deviation might be consistent with high effectiveness. Box 5.3 shows how MTFF capital spending estimates in Estonia discipline subsequent investment spending.

USEFUL DATA SERIES

Data	Questions to Address
Compare MTFF fiscal aggregates announced for the budget year and fiscal aggregates in the approved central government budget	Does the MTFF effectively constrain the budget process?
Compare MTFF capital allocation, approved capital budget expenditures, and actual capital expenditures	Do the MTFF and the budget provide realistic capital budget projections?

Box 5.3. Medium-Term Fiscal Framework in Estonia

In Estonia, the annually prepared medium-term State Budget Strategy provides a medium-term fiscal framework (MTFF) that specifies planned current and capital spending. Capital spending is allocated by ministries, by main funding source, and by major programs and projects. The Budget Strategy describes decisions regarding ongoing and new investment projects, but there is no clear specification of budget allocations to existing and new capital projects in the published State Budget Strategy. This is specified in the underlying, detailed medium-term estimates provided by the ministries to the Ministry of Finance (Table 5.3.1).

Table 5.3.1. Medium-Term Fiscal Framework Capital Spending Ceilings in Estonia, 2015–21
(Millions of euros)

Investment spending	2015	2016	2017	2018	2019	2020	2021
2015 State Budget Strategy	1,054	972	1,042	1,011			
2016 State Budget Strategy		1,033	1,286	1,237	1,165		
2017 State Budget Strategy			1,067	1,196	1,159	1,116	
2018 State Budget Strategy				1,365	1,375	1,408	1,224
Final outturn	1,081.1	989.6	1,290.8				

Sources: Estonia Ministry of Finance State Budget Strategies, 2015–18.

Institution 2: National and Sectoral Planning

Are investment allocation decisions based on sectoral and intersectoral strategies?

Public investment should be guided by strategies that set out the goals and objectives to be achieved through public investment spending and plans for how to realize these. The strategies should set out the direction and high-level ambition or aspirations for future public investment, informed by current gaps and trends (for example, population, technology, environmental) that would shape future infrastructure needs and demands. The plans should explain how public investment goals and objectives will be achieved through a broad portfolio of projects that complement each and prioritize individual major projects. These goals and objectives are nonfinancial in nature, but plans should be subject to broad constraints in terms of the economic viability of addressing the underlying infrastructure needs. Plans should not be expected to go into much detail about major projects and will often not include any information on specific smaller projects. Public investment spending contributes to the capital stock and is often driven by gaps in this stock, and thus plans should make some reference to the existing nonfinancial fixed assets.

Each dimension of this institution addresses a key aspect of the planning phase:

- The first dimension captures whether national and sectoral public investment strategies and plans are prepared and how comprehensive they are. National and sectoral goals are achieved through the contribution of all projects once they are completed.
- The second dimension highlights the importance of costing of public investment plans. The total cost of a plan should reflect the financing constraints—if there are no constraints, there are no priorities. Costing major projects conveys greater confidence that fiscal constraints applied to the plan, and the number of major projects identified in the plan, are realistic.
- The third dimension reinforces the concept of nonfinancial project benefits—the value of an individual project, and its contribution to overall goals, can best be assessed through its contribution to outputs and outcomes.

Dimension 2.a: Does the government prepare national and sectoral strategies for public investment?

QUESTIONNAIRE

Low	National or sectoral public investment strategies or plans are prepared, covering only some projects found in the budget.
Medium	National or sectoral public investment strategies or plans are published covering projects funded through the budget.
High	Both national and sectoral public investment strategies or plans are published and cover all projects funded through the budget regardless of financing source (for example, donor, public corporation, or public–private partnership).

DEFINITIONS OF KEY TERMS

Term	Definition
National	In this context, a national plan is one that is produced by central government and includes all types of projects for which central government is responsible regardless of location within the national boundaries. It may also include projects under the responsibility of SNGs or other parts of the public sector if these are of national importance.
Sectoral	A sectoral plan is a subset of a national plan. There is no standard definition of sector. The closest to a standard definition would be the UN Classification of the Functions of Government, the COFOG functional classification.

Term	Definition
Strategy	The direction and high-level ambition or aspirations for future public investment, informed by current gaps and trends (for example, population, technology, environmental) that would shape future infrastructure needs and demands.
Plan	A document that describes how strategic goals and objectives are to be achieved. This may be a part of the strategy document (strategic plan) or a separate document. A plan includes statements of goals and objectives, covers a period of at least 3–5 years, identifies the budget entity or entities accountable for it, and is separate from, and is prepared before, the budget documentation.
Found in the budget	A project that is included in budget documentation.
Fund through the budget	A project that receives funding from the budget but may also receive financing from other sources.
Publish	See the Glossary.

INSTITUTIONAL DESIGN

The purpose of this dimension is to clarify the existence and the contents of national strategies and plans, in particular, how they cover public investment. National strategies and plans provide the long-term foundation for public investments. The terms *strategies* and *plans* have different meanings, as defined previously. However, in practice these terms are often used interchangeably. When assessing national and sectoral planning documents, it is important to verify whether they include both strategies and plans or are limited to one of these aspects.

The strategies and plans can cover both current and capital spending. A strategy or plan that includes public investment but is not limited to public investment meets the definition of a public investment strategy or plan. Institution 7, Budget Comprehensiveness and Unity, gives higher scores when recurrent and capital budget preparation are closely coordinated. Plans are not different.

- A low score indicates that plans are not prepared or that they provide limited coverage of future investment projects. Plans and strategies may be high level and focus more on broad policy directions than on specific projects. These plans do not provide concrete guidance on specific future investment projects, although they may be used to justify such projects. Some plans and strategies may mention a few projects that are under preparation but do not provide a concrete description of these projects or an overview of planned investments in the sector.
- A medium score indicates that either national or sectoral plans are published and identify the planned major budget-funded projects in a sector. The plan and strategy need not address all possible future projects or be as detailed as the budget. To qualify for a medium score on Dimension 2.a, the plan and strategy should identify some of the 3–5 most important projects in most main infrastructure sectors. The definition of main sectors, and the government's role in each sector, may vary between countries, and needs to be determined in each country. In many countries, main public infrastructure sectors will include transport (roads, railways, airports, and seaports), electricity, telecommunications, and water supply.
- A high score indicates that most major projects are identified in published national and sectoral plans, and these plans should cover all financing sources, including external sources, public-private partnerships (PPPs), and public corporations (PCs). For a high score, the plan should identify most of the 3–5 most important projects in each main sector.

IMPORTANT DOCUMENTS

Documents	Uses
National strategies and plans	Assess how public investment projects are reflected in strategies and plans
Sectoral strategies and plans	Assess how public investment projects are reflected in strategies and plans
Official gazette Web site of ministries	Assess if the strategies and plans are published and accessible

EFFECTIVENESS

The effectiveness of the capital project planning process depends on the realism of the plans and the correspondence between the major project priorities found in the plans and the projects that are included in subsequent budgets. If projects turn out to be very different from those envisaged in the plan, or if the annual budget includes major projects that have not been covered by the planning process, planning is not very effective. A fragmented planning framework, with many partly overlapping but inconsistent planning documents, may also undermine effectiveness. The effectiveness assessment should be based on comparing the projects that have been included in the budgets for the years covered by a strategy.[2]

- *Low effectiveness* implies that the plans have little impact on which projects are approved in the budget and implemented. This might be because the initial plans fail to identify projects, as discussed under institutional design. It might also be the case that plans do identify major projects, but these are largely ignored when budgets are prepared. If budgets for relevant years include few of the investment projects in national or sectoral plans, then effectiveness is low. If few of the projects approved in the budget have been identified in national or sectoral plans, then effectiveness is also low. In addition, if it is not possible to assess the consistency between the plans and the subsequent budgets, then effectiveness will be low.
- *Medium effectiveness* indicates that many projects are identified in plans, but there may be significant changes in the projects that are selected for implementation. For medium effectiveness, some projects that are described in national or sectoral plans are subsequently approved for budget funding. If some projects approved in the budget have been identified in national or sectoral plans, then effectiveness is also medium.
- *High effectiveness* indicates that there is close correspondence between the national and sectoral plans and subsequent budgets. Most major projects that are approved for implementation have been identified in relevant plans, and the project scope and design is consistent with the initial plans. For high effectiveness, most projects that are described in national or sectoral plans are approved for budget funding. If most projects approved in the budget have been identified in national or sectoral plans, effectiveness is also high. Box 5.4 describes the national planning process in Botswana, which facilitates high correspondence between planned and realized investment projects.

Plans are less effective if they have a narrower coverage than the capital budget. For example, if the budget includes externally funded projects but plans do not, then the plans are not effective. They are more effective if they have a wider coverage than the budget.

National and sectoral plans should be consistent with each other. Sectoral plans may be more detailed than the national plan. If there are significant differences between the sector portion of the national plan and separate sectoral plans in terms of coverage, priorities, or major projects, then, planning is not effective.

[2] For instance, the projects identified in the national strategy for 2014–19 should be compared with the projects included in the budgets for 2014 through 2019.

Box 5.4. Botswana National Development Plan

Botswana has several strong planning institutions—as reflected in the National Development Plan (NDP). The plan is in its 11th iteration and is valid for six years. NDP 11 is based on the government's 2036 strategic vision, includes six-year estimates per ministry and per project, and provides the basis for the total medium-term and annual budgets. Sector and subsector strategies are integrated within the NDP and are linked to broader policy goals (thematic policy areas). The NDP indicates the status of funding for each sector, program, and project, categorized as Committed Projects, Programmed Investment, Appraised Projects, and In Preparation. Table 5.4.1 summarizes the NDP allocations for one ministry.

Table 5.4.1. NDP Allocations for the Ministry of Defence, Justice, and Security

Cluster Project/Project	Funding Status	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Total NDP 11 Cost
Total NDP Allocation		2,813.2	2,928.1	2,933.6	3,086.1	3,143.6	3,002.1	17,906.7
	o/w: Committed	2,678.8	2,718.8	2,659.8	2,588.8	2,506.8	2,481.8	15,634.5
	Programmed	87.2	112.2	92.2	91.1	91.3	56.2	530.1
	Appraised	22.0	57.0	40.0	4.0	5.0	0.5	128.5
	In Preparation	25.2	40.0	141.7	402.3	540.6	463.6	1,613.6
Programme: Rule of Law								
NDP 11 Key Result Area: Goal: Key Performance Indicator: 2.0 Strengthening of Botswana Police Services	National Security Strengthening of National Security Voice and Accountability					**TEC (P million)**		**2,420.1**
	TOTAL	310.1	382.0	365.0	471.0	470.0	422.0	2,420.1
	o/w: Committed	205.0	245.0	185.0	116.0	35.0	10.0	796.0
	Programmed	70.1	90.0	70.0	69.9	70.1	37.0	407.1
	Appraised	15.0	17.0	0.0	0.0	0.0	0.0	32.0
	In Preparation	20.0	30.0	110.0	285.1	364.9	375.0	1,185.0
2.1 Block 10: 130 Staff Houses	TOTAL	25.0	25.0	25.0	25.0	00.0	00.0	100.0
	o/w: Committed	25.0	25.0	25.0	25.0			100.0
	Programmed							0.0
	Appraised							0.0
	In Preparation							0.0
2.2 Police Posts and Base Camps	TOTAL	0.0	0.0	15.0	15.0	15.0	15.0	60.0
	o/w: Committed							0.0
	Programmed							0.0
	Appraised							0.0
	In Preparation			15.0	15.0	15.0	15.0	60.0
2.3 Letlhakane: 28 Staff Houses and New Police Station	TOTAL	25.0	20.0	15.0	11.0	10.0	10.0	91.0
	o/w: Committed	25.0	20.0	15.0	11.0	10.0	10.0	91.0
	Programmed							0.0
	Appraised							0.0
	In Preparation							0.0

Source: Botswana National Development Plan 2017.
Note: ICT = information and communications technology; MDJS = Ministry of Defence, Justice, and Security; NDP 11 = 11th National Development Plan; o/w = of which. The inclusion of multiyear projections in the NDP provides an effective platform for investment funding and implementation. The NDP framework includes project codes, names, and their total estimated costs, which provides a tangible bridge to the annual and multiyear budget and execution processes.

USEFUL DATA SERIES

Data	Questions to Address
Number and cost of major projects that appear in plans but not in the budget	What is the realism of the planning process?
Number and cost of major projects in the approved budget that do, and do not, appear in national or sector plans, by financing source	What is the effect of the plans on subsequent budget decisions?

Dimension 2.b: Are the government's national and sectoral strategies or plans for public investment costed?

QUESTIONNAIRE

Low	The government's investment strategies or plans include no cost information on planned public investment.
Medium	The government's investment strategies include broad estimates of aggregate and sectoral investment plans.
High	The government's investment strategies include costing of individual, major investment projects within an overall financial constraint.

DEFINITIONS OF KEY TERMS

Term	Definition
Investment strategy or plan	Defined in the discussion in Dimension 2.a.
Broad estimate	A top-down estimate of financing, without reference to individual projects.
Aggregate and sectoral investment plan	Estimated spending on all projects, or projects grouped by sector or major ministry, for which central government budget entities are responsible.
Major project	See discussion on page 24.
Overall financial constraint	The maximum amount of money that would be spent for all projects in the strategy or plan. This must be stated with specific reference to fiscal policy, and thus is not the same as broad estimates of aggregate or sector investment plans.

INSTITUTIONAL DESIGN

This dimension assesses whether public investment plans are costed and subject to financial constraints. If the plans are to guide capital project priorities, they must be concrete and contain initial cost estimates for the major projects or groups of projects identified in the plans.

- A low score indicates that there is no concrete cost information in strategies and plans. The documents may mention specific projects, but in the absence of any costing it is not possible to make any judgment about the likelihood that the projects will be implemented. The failure to provide cost estimates and indicate resource availability is a common weakness in many strategies and plans.
- A medium score requires that the plans provide aggregate estimates for groups of projects. However, the plan does not indicate resource availability for these project groups.
- For a high score, the plans should provide cost estimates for individual major investment projects and indicate the overall financial constraints of the investment, and the cost estimates should be consistent with these financial constraints. The financial constraint should be based on top-down considerations of future fiscal space. It is different from a bottom-up assessment of sectoral spending needs. The plans should provide a comparison between the overall spending needs and financial constraints and discuss strategies for closing any financing gaps.

IMPORTANT DOCUMENTS

Documents	Uses
National plans and strategies	Assess the costing of major investment projects and the financial constraints applied to public investments
Sectoral plans and strategies	Assess the costing of major investment projects and the financial constraints applied to public investments in each sector
Public investment plans and budget documents	Compare project costs and fiscal space to estimates in plans and strategies

EFFECTIVENESS

The effectiveness of this dimension should be assessed by comparing the broad cost estimates in the plans to the final cost estimates in the subsequent budgets. Underestimation of project costs at the planning stage is a common weakness in many public investment management systems. This may be because of weak capacity and inadequate methodologies. Strategic misrepresentation is also common—low initial cost estimates are provided to reduce the risk that a project is rejected as too costly compared with the expected benefits.

- *Low effectiveness* implies that there are significant differences between initial plan estimates and budgeted amounts. If cost estimates in the plan are systematically lower or higher than in the budget, the planning process is not effective. If broad cost estimates in plans are significantly higher than budgeted capital expenditure for the same period as the plan, effectiveness would be assessed as low. This assessment should be based on a sample of major projects, covering the most important public investment sectors. If it is not possible to compare cost estimates, the effectiveness of this dimension will be low.
- *Medium effectiveness* implies that the differences between initial estimates in the plan and the budgets are more moderate. If broad cost estimates in plans are somewhat higher than budgeted capital expenditure for the same period as the plan, effectiveness should be considered to be medium.
- *High effectiveness* implies that initial estimates are generally accurate. If broad cost estimates in plans are broadly in line with budgeted capital expenditure for the same period as the strategy, effectiveness should be considered as high. Box 5.5 describes the Irish National Development Plan 2018–2027, in which there is close correspondence between cost estimates in the plan and the outturns, and between the fiscal framework for the plan and subsequent budgets.

USEFUL DATA SERIES

Data	Questions to Address
Compare the cost of individual major projects in the plan with the cost of the same project in the budget	Are project cost estimates in the plan realistic?
Compare total sector costs in the plan with the total sector costs in the budget	Are sector cost estimates in the plan realistic?
Compare aggregate financial constraints used in planning with aggregate financial constraints used in budgeting (in the MTFF or the total in the approved budget)	Are financial constraints in the plan consistent with actual fiscal space?

Box 5.5. Strategic Investment Planning in Ireland

Ireland prepared a National Development Plan (NDP) for 1989–1994 as the basis for a request for European Union financial support. The second National Development Plan, for 1994–2000, was largely a strategic investment plan. New plans have been prepared at regular intervals and the focus has shifted from European Union financing to national investment priorities. The current plan covers the period 2018–2027 (Table 5.5.1).

The NDP 2018–2027 is managed by the Department of Finance. The plan is fully costed, and fully coordinated with the budget process. The NDP provides financing indications that are consistent with long-term fiscal projections, and these will be updated and revised during medium-term and annual budget considerations. Capital investment allocations are provided for a five-year period and will be rolled over annually. The NDP 2018–2027 combines direct investment by the Exchequer of €91 billion and state-owned sector investment of around €25 billion. This will increase public investment from about 3 percent to about 4 percent of gross national income during the period.

The NDP includes 10 strategic investment priorities that are aligned with the 10 strategic outcomes in the National Planning Framework and identifies 43 major investment projects or programs. There is a substantial contingency allocation. Annual progress reports show that the NDP has been effective in guiding public investment in Ireland.

Table 5.5.1. Strategic Investment Priorities in Ireland's 2018–2027 National Development Plan

Priorities	Euros (in millions)
Compact growth	14,500
Enhanced regional accessibility	7,300
Strengthened rural economies	8,800
Sustainable mobility	8,600
Strong economy	9,400
High-quality international connectivity	4,800
Enhanced amenity and heritage	1,400
Transition to a low-carbon, climate-resilient society	21,800
Sustainable water and environment	8,800
Access to childcare, education, and health services	20,100
Other sectors	3,000
Contingency	7,400
Total	115,900

Source: Government of Ireland 2018, 2020.

Dimension 2.c: Do sector strategies include measurable targets for the outputs and outcomes of investment projects?

QUESTIONNAIRE

Low	Sector strategies do not include measurable targets for outputs or outcomes.
Medium	Sector strategies include measurable targets for outputs (for example, miles of roads constructed).
High	Sector strategies include measurable targets for both outputs and outcomes (for example, reduction in traffic congestion).

DEFINITION OF KEY TERMS

Term	Definition
Measurable target	A numerical goal or objective to be achieved within the plan period.
Output	Products or services delivered by a budget entity. Capital budget outputs include the number and types of health care facilities built, the number of primary education classrooms built, or miles of public roads constructed.
Outcome	The effect of outputs on a problem, condition, or need, such as reducing traffic congestion or increasing the literacy of the general population.

INSTITUTIONAL DESIGN

The purpose of this dimension is to assess whether sector strategies identify measurable targets for outputs and outcomes of public investment. The sector strategy could be defined as part of a national strategy or in a separate sectoral strategy document. A strategy should identify multiple outputs and describe how they work in concert to achieve specific outcomes. Outcome targets should be aligned with the goals or objectives of the strategy. At least one measurable target must be provided for each major output and for each outcome in the strategy. The assessment must also cover the validity and reliability of the performance indicators.

- A low score indicates that there are no specific output or outcome targets for investment in the sector strategy. There may be targets related to broad policy initiatives, but if these are not linked to public investment, then it is not possible to ascertain the results of the investments.
- A medium score indicates that the sector strategies include targets for outputs of the investment projects. Outputs are generally easier to measure than outcomes and therefore easier to include in planning documents. It is reasonable to measure outputs annually.
- A high score indicates that strategies provide targets for both outputs and outcomes. Outputs are the means for achieving an outcome. Knowledge of outputs is necessary to understand the realism of outcomes and to monitor the progress in achieving them. Inclusion of only outcome measures satisfies neither a medium nor a high score. Outcomes are more difficult to measure than outputs because there are other influences than government outputs on the problem or condition targeted by the government output. Because of this complication, outcomes are sometimes measured through surveys and infrequently, for instance, once every few years.

IMPORTANT DOCUMENTS

Documents	Uses
National plans and strategies	Identify output and outcome targets for major investment projects
Sectoral plans and strategies	Identify output and outcome targets for major investment projects
Budget submission documents	Assess whether output and outcome information is used to justify budget proposals
Ex post project reviews and evaluations	Assess how output and outcome information is used to analyze project performance (effectiveness)
Annual reports for ministries or government	Assess whether output and outcome targets are used to assess annual performance (effectiveness)

EFFECTIVENESS

The effectiveness of measurable targets depends on whether and how they are used:

- First, measurable outputs and targets can be used explicitly to analyze or justify proposed current or capital budget allocations, either by line ministries or by the Ministry of Finance (MoF).
- Second, measurable outputs and targets can be used by a line ministry to manage a program. This must be demonstrated by monitoring reports prepared by line ministries or through a central monitoring system.
- Third, outcomes can be measured through spending reviews, performance audits, evaluation reports, or other specialized studies. Program outcomes can be measured on a periodic (that is, not annual) or on a sample basis.

The share of major projects in which measurable targets are used for decision making, project management, and evaluation purposes is a key indicator for effectiveness:

- *Low effectiveness* means that there is little evidence that output and outcome data are actively used. This is done in few major projects.
- *Medium effectiveness* means that there is frequent but. There is documentation that performance data are used in some major projects.
- *High effectiveness* indicates that there is systematic and extensive use of output and outcome information. This is actively used and documented in most major projects. Box 5.6 illustrates how outcome and output targets from Malaysia's national planning framework are actively used in line ministries' investment project proposals, and in prioritizing among these.

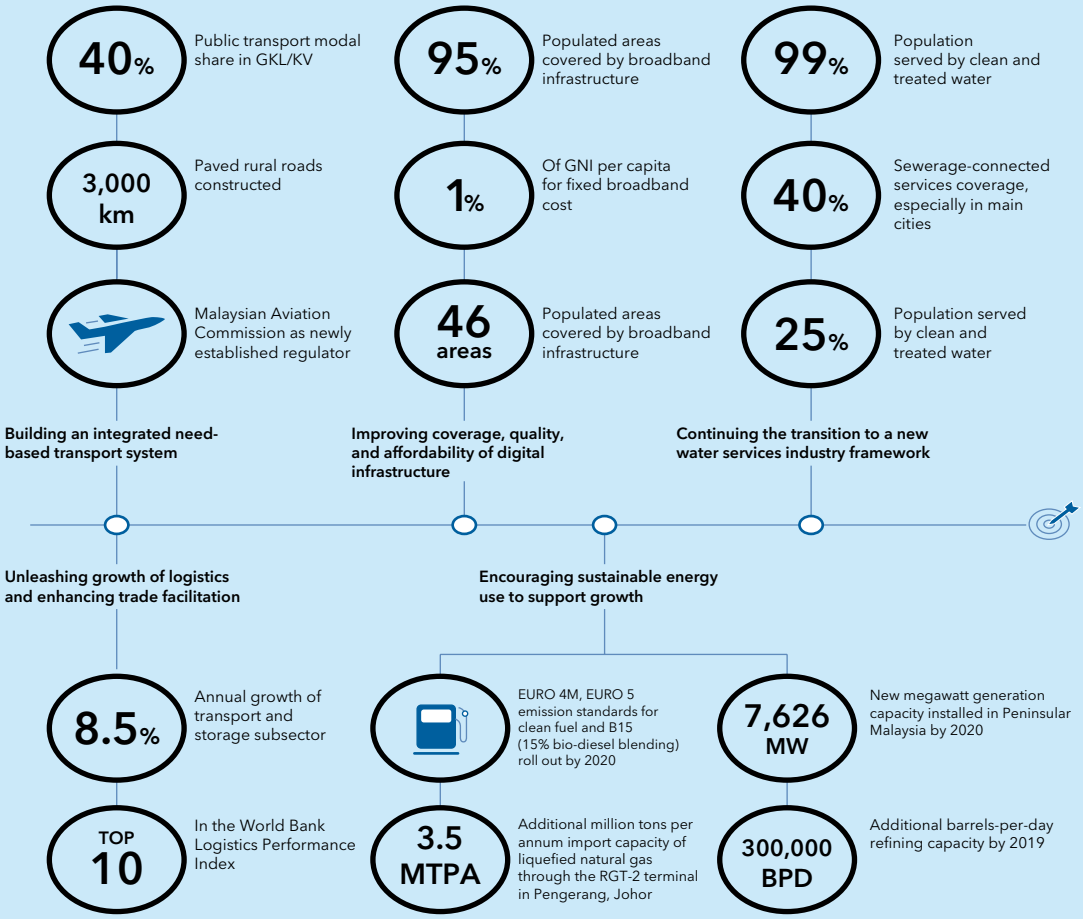
USEFUL DATA SERIES

Data	Question to Address
Project implementation and monitoring data from internal tracking and management systems or published in, for example, annual reports	Are output and outcome data used in project management and monitoring?

Box 5.6. National Planning in Malaysia

The Malaysian government publishes national strategies for public investment under its five-year development plan series, with the current plan, the 11th Malaysia plan, covering 2015–20 (Figure 5.6.1). Each sector produces its own strategies for public investment under various sectoral master plans and blueprints, albeit with a different time coverage. The 11th Malaysia plan includes high-level outcome targets and identifies some major investments. The sectoral strategies include measurable targets for outputs and outcomes, and when ministries submit their budget requests, details on the targets and outcomes for each project are required.

Figure 5.6.1. Outcome and Output Targets for Infrastructure in the 11th Malaysia Plan



Sources: 11th Malaysia plan, annual budget documents.
Note: GNI = gross national income; LGK/KV = Greater Kuala Lumpur/Klang Valley; RGT-2: re-gasification terminal.

National and sectoral plans have been effective in guiding the strategic selection of investment projects. Sectoral strategies are published and their formulation is broadly guided by the national strategy plan. On the basis of national and sectoral strategies, ministries prepared a master list of top priority projects for 2016–20, which was approved by the cabinet.

Institution 3: Coordination between Entities

Is there effective coordination of the investment plans of central and other government entities?

Institution 3 addresses coordination between plans at different government levels, that is, coordination between entities that have the right to independently allocate resources to public investment. Coordination in this context also includes how one entity—central government—provides financing to other entities.

In addition to the public investment plans themselves, the dimensions of this institution focus on fiscal relations between entities involved in the public investment:

- First, how is capital spending by different government levels coordinated? SNGs are often as important, and sometimes more so, than central government in public investment planning, financing, and implementation. Coordination in this context means to ensure that priorities are consistent and individual projects complementary between the central government and SNGs.
- Second, how does the central government provide funds to SNGs that may be used for public investment? The more predictable this flow of funds, the more realistic are funding constraints used in public investment plans. The focus here is on funds for which SNGs have discretion—in other words, SNGs independently decide the projects financed by these funds.
- Third, how does the central government monitor contingent liabilities (CLs) related to other parts of the public sector? Central government is often called upon to bail out other entities, including SNGs and PCs, in the event of serious problems arising from projects. Central government has an interest in monitoring and minimizing such CLs.

Dimension 3.a: Is capital spending by SNGs coordinated with the central government?

QUESTIONNAIRE

Low	Capital spending plans of SNGs are not submitted to or discussed with central government.
Medium	Major SNG capital spending plans are published alongside central government investments, but there are no formal discussions, between the central government and SNGs on investment priorities.
High	Major SNG capital spending plans are published alongside central government investments, and there are formal discussions between the central government and SNGs on investment priorities.

DEFINITIONS OF KEY TERMS

Term	Definition
Capital spending plan	Medium- to long-term investment plans as well as budgets.
Major SNG capital spending plan	Plan identifying major SNG projects that are planned, proposed, or selected for inclusion in the budget. See also "major projects" in the glossary.
Published alongside	SNG and central government projects are listed in the same document or public website.
Formal discussion	There is a well-defined process for SNGs and central government to exchange information on projects.

INSTITUTIONAL DESIGN

The intent of this dimension is to determine if there is a system to ensure that major projects are

Table 5.2. Funding Arrangements for Investment Projects Involving Subnational Governments

Who Funds?	Who Implements?	Who Selects?
SNG own funds—tax, nontax, and borrowing	SNG	SNG
Unconditional transfer from central government	SNG	SNG
Conditional transfer from central government	SNG	Proposed by SNG but approved by central government
Central government line ministry budget	SNG	Proposed and selected by central government; SNG is implementation agent
Central government line ministry budget	Central government/ SNG	Proposed by SNG but approved by central government

Source: IMF staff.

planned and selected by each level of government with awareness of planning and selection decisions at other government levels. The need for coordination and the direction of this coordination is dependent on assignment of responsibilities and on the funding arrangements for different capital projects. We can define five main funding arrangements for projects involving the central government and SNGs (Table 5.2). In principle, coordination with central government occurs automatically in the last three funding arrangements, so the need for formal discussions should relate mainly to the first two funding arrangements. However, this automatic coordination does not always occur in practice, so the assessment also needs to cover these forms of funding arrangements.

The focus of this assessment will usually be on the level below central government, but in some countries, it may also be relevant to capture the next level of SNGs. If lower levels of SNGs are responsible for more than 25 percent of SNG public investment, the PIMA should also comment on practices at this level. The scoring should still be based on the first level below central government.

- A low score on Dimension 3.a implies that there is no institutional requirement for systematic sharing and coordination of spending plans. The institutional requirement can be expressed through legislation, regulations, or intergovernmental agreements. The central government does not know which investments are being planned at the SNG level, and there is no dialog to ensure that SNG investment plans are consistent with central government investment plans. For instance, local roads might be built without knowledge of future developments in the national road network.
- A medium score implies that there is an institutional requirement that central government and SNG projects are presented in a consolidated format. Central government receives the capital spending plans of SNGs and ensures that these are published alongside central government investments. Ideally, SNG and central government projects would be commingled and sorted by common project type and location. The legal requirement for sharing and presentation of SNG investment plans will need to be anchored in central government legislation, but there may be additional provisions in SNG legislation. If the provision is only in SNG legislation, this is not sufficient for a medium score.
- A high score indicates that the coordination includes a system of formal discussions between the central government and SNGs. For the design assessment, formality means that the system of discussions, or system of coordination, is defined in legislation or in written procedures, such as budget instructions or ministry regulations.

IMPORTANT DOCUMENTS

Documents	Uses
Legal and regulatory framework for intergovernmental fiscal relations	Clarify legal requirements for coordination of public investments between levels of government
National plans and strategies SNG plans and strategies	Assess consistency between national and subnational investment plans
National budget documents	Verify whether SNG projects are presented alongside central government projects
Budget circular and other guidelines	Verify whether SNG project should be aligned/coordinated to national priorities Verify whether there is a formal consultation mechanism between the central and SNG governments

EFFECTIVENESS

The effectiveness assessment should focus on whether the arrangements that are put in place actually lead to effective coordination of public investments between the central government and the SNG. Is there a flow of information in this system that can be used for project planning and selection by each entity? Effective coordination should have impacts on the design and selection of specific investment projects. Identification of such impacts will support the assessment of effectiveness.

- *Low effectiveness* indicates that the level and impact of coordination is low. This may be attributable to the absence of formal coordination mechanisms, which would also result in a low score on institutional design. Alternatively, there may be formal arrangements in place, but these are not working in practice. Central government may receive SNG investment plans, but these are not reviewed and the information in them is not used for coordination purposes. In some countries, discussions between the central government and SNGs occur after budget decisions have been made and serve as a vehicle for information rather than coordination. If effectiveness is low, there are few examples of SNG capital projects submitted to and effectively coordinated with the central government.
- *Medium effectiveness* indicates that the formal coordination mechanisms are operational but do not cover all SNG public investment decisions. If there are few concrete examples of the impact of this coordination, it is only moderately effective. For medium effectiveness, some SNG capital projects are submitted to and effectively coordinated with the central government.
- *High effectiveness* implies that information about investment plans is shared and forms the basis for active coordination, and that the impact of this is clearly documented in plans and budgets. In this case, most SNG capital investments are coordinated with central government. Some countries have annual formal consultations with SNGs early in the budget process and use these to decide investment priorities. If discussions do not have a clear formal basis, discussions must have occurred with regularity for the past three years to be equivalent to formal discussions.

USEFUL DATA SERIES

Data	Questions to Address
Total public investment spending by level of government compared with central government broken down by financing source where SNG has full or partial discretion over use of funds	How has coordination between central government and SNGs impacted the following? • public investment at each level • Investment levels • Project selection • Sectoral prioritization

Many countries have comprehensive institutional arrangements for consultation between the central government and the SNGs on public investment. Box 5.7 provides an example of the institutional arrangements for Chile. Chile has not been subject to a PIMA, so there is no assessment of the effectiveness of these arrangements from a PIMA perspective. Box 5.8 describes similar mechanisms in Indonesia, where the PIMA indicated that these mechanisms were effective.

Box 5.7. Subnational Government Investments in Chile

Decree N. 3876 of 2000 stipulates that is the responsibility of the Ministry of Interior and Public Security, through its Sub-secretariat for Regional and Administrative Development (SUBDERE), to coordinate regional public investment. This duty is the responsibility of the Co-ordination of Public Expenditure Unit (Coordinación Gasto Público, CORGAPU) with the support of intendentes (central government appointees in the regions), with the latter responsible for coordination with public services and ministries within their regions.

The intendente, together with the Regional Council, Ministry Regional Secretariats (SEREMIs), and of the public services in the region, develop the Anteproyecto Regional de Inversión (ARI), including a financial estimation of the projects to be undertaken, to accomplish their institutional objectives. The ARI needs to be sent to the Unit of Coordination of Public Expenditure via the online ChileIndica platform. Any discrepancies between the priorities of the intendente and the regional authorities of the sectoral ministries must be resolved in the evaluation phase of the ARI or in the budgetary discussions carried out in the national budget office (DIPRES).

The preparation of the ARI is strongly guided at the central government level. National ministries and services give their regional representatives specific guidelines as to which policies, programs, and institutional goals should be considered for the regional ARI. In parallel, to design the ARI, intendentes have to consider the nonbinding Regional Development Strategy (ERD), the presidential commitments, the Special Development Plans for Extreme Zones, and Community Development Plans. However, the official memorandum that provides instructions for the preparation of the ARI and the Public Programme for Regional Investment (Programa Público de Inversiones Regionales, PROPIR) specifically mentions that the intendente may consult the mayor when appropriate.

Once the ARI is approved at the central government level and by the DIPRES, national ministries and services inform regional representatives of the details of investments and programmes to be considered in the PROPIR. This information is also available on the ChileIndica online platform. This platform has to be updated regularly by regional governments, because it is the instrument used by the central government to monitor execution of investments. However, the information of this platform is not publicly available, which represents a significant restriction on the possibilities for monitoring by citizens and ensuring accountability.

Source: OECD 2017b.

Box 5.8. Subnational Government Investments in Indonesia

Subnational governments (SNGs) engage in public investment in social and economic infrastructure. Following adoption in 2001 of the fiscal decentralization policy, SNGs became responsible for developing their own medium-term plans (RPJMDs) and an annual work plan (RKPD). These plans are not included in national plans or sectoral plans at the national level. The role of SNGs in providing infrastructure is substantial. In 2018, SNGs' aggregate budget for public investment was approximately 130 percent of the central government budget for public investment.

Mechanisms exist to annually coordinate investment spending of SNGs with national priorities. This occurs through several channels and phases in which each SNG participates:

- The development planning forum (Musrenbang), which consists of a series of meetings in each region between dinas (local governments' working units) and Bappenas (the regional development agency) leading to a regional work plan, and meetings at the national level between regions, line ministries and Bappenas to coordinate national work priorities and strategies. These meetings are held between February and April.
- Technical coordination meetings (Rakontek) held with line ministries normally twice yearly. Rakontek is also a series of meetings between line ministries and regions normally held to discuss the physical project plan under DAK (specific allocation fund) transfer.
- The Ministry of Home Affairs reviews SNG overall budget plans (APBD) to ensure that the overall spending is aligned with regional and national priority programs at the end of the national budget process.

Box 5.8 *continues on next page*

Box 5.8 (*continued*)

SNG annual plans are published on the websites of the Ministry of Home Affairs (under DG Regional Development), the Ministry of Finance (under DG Fiscal Balance), and the National Public Procurement Agency (LKPP).

Source: Indonesia PIMA 2017.

Dimension 3.b: Does the central government have a transparent, rule-based system for making capital transfers to subnational governments and for providing timely information on such transfers?

QUESTIONNAIRE

Low	The central government does not have a transparent rule-based system for making capital transfers to SNGs.
Medium	The central government uses a transparent rules-based system for making capital transfers to SNGs, but SNGs are notified about expected transfers less than 6 months before the start of each fiscal year.
High	The central government uses a transparent rules-based system for making capital transfers to SNGs, and expected transfers are made known to SNGs at least 6 months before the start of each fiscal year.

DEFINITIONS OF KEY TERMS

Term	Definition
Rules-based system	The quantity of funding to be transferred is calculated using a formula with variables, or factors, such as population, economic development, or surface area.
Capital transfer	Transfer of funds that can be used for capital projects.
Notify about expected transfers	Communication in writing (hard or soft copy) from an authoritative source to a responsible party that communicates a final decision. A telephone call cannot be viewed as "notification."

INSTITUTIONAL DESIGN

This dimension assesses whether there are rules in place to ensure predictable funding of SNG capital investments. A rules-based system is a capital transfer plan whereby both the transfer pools (the amount of funds to be distributed) and the distribution formula are set in rules. In the absence of such rules it is very difficult to ensure that funding decisions are transparent and consistent across SNGs and from year to year, or even within the year. The transfers need not be reserved for capital spending purposes. There may be a general transfer plan that can be used for both current and capital spending.

A rules-based system for capital transfers should increase the predictability of these transfers. If the rule is used only to define the transfer pool, but the distribution of this amount among SNGs can be changed from year to year without reference to a rule, it does not give predictability to SNGs. Such a design does not constitute a rules-based system for the purpose of this dimension.

- A low score indicates that there is no legal or regulatory framework that establishes a transparent and rules-based capital transfer system. This does not mean that there are no transfers to SNGs. However, such transfers may be ad hoc or may be a result of annual considerations, without a specific allocation formula to estimate the transfers. Sometimes, formulas or similar methodologies are assumed to be in place, but the details of these are not known outside the central government. If the methodology is not available and not transparent, the score on design is low.
- A medium score implies that there is a transparent and rules-based transfer system, but that the transfer amounts are not known to SNGs well ahead of the budget year. If transfers from the central government are known less than six

months before the fiscal year, it is difficult to fully reflect these in the SNGs' own budget process.

- A high score implies that the transfers are based on a transparent and rules-based transfer system and communicated at least six months before the budget year. This should give SNGs ample time to plan for the use of these funds in their internal budget processes.

To establish predictability, the rule for calculation amounts and notification dates must be based in regulation, law, or constitution. If the rule and dates are based on government policy, annual budget instructions, or a minister's order, it can easily be changed. Notification can be done in published documents, for instance, a budget document, and in direct communications to the SNGs. Allocations that are included in internal central government documents, but not published or conveyed to SNGs, cannot be counted as notification in this regard.

IMPORTANT DOCUMENTS

Documents	Use
Legislation and regulations regarding transfers to SNGs	Assess transparency and robustness of transfer mechanisms
Decisions regarding SNG transfers during annual budget preparation	Analyze how mechanisms are is reflected in annual budget process

EFFECTIVENESS

The effectiveness of this dimension depends on whether and when SNGs are able to realistically predict the amounts and the timing of the financial resources they will have available for public investment. As noted under Institution 2, accurate financial constraints support effective planning. If total annual amounts transferred to SNGs during the fiscal year differ from the announced amounts, the rules are not effective, unless this is related to project implementation delays or similar reasons. If the financing constraint used in planning the SNG capital budget is incorrect, project prioritization may be inappropriate.

- Effectiveness is *low* if there is no mechanism for predictable transfers or if actual transfers deviate substantially from the amounts determined by the rules-based system. If the assessment of institutional design concludes that there is no transparent, rules-based capital transfer system, it is difficult to envisage that these transfers can be predictable. Even if a transfer system is in place, it does not necessarily deliver the intended results. If aggregate actual capital transfers deviate significantly from amounts notified to SNGs, effectiveness is low.
- Effectiveness is *medium* if aggregate actual capital transfers deviate somewhat from amounts notified to SNGs or actual notification is done less than six months before the fiscal year. Even if there are moderate deviations and delays, the transfer system still provides some degree of predictability to SNGs.
- Effectiveness is *high* if both the amounts received and the timing is in line with expectations. This implies that the aggregate transfers are broadly in line with amounts notified to SNGs and actual notification is done at least six months before the fiscal year. High effectiveness will generally coincide with a high score on institutional design for the same dimension. Box 5.9 describes coordination of investments and transfer of funds to SNGs in Mali. The transfer mechanism in Mali was assessed to be highly effective in the 2018 PIMA, although the role of SNGs in public investment in Mali generally is limited.

For the system to be effective, SNGs should have access to promised funds when needed to finance public investment spending. There may be timing issues for actual transfers. SNGs often note that actual transfers do not occur early in the fiscal year. However, capital transfers need not be immediate cash transfers equal to the annual amount promised to them. Central government may have a system of monthly or quarterly allocations that could apply to capital transfers as well as to line ministries. Such mechanisms should be structured so they do not create obstacles for predictable and rational implementation of capital projects in SNGs. If unpredictable in-year transfers undermine the system, effectiveness could be assessed as medium.

Box 5.9. Coordination of Investments and Transfer of Funds to SNGs in Mali

In Mali, SNG investment plans are defined through a coordinated process with the central government. The economic, social, and cultural development program (PDSEC) provides the reference for investment projects in territorial communities. This program has been implemented since 2015 through state-region contracts, concluded for five years. There are information and coordination mechanisms at different levels of government: a national steering committee for technical support to local authorities (NOCs); regional orientation, coordination, and monitoring of development actions (CROCSAD); local orientation, coordination, and monitoring of development actions (CLOCSAD); municipal orientation committees for coordination of development actions (CCOSAD).

The amount of transfers allocated to SNG investment expenditure is generally known at least six months before the start of the financial year. Since 2007, Mali has had a National Support Fund for Territorial Communities (FNACT), funded mainly by development partners and in part by budget allocations and state subsidies. This fund is administered by the National Agency for the Investment of Territorial Communities (ANICT). For the allocation of investment grants, the ANICT relies on an equalization formula that combines two series of criteria: (1) situation criteria (the needs of communities with regard to their territorial context), and (2) performance criteria (good tax administration for local authorities). Scoping letters sent by the ANICT communicate each year to the communities the transfers provided for in the central budget. In 2016, this letter was sent on June 9, more than six months before the next fiscal year.

In 2016, SNG capital expenditure reaches 27.4 billion CFAF, or 14 percent of the total expenditure of the territorial communities. Although this share has more than doubled in three years, it remains limited. The state budget constitutes the main source of funding for communities, while the communities' own resources are weak. Since 2007, the revenue from local authorities' own resources (in particular non-tax resources) has remained low. In addition, the state itself executes a significant part of the expenditure made at the local level through transfers to the deconcentrated services but also through projects executed by central government agencies, in particular multiregional projects. PDSEC contracts have been signed with five regions and two are in the process of being signed (Kidal and district of Bamako). All of the funding allocated to contracts was included in the 2017 finance law.

Source: Mali PIMA 2018.

Different fiscal years at central and local levels may impact effectiveness. The questionnaire assumes that SNG and central government fiscal years are the same. This is true in most countries, but not all. Effectiveness, with regard to date of notification, should be assessed relative to the start of the SNG fiscal year.

USEFUL DATA SERIES

Data	Questions to Address
Amount of money (total overall and total for capital projects) transferred from central government to SNGs, and percent of SNG spending	What is the overall importance of SNG transfers for public investment?
Comparison of amount of money mandated by the formula with transfer to SNGs and actual amounts transferred Comparison of amounts SNGs were notified they would receive with amounts provided	Is the transfer mechanism effective in terms of amounts provided?
Dates when SNGs were formally notified of capital transfer amounts Dates when funds were made available to SNGs	Is the transfer mechanism predictable?

Dimension 3.c: Are contingent liabilities arising from capital projects of subnational governments, public corporations, and public-private partnerships reported to the central government?

QUESTIONNAIRE

Low	CLs arising from major projects of SNGs, PCs, and PPPs are not reported to the central government.
Medium	CLs arising from major projects of SNGs, PCs, and PPPs are reported to the central government but are generally not presented in the central government's budget documents.
High	CLs arising from major projects of SNGs, PCs, and PPPs are reported to the central government and are presented in full in the central government's budget documents.

DEFINITIONS OF KEY TERMS

Term	Definition
Contingent liability (CL)	An obligation that does not arise unless a particular discrete event occurs in the future. See GFSM 2014. Only explicit CLs should be taken into consideration under this dimension.
Central government	Limited to budgetary central government.
Budget document	See the Glossary.
Present in full	The total known size of CLs, as reported for each of the three categories (that is, SNGs, PCs, and PPPs).

INSTITUTIONAL DESIGN

This dimension is intended to assess the extent to which the MoF and the legislature are aware of CLs arising from major public investment projects, regardless of who finances or is responsible for the project. Public investment may entail significant CLs, and monitoring and reporting of these CLs is essential for fiscal risk management. These liabilities are defined during the project planning and implementation period, when it is decided who will be responsible for implementing a project and how it will be procured and financed.

- A low score indicates that there is no legal requirement for systematic reporting of CLs from capital projects undertaken by SNGs, PCs, and PPPs. Partial information on such liabilities may be available on an ad hoc basis, but often this only happens after problems occur and CLs materialize.
- A medium score indicates that there are legal requirements in place to ensure that these CLs are systematically reported. Reporting should include all four of the following attributes:
  - Coverage: CLs must be reported by at least two of the three categories of projects listed: SNG, PCs, and PPPs.
  - Frequency: reporting must occur at least once annually.
  - Mode: reporting can be made through financial statements, regularly scheduled and mandatory specialized reports, or regularly scheduled audits (if they are conducted annually and published within four months of the end of the reporting period).
  - Audience: the report must be readily available to the MoF, and they must be notified of the availability of the report.
- A high score indicates that there are also legal requirements that these CLs also are comprehensively disclosed in budget documents. The total known size of CLs should be reported for each of the three categories (that is, SNGs, PCs, and PPPs). It is not required that presentation in the budget is made at the same level of detail as in the reports that are received. CL information need not be presented in a specific type of central government budget document. A variety of documents, with different purposes, makes up the budget document. These include the budget law, policy statements, analyses, reports, and other information. This criterion is satisfied if CLs are presented in any of these documents, including only for information.

IMPORTANT DOCUMENTS

Documents	Uses
Legal and regulatory framework for reporting of CLs by SNGs, PCs, and PPPs	Assess institutional design
Samples of reports on CLs	Analyze compliance with reporting requirements (effectiveness)
Budget documents including information on CLs	Analyze compliance with disclosure requirements (effectiveness)

EFFECTIVENESS

The assessment of effectiveness should include to what extent reporting on and disclosure of CLs take place in practice. This assessment should be based on review of practices and budget documents for at least the past three years. Reporting on and disclosure of CLs are mutually reinforcing—the disclosure assists in the verification of the data and systematic consideration of fiscal risks. Because of this, the effectiveness assessment should reflect the combination of the two requirements. Ideally, CLs should be reported together in budget documentation, for example, as part of a consolidated fiscal risk statement. If reporting on CLs is scattered throughout the budget documents, then it may be difficult to understand their total magnitude and potential impact.

- *Low effectiveness* indicates that there is little reporting on and disclosure of CLs by SNGs, PCs, and PPPs. This may be by design, which would be evident in a low score on institutional design, or because legal and regulatory provisions are not complied with. It could also be that there is some information on CLs in budget documents, but that this is so fragmented that it is not possible to understand the impacts of these liabilities. For this score, few CLs are reported to central government. Low effectiveness is also indicated when CLs are reported for none or one of the three categories.
- *Medium effectiveness* indicates that some CLs are reported and disclosed, but that there are important gaps in the reporting. A partial picture of fiscal risks related to SNGs, PCs, and PPPs is better than nothing, but is clearly not adequate for consistent fiscal risks analysis and management. For this score, some CLs are reported to central government, or CLs are reported for two of three categories.
- *High effectiveness* implies that there is comprehensive reporting of CLs and that these are fully disclosed in budget documents. Most CLs are reported to central government and disclosed, or CLs are reported and disclosed for three of three categories. If reporting and disclosure are fully in line with legal requirements, there should be high scores on both design and effectiveness. In some case, practices may be better than legally required and the effectiveness score higher than the design score. Box 5.10 describes disclosure of CLs in the Slovak Republic.

USEFUL DATA SERIES

Data	Questions to Address
Reported CLs by group of entities (SNGs, PCs, PPPs)	What is the importance of different categories of CLs?
CLs disclosed in budget documents by group of entities	Are reporting and disclosure of CLs consistent with each other?

Box 5.10. Disclosure of Contingent Liabilities in Slovak Republic

In Slovak Republic, contingent liabilities arising from major public investment projects are presented in government budget documents as an annex, regardless of who is responsible for the projects. By law, the central government does not guarantee liabilities incurred by SNGs.

Every year, the central government approves a general government budget covering a period of three years. It contains the state budget and a summary of budgets of general government institutions (Table 5.10.1). Annexes to the budget include general government contingent liabilities (including contingent liabilities of SNGs and state-owned enterprises) and "implicit liabilities." The projected "availability-based" payments for PPPs (discounted expected payments for the remaining duration of the concessions) are reported as "implicit liabilities" and are expressed as a percentage of GDP. In 2018, the implicit liabilities connected to PPPs were estimated at 3.3 percent of GDP.

Table 5.10.1. Slovak Republic Contingent Liabilities

(Euros)

	December 31, 2015	December 31, 2016	December 31, 2017
Central administration and state administration enterprises	13,228,220	12,925,751	13,778,276
Higher territorial units and their budgetary and contributory organizations and enterprises of territorial self-government	2,615	1,247	510
Municipalities and their budgetary and contributory organizations and enterprises of territorial self-government	40,508	21,477	48,522
Total	**13,271,343**	**12,948,475**	**13,827,308**
Capital on demand and guarantees in international financial institutions	8,464,557	8,473,154	8,669,919
International investment arbitration	263,500	343,852	471,182
Other litigation	2,336,740	1,590,061	2,028,078
Other	2,081,252	2,355,099	2,426,423
Total	**13,146,049**	**12,762,166**	**13,595,602**

Source: Slovak Republic Budget 2018, Appendix 4.

Institution 4: Project Appraisal

Are project proposals subject to systematic project appraisal?

This institution addresses whether and how appraisals are used to determine if a project is likely to meet its stated objectives and achieve a defined threshold of spending efficiency. If an appraised project meets this threshold, it becomes eligible for budget selection (which is discussed under Institution 10). Appraisals analyze project benefits and their contributions to achieving objectives set in national or sectoral plans. As such, appraisals are part of the planning phase of public investment management.

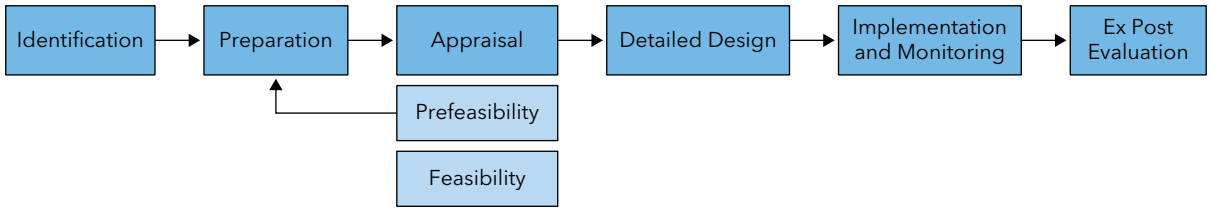
- The first dimension of this institution seeks to account for the coverage of projects that are subject to appraisal, and the overall rigor and independence of these appraisals. Because appraisals require specialized skills and are labor intensive, major projects are typically subject to more extensive appraisals than others.
- The second dimension addresses the extent to which appraisals are based on standard methodology and central support, to ensure a consistent basis for the analytical process. Different, or uncoordinated, methodologies do not guarantee adequate appraisal of all projects and make cross-project comparisons (within and between types of projects) difficult or impossible.
- The third dimension addresses how risks are considered in project appraisals. Project risks increase uncertainty regarding final costs and benefits. Because a wide range of possible costs and benefits complicates appraisal, risk identification and possible mitigation measures to narrow this range are an essential part of appraisal. Information on risks, and management of them, should also feed into project implementation plans, addressed in Institution 14.

Appraisal methodologies vary based on the type of project, its size, and its unique context and characteristics. There is no universally accepted definition of project appraisal, but appraisal is generally considered as one stage in the project cycle (Figure 5.1). The appraisal phase is often divided in two subphases.

Appraisal will usually include analysis of a project's benefits, costs, and risks, from a social, economic, and financial perspective. Table 5.3 provides an overview of elements that are commonly assessed in a comprehensive project appraisal. In advanced appraisals, the analysis of project benefits and impacts may be extensive.

This institution focuses on projects that should be appraised by central government institutions, including PPPs. In some countries, projects implemented by PCs are subject to the same appraisal process, but this is not a requirement under this institution. Central government oversight of PC investment projects is discussed under Dimension 5.c.

Figure 5.1.Standard Project Phases



Source: IMF staff.

Table 5.3. Key Elements of Comprehensive Project Appraisal

Project rationale, objectives, and targets
Project status and timetable
Project description
Cost estimates
Revenue estimates
Project benefits and impacts (quantitative and qualitative assessment) Social Climate change and other environmental Employment Regional development
Options analysis
Risk analysis
Implementation plan
Procurement strategy and plan
Financing plan

Source: Allen and Tandberg 2021.

Dimension 4.a: Are major capital projects subject to rigorous technical, economic, and financial analysis?

QUESTIONNAIRE

Low	Major capital projects are not systematically subject to rigorous technical, economic, and financial analysis.
Medium	Major projects are systematically subject to rigorous technical, economic, and financial analysis.
High	Major projects are systematically subject to rigorous technical, economic, and financial analysis, and selected results of this analysis are published or undergo independent external review.

DEFINITIONS OF KEY TERMS

Term	Definitions
Subject to analysis	There is a well-defined mandatory process, or processes, for the analysis of capital projects, including a critical review of input data and reasoning.
Rigorous technical, economic, and financial analysis	Rigor means that analysis consistently includes a substantial portion of commonly accepted approaches and techniques.

INSTITUTIONAL DESIGN

This dimension aims to determine the efficiency of projects in the pool from which projects are selected for inclusion in the budget. If all projects, and particularly the major projects, have been subject to systematic and consistent appraisal, the selection of projects is likely to maximize the economic returns on scarce public investment resources (see Institution 10). In some low-income countries, many projects are financed by development partners (DPs) and international financial institutions (IFIs) and may be subject to appraisal by them. This should not impact the assessment of the institutional design for this dimension, but may affect the assessment of effectiveness, as will be discussed further. For the assessment of the institutional design, appraisal of externally financed projects by DPs and IFIs is not relevant—what is relevant here is appraisal by government entities (possibly on the basis of studies presented by those external entities, plus additional due diligence by government).

- A low score indicates that there is no legally mandated mechanism for systematic appraisal of major projects. Requirements for appraisal may be completely missing, or they may be insufficient to ensure a rigorous appraisal process for all major projects, or several significant sectors or financial sources are exempted.

- A medium score indicates that there will be legal requirements for systematic and rigorous appraisal of all major projects. Some sectors or financing sources may be exempted from the general appraisal process. If this is the case, there should be other mechanisms in place to ensure that these projects are subject to the same level of appraisal. For instance, if public-private partnerships are exempted from general appraisal rules, the partnership's legal framework should have rules prescribing that appraisal is done with the same rigor.
- A high score implies that there is systematic appraisal of all major projects and that appraisal results are either published or subject to independent external review. Publication should, as a minimum, include a description of the overall project, key issues, conclusions stemming from the analysis, assumptions made in the analysis, and any recommendations for modifying the project proposal. If appraisal results are made subject to external review, then it is expected that the external reviewers are qualified for the task and will have access to full information about the project and the appraisal that has been done. External review can be done by national as well as international experts.

IMPORTANT DOCUMENTS

Documents	Uses
Laws, regulations, and guidelines for project appraisal	Assess regulatory framework for project appraisal
Project appraisal documents for major projects	Assess quality and consistency of project appraisals
Project appraisal review reports by independent external reviewers, if any	Assess quality of project reviews
Project decision documents, for individual projects and/or for project portfolios and pipelines	Assess impact of project appraisals on specific project decisions

EFFECTIVENESS

The effectiveness assessment for this dimension should focus on the share of major projects that are subject to rigorous project appraisal. Do appraisal documents provide systematic and credible assessments, in line with legal or regulatory requirements? Do the documents describe realistic expected benefits and costs of projects? Are lower-value projects systematically identified and discarded or returned for further development and possible resubmission?

The assessment must be based on a sample of project appraisal documents. There are often major discrepancies between the formal requirements for project appraisal and the actual practices. Many countries have comprehensive regulations and manuals for project appraisal, including requirements for cost-benefit analysis, risk analysis, and implementation plan review, but have limited capacity to comply with these. In the actual project documents, these requirements may be ignored or only addressed in a minimalistic fashion. Data and assumptions may be far from realistic, suffering from optimism bias. Project "appraisal" documents are sometimes limited to basic technical design documents. Verification of actual project documents is therefore essential for the analysis of this dimension.

- *Low effectiveness* indicates that few major projects are subject to systematic and rigorous appraisal, or that there is evidence that low-value projects are included in the pipeline with no requirement for resubmission. This may be related to the absence of a clear regulatory framework. In this case, both the effectiveness assessment and the design assessment will tend to be low. Low effectiveness may also be related to failure to comply with formal requirements for project appraisal or lack of capacity to carry out the required appraisals. In these cases, the effectiveness will be assessed lower than the institutional design. In some countries, the appraisal process never leads to projects being rejected and all projects are included in the project pipeline, regardless of the appraisal results and regardless of whether they are ready for implementation.

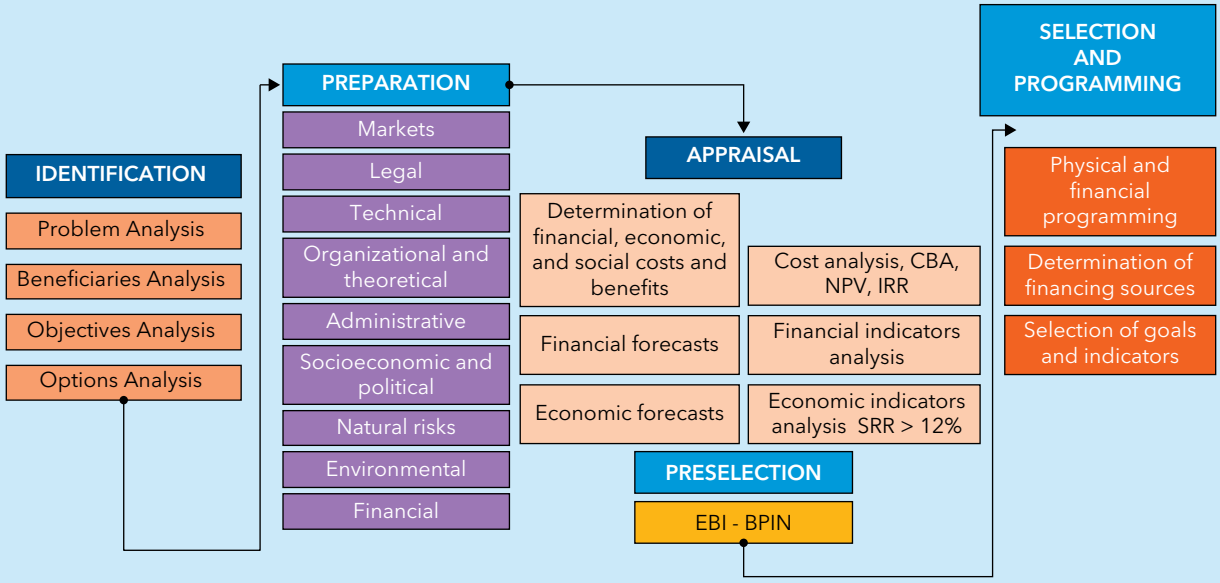
- *Medium effectiveness* implies that some major projects are systematically and rigorously appraised, and there is no evidence that low-value projects are included in the pipeline. Under a rigorous process, some project appraisals are expected to contain recommendations for change and even requests for project resubmissions after revision.
- *High effectiveness* indicates that most projects are subject to systematic and rigorous appraisal, with clear linkages to the decision to include projects in the pipeline; further, appraisals are realistic. Good practice indicates that all projects should be appraised, but the depth of the appraisal would reflect the value and the risks of the project. Only the projects that are assessed to have high value and are ready for implementation are included in the pipeline, and other projects are rejected or returned for further development. If externally funded projects are excluded from national procedures, there should be rules to ensure that these are subject to at least the same degree of scrutiny as other projects. Box 5.11 describes the project appraisal framework in Colombia. Colombia has not had a PIMA but is generally recognized for a well-designed and effective public investment planning framework. Box 5.12 describes the project appraisal framework in Timor-Leste, which has been strengthened substantially in recent years.

Some projects may be appraised by IFIs and DPs, but this is unlikely to constitute an effective overall framework for appraisal of major projects. Some IFIs, including the major development banks, have rigorous appraisal methodologies. However, many other financial institutions, as well as bilateral DPs,

Box 5.11. Project Appraisal in Colombia

Colombia has an advanced framework for preparation, appraisal, and selection of public investment projects. The process comprises clearly defined stages: identification, preparation, appraisal, pre-selection and selection/programming. Appraisal is comprehensive, including financial, economic, and social costs and benefits, based on detailed project documents. Figure 5.11.1 describes the main elements in the process.

Figure 5.11.1. Colombia Project Development and Appraisal Process

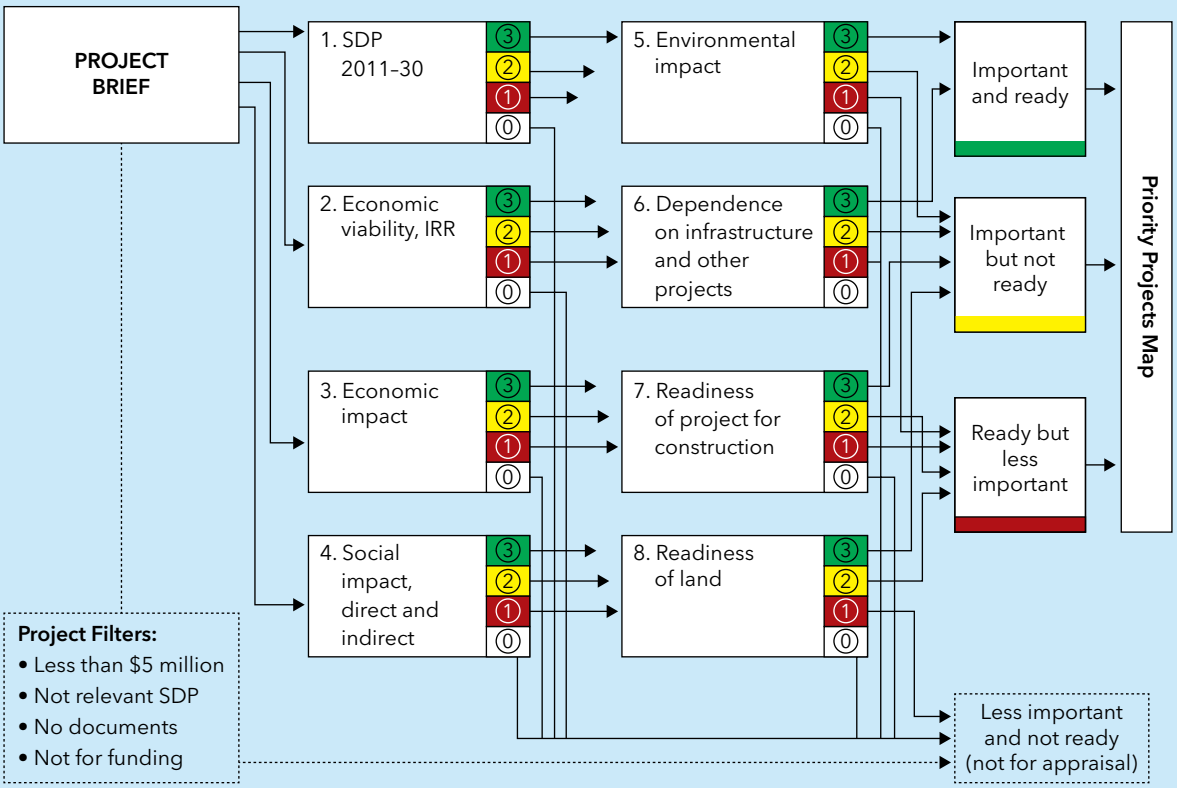


Source: Colombia Ministry of Planning 2016.
Note: EBI File summarizes the information contained in the formulation of the investment projects for the administration, strengthening, and rates. It helps the administration and the general public so they know the basic information of each of the investment projects that they execute.
BPIN = Bank for National Investment Programs and Projects; CBA = cost-benefit analysis; IRR = internal rate of return; NPV = net present value; SRR = statutory reserve requirement.

Box 5.12. Standardized Appraisal Methodology in Timor-Leste

Following the 2016 PIMA, Timor-Leste has taken several steps to strengthen public investment management, including a standardized methodology for project appraisal. This appraisal process assesses the projects against eight criteria and sorts them in three major groups green (important and ready), yellow (important but not (ready), and red (ready but less important) (Figure 5.12.1).

Figure 5.12.1. Timor-Leste Project Appraisal Process



Several guidelines are related to project development and appraisal:

- Project Appraisal Guideline. MPS, August 2017
- Feasibility Study Guideline. MPS, May 2018
- Model Terms of Reference for Infrastructure Fund Projects. MPS, February 2018
- Project Brief Standard Form. MPS, 2017
- Fund Administration Manual. MPS, December 2018
- Ex Post Evaluation Guide. MPS, 2019

Source: Government of Timor-Leste 2020b.
Note: IRR = internal rate of return; SDP = Strategic Development Plan.

have much less rigorous approaches. In addition, external financing plans are often more focused on establishing a financial mechanism than on the specific projects to be financed under this plan. In these cases, the DPs' appraisal of the financial mechanism will not constitute appraisal of the specific investment projects. In some cases, IFIs and DPs carry out appraisal of specific investment projects only after a financial mechanism has been approved. Project appraisal by IFIs and DPs will focus on the priorities

and preferences of the institution conducting the appraisal, which is not always fully aligned with the government's priorities and preferences.

If the effectiveness assessment is to be influenced by appraisals done by IFIs and DPs, the basis for this should be comprehensively described and documented. The share of different IFIs' and DPs' financing of the capital budget should be presented, together with a summary description of the appraisals that are conducted and of the separate due diligence and review done by the government, if any. This should be based on a representative sample of appraisal documents. To give a higher score on effectiveness than on design, there should be documentation showing that a significant share of major projects is subject to systematic, rigorous and consistent appraisal, and that this appraisal is based on the government's priorities and preferences. For medium effectiveness, many major projects should be covered. For a high score, most of the public investment program should be subject to systematic appraisal.

USEFUL DATA SERIES

Data	Questions to Address
Number, and proportion, of major projects for which appraisals were conducted	What is the scope of project appraisal requirements?
Number of project appraisals published and number subject to external review	Are practices for publication and external review consistent with requirements?
Number and share of appraised projects that were included in the project pipeline	What are the impacts of appraisals on project decisions?
Number, and proportion, of major projects subject to appraisal by different IFIs and DPs and overview of appraisal methodologies applied	Should donor practices impact effectiveness scoring?
Project performance data, including any ex post reviews	Do projects perform as assessed during appraisal?

Dimension 4.b: Is there a standard methodology and central support for the appraisal of projects?

QUESTIONNAIRE

Low	There is no standard methodology or central support for project appraisal.
Medium	There is either a standard methodology or central support for project appraisal.
High	There is both a standard methodology and central support for project appraisal.

DEFINITIONS OF KEY TERMS

Term	Definition
Standard methodology	One or more methodologies that should be used for specified purposes, as officially directed in legislation, regulations, and guidelines from a responsible government unit. Appraisal methodologies may vary based on the sector or size of project.
Central support	Designated staff or unit that is responsible for advising many central government budget entities on appraisal methodologies. Central support may be located organizationally in the MoF, the planning ministry, a line ministry, or an independent agency.

INSTITUTIONAL DESIGN

The aim of this dimension is to determine whether appraisals have a known quality, and lead to results that can be used to compare projects. It is closely connected with Dimension 4.a discussed earlier. The existence of a standard methodology does not imply that lesser projects are required to follow the same procedures and methodologies as major projects—the effort and degree of sophistication usually depend on the importance of the project.

- A low score indicates that there is neither a standard methodology nor central support for

appraisal of major investment projects. While the existence of appraisal methodologies is relevant for the assessment of Dimension 4.a, the dimension assesses the standardization or coordination of methodologies among the several appraisal entities.

- A medium score indicates that there is either a standard methodology or central support for appraisal of major investment projects. Methodologies are standard if they are presented in manuals or instructions issued by a responsible agency and are applicable to most projects in the capital budget. Central support usually means that one unit advises the entities proposing most capital projects in the central government budget. A ministry of planning or public works might provide central support as effectively as MoF. In some cases, there may be more than one unit involved in providing central support, based on a common methodology. Support exists when advising on appraisal methodologies is part of a unit's responsibilities designated in budget instructions, a minister's order, regulation, or law. Support is most clearly indicated by the issuance of manuals and instructions and the conduct of training. If the unit only provides guidance ad hoc, this does not constitute central support
- A high score indicates that there is both a standard methodology and central support for appraisal of major investment projects.

IMPORTANT DOCUMENTS

Documents	Uses
Laws, regulations, and guidelines for project appraisal	Assess regulatory framework for project appraisal methodologies and central support
Mandate for unit providing central support to project appraisal	Assess role and adequacy of central support function
Guidance materials produced by central support unit	Assess how the central support unit promote appraisal quality and standardization

EFFECTIVENESS

The effectiveness assessment should cover to what extent standard appraisal methodologies are applied to project appraisals and contribute to the quality of these. This indicator is a measure of the support to achieving the objectives of Dimension 4.a. The effectiveness assessment will therefore have a strong focus on compliance with formal regulations. Externally financed projects may be appraised according to IFI standards, but these should be consistent with national methodologies. The assessment should therefore cover all major public investments, regardless of financing source and financing modalities.

- *Low effectiveness* implies that standard appraisal methodology has limited impact on project appraisal. This may be because the methodology is missing, which would imply that the institutional design score also is low. It could also be because the methodology is incomplete or inadequate, or because it is not followed in practice. If effectiveness is low, few major projects fully benefit from the standard methodology.
- *Medium effectiveness* indicates that a standard methodology is in place, but not fully applied to all major projects. Some major projects fully benefit from the standard methodology.
- *High effectiveness* indicates that the standard methodology is used actively to ensure high-quality project appraisals for most major projects. The methodology is consistently applied for most major projects.

PIMAs should comment on any external methodologies for appraisal of externally funded projects, and their consistency with the national standard appraisal methodologies. Box 5.13 provides an example from the Slovak Republic, which has well-designed national methodologies and central support for domestically financed major projects, while projects financed by EU funds follow EU methodologies. Box 5.14 describes the choice of discount rates for cost-benefit analysis, a key methodological issue for project appraisal.

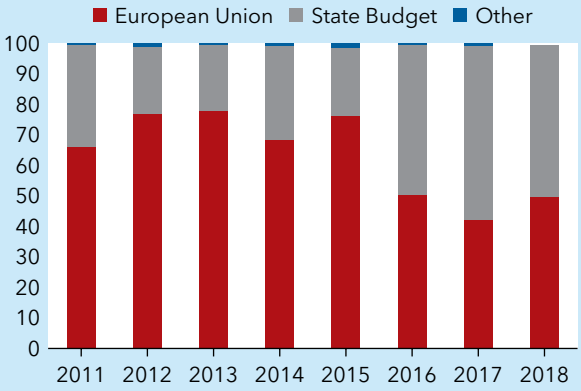
Box 5.13. Project Appraisal Guidelines and Central Support in Slovak Republic

In Slovak Republic, investment projects financed by budget resources have been subject to cost-benefit analysis (CBA) since 2017. CBAs are mandated for major projects above €40 million and for IT projects above €10 million. Central support for state budget-funded major projects is rendered by the MoF's Value-for-Money Division, which validates the calculations set out in the CBA before any project is eligible to enter the procurement stage. The Value-for-Money Division was created to assist ministries that do not have the ability to do CBA and to control the quality of CBA for projects. Even though the MoF's opinion on the CBA of these major projects is not binding, it has a strong influence on government decisions.

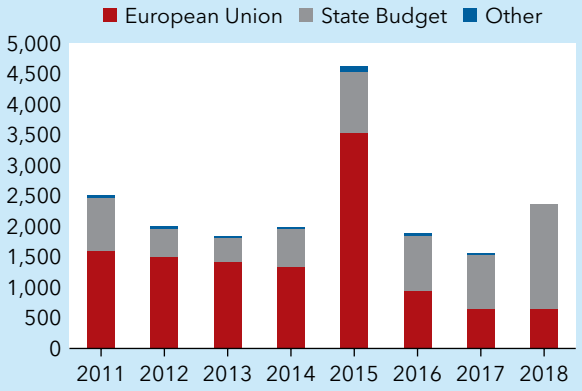
Projects financed by EU funds are a significant share of public investment (see Figure 5.13.1). These are subject to comprehensive technical, economic, and financial analysis determined by EU rules and procedures, and there is central support for project appraisal. For the 2007–13 programming period the European Commission published a guideline for CBA that provided a common framework for project appraisal. This was subsequently updated for the programming period 2014–20. The European Commission requires the use of CBA for all major infrastructure projects above €50 million, regardless of the beneficiary. In Slovak Republic, all EU-funded projects follow the EU rules and conduct the required CBA. The state expertise involvement in the appraisal of projects is mandatory. Since 2017, the results of the appraisals have been published on the website of the Ministry of Transport, Construction and Regional Development.

Figure 5.13.1. Public Investment, by Source of Financing

1. Per Year, by Source of Financing
(*Percent*)



1. Per Year, by Source of Financing
(*Millions of euros*)



Source: Slovak Republic PIMA 2019.

USEFUL DATA SERIES

Data	Questions to Address
Number and share of projects that are appraised in accordance with standard methodologies	Are standard methodologies actively used for project appraisal?
Number of staff providing central support to project appraisal	What is the capacity of the central support unit?
Training sessions provided by central support unit	How does the central support unit promote capacity building?
Number and share of appraisals reviewed by central support unit	What is the impact of the central support unit on actual project appraisals?
Number of share of appraisals conducted according to methodologies of external financing institutions	How consistent are these methodologies with national standards?

Box 5.14. Discount Rates for Cost-Benefit Analysis

The choice of discount rates is a key element of the methodology for project appraisal, and should be clearly defined in national guidance materials. A higher discount rate will generally make investments less beneficial and will favor projects for which benefits materialize quickly compared with longer-term projects. There are two main approaches to selecting appropriate discount rates:

- Consumption behavior (normative) approach (C). The social discount rate is computed from the Ramsey equation: r=d+n*g, where *d* is time preference, *n* is the elasticity of marginal utility of consumption, and *g* is the growth rate of the economy.
- Opportunity cost of capital (descriptive) approach (O). The discount rate is estimated by observing actual interest rates, for instance market rates for low-risk government bonds.

Treatment of risk is also a critical issue. Some countries apply risk-free interest rates and handle risk by scenario analyses of benefit and cost streams. Others include a risk premium in the discount rate. Discount rates may differ (be reduced) over time. Table 5.14.1 summarizes the approach to determining the discount rate for public investment appraisal in different countries.

Table 5.14.1. Discount Rates in Selected Countries

	The Netherlands	United Kingdom	Norway	Sweden	Denmark
Approach	Opportunity cost of capital (descriptive)	Consumption behavior (normative)	Opportunity cost of capital (descriptive)	Consumption behavior (normative)	Opportunity cost of capital (descriptive)
Risk-free rate	0	3.5 (0–30 years) 3.0 (31–75 years) 2.5 (>75 years)	2.5 (0–40 years) 2.0 (>40 years)	3.5	3.0 (0–35 years) 2.5 (36–70 years) 2.0 (>70 years)
Risk premium	4.5	Not applicable	1.5 (0–40 years) 1.0 (41–75 years)	Not applicable	1.0 (0–35 years) 0.5 (36–70 years)
Total discount rate	4.5	3.5 (0–30 years) 3.0 (31–75 years) 2.5 (>75 years)	4.0 (0–40 years) 3.0 (41–75 years) 2.0 (>75 years)	3.5	4.0 (0–35 years) 3.0 (36–70 years) 2.0 (>70 years)

Source: Mouter 2018.

Dimension 4.c: Are risks taken into account in conducting project appraisals?

QUESTIONNAIRE

Low	Risks are not systematically assessed as part of the project appraisal.
Medium	A risk assessment covering a range of potential risks is included in the project appraisal.
High	A risk assessment covering a range of potential risks is included in the project appraisal, and plans are prepared to mitigate these risks.

DEFINITIONS OF KEY TERMS

Term	Definition
Risk assessment	An estimation of the uncertainty underlying market, technical, financial, economic, and distributional analyses of a project.
Potential risk	Risk that has a nonnegligible probability of occurring.
Mitigate risk	Risk mitigation includes measures to reduce, transfer, share, or provision for risk.

INSTITUTIONAL DESIGN

The aim of this dimension is to identify uncertainties relating to the project and to minimize them. Thus, the quality of project appraisals will be improved. Table 5.4 gives an overview of some common risks related to major public investment projects.

- A low score indicates that there is no regulatory requirement for systematic risk assessment in appraisals of major projects. Neither is risk assessment included in standard appraisal methodologies if they exist. Some risks may be required to be identified in project documents, but there is no analysis and no indication of probability or possible impacts. There are no regulatory requirements for consultations with stakeholders to identify possible risks.
- A medium score indicates that appraisals of major projects are required to include a section devoted to risk assessment but there are no requirements for risk mitigation plans.
- A high score indicates that both risk analysis and concrete plans for risk mitigation are required for major projects. Mitigation measures can be included in the appraisal document, procurement plan, project implementation plan, financial plan, or operating plan. If they are in documents other than the project appraisal, mitigation measures must be clearly identified as such and linked to risks identified in the appraisal.

Table 5.4. Common Risks in Major Public Investment Projects

Project Phase	Risks
Planning	• Demand estimates • Choice of concept: best fit to meet objectives • Construction cost estimates • Operating cost estimates • Timetables
Allocation	• Budget priority • Availability of funding over time
Construction	• Procurement delays • Procurement outturns • Implementation delays • Construction cost overruns • Contractual disputes
Operation	• Demand shortfalls • Operating cost escalation • Failure to realize planned objectives

Source: Monteiro and others 2020.

IMPORTANT DOCUMENTS

Documents	Uses
Laws, regulations, and guidelines for project appraisal	Assess formal requirements for risk analysis and mitigation
Risk assessment found in project appraisal documents	Assess quality and comprehensiveness of risk assessment
Risk mitigation plans in project implementation documents	Assess relevance and adequacy of risk mitigation plans (effectiveness)
Project implementation, monitoring, and evaluation reports	Assess how risks have materialized and been addressed during project implementation (effectiveness)

EFFECTIVENESS

The effectiveness of risk assessments and risk mitigation plans depends on how they are used. Risk mitigation plans are not effective if they are not implemented. This may be confirmed by looking at a sample of major projects approved in the budget roughly five years before and for which an appraisal was completed and a risk mitigation plan prepared. If risks materialized but the mitigation plan was not implemented in material aspects, the mitigation plan is not effective. The focus is on domestically financed major projects, because national authorities will have limited influence over risk management practices for externally financed projects.

- *Low effectiveness* implies that there is no systematic use of risk assessment in project appraisal or project implementation. There may be no formal requirements, as indicated by a low score on institutional design, and no informal or ad hoc approaches to incorporating risk considerations. Alternatively, risk assessments may be prepared but are too limited for risk management purposes. Few major investment projects include stringent analysis of project risks.
- *Medium effectiveness* indicates that risk assessment plans are prepared for some project appraisals. Some major investment projects include stringent analysis of project risks.
- *High effectiveness* indicates that risk analysis is systematically included in project development and actively used in project implementation. Most major investment projects include stringent analysis of project risks and risk mitigation plans. Estimates of project costs and benefits disclose the risks related to key assumptions, and there are contingency reserves to absorb a reasonable share of these risks. Risk mitigation plans are defined before project implementation and are used to manage risks during project implementation. Active risk management helps ensure that projects are implemented on budget and on time, and deliver the expected benefits. Box 5.15 describes the approach to assessing project risks in Norway, where all major projects (above €100 million) undergo detailed risk analysis.

USEFUL DATA SERIES

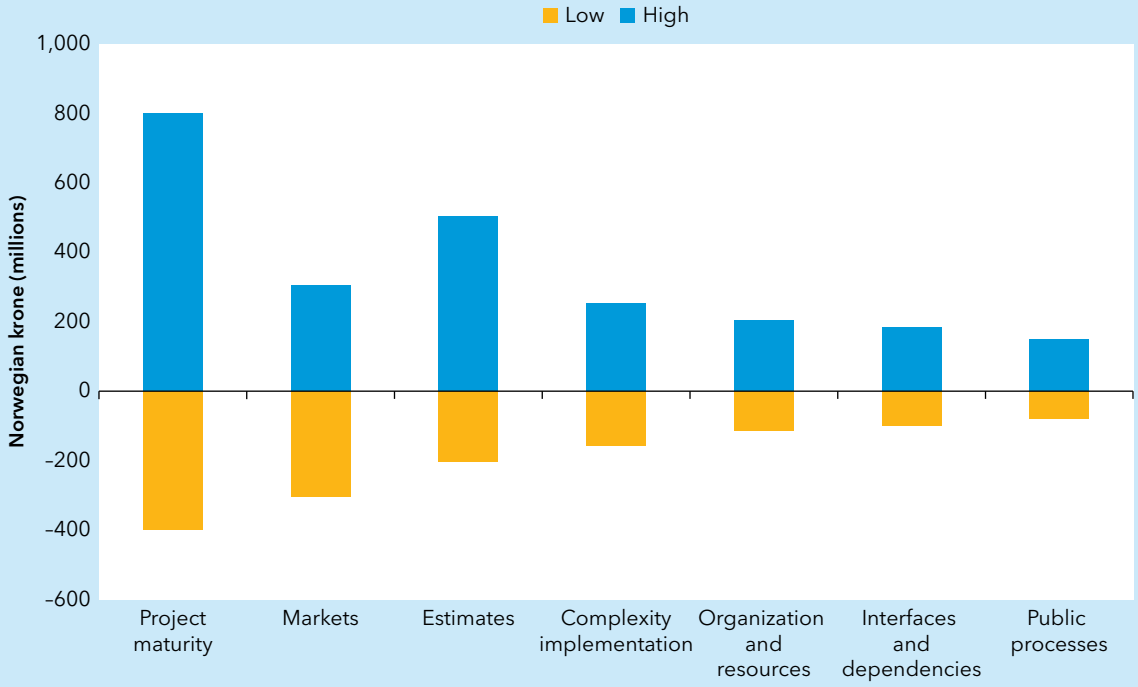
Data	Questions to Address
Adjustments to estimated project benefits and costs based on risk considerations during project appraisal	Has risk analysis impacted project estimates?
Contingency reserves in project cost estimates in project appraisal documents	Are contingency reserves based on explicit risk assessment?
Use of contingency reserves and reallocation caused by unexpected events during project implementation	Have risk assessments and contingency reserves been realistic?

Box 5.15. Project Risks and Contingency Reserves in Norway

In Norway, cost estimates for major investment projects are subject to mandatory, standardized risk analysis. The project estimates are decomposed into major cost components, key risks are defined, and a cost probability distribution is assigned to each risk factor. Because cost of risk is assymetric, expected total cost (the P50 estimate) is higher than the base cost estimate. Figure 5.15.1 illustrates the cost estimates for different risk factors, sorted by importance.

Figure 5.15.1. Risk Analysis in Norwegian Investment Projects

(Deviations from base estimates)



On the basis of this analysis, project allocations include two contingency items. The first is called *expected additions* and reflects the difference between the base cost estimate and the expected total cost (P50). This reserve is managed by the project implementing agency. The second item is called *uncertainty reserve*. It reflects the difference between P50 and P85 (85 percent delivery confidence). This reserve is managed by the supervisory ministry and is only released to the implementing agency after a formal procedure, whereby the implementing agency must explain and justify why cost estimates have increased.

Source: Drevland, Austeng, and Torp 2005.

Institution 5: Alternative Infrastructure Financing

Is there a favorable climate for the private sector, PPPs, and PCs to finance infrastructure?

This institution is intended to assess the climate for the private sector, PPPs, and PCs to finance economic infrastructure. The division of public and private responsibilities for economic infrastructure is not the same in all countries. For example, internationally, electricity is commonly generated and distributed by both public and private entities. If private firms find a stable environment in which they can achieve a fair return on long-term investment, responsibilities for some infrastructure can shift from the public sector to the private sector, thus relieving pressure on public finances.

Three dimensions seek to measure this climate:

- The first dimension assesses if private firms are free to invest and are reasonably assured that they can earn a fair return. Because most economic infrastructure requires investments that are large and long term (often 30 years or more), private investors look for a consistent regulatory history or safeguards that are likely to continue into the future.
- The next two dimensions look at two important classes of financial institutions that straddle the public and private sectors, and for which poor institutions can shift financing risks back to the public sector.
    - PPPs are a potential source of private finance and expertise but they must be structured carefully to ensure a fair allocation of risk and reward.
    - PCs form a large part of the economy in some countries. PCs exist, in part, to free management from political interference. But weak PC governance sometimes results in financial losses for the governments that own them, thus undermining the goal of having PCs relieve financial pressures on public finances.

Dimension 5.a: Does the regulatory framework support competition in contestable markets for economic infrastructure (for example, power, water, telecoms, and transport)?

QUESTIONNAIRE

Low	Provision of economic infrastructure is restricted to domestic monopolies, or there are few established economic regulators.
Medium	There is competition in some economic infrastructure markets, and a few economic regulators have been established.
High	There is competition in major economic infrastructure markets, and economic regulators are independent and well established.

DEFINITIONS OF KEY TERMS

Term	Definition
Economic infrastructure	See *major economic infrastructure market.*
Domestic monopoly	A domestic infrastructure market in which only a single firm is operating, and no new firms can enter.
Economic regulator	An entity, often an independent government agency, that oversees one or more economic infrastructure markets. Regulators are typically empowered to define services, set prices, establish geographic service areas, and set competition policy, among other issues.
Competition	For the purpose of this institution, a competitive market is one in which any qualified firm, regardless of ownership (for example, domestic or international), is legally allowed to enter an economic infrastructure market. Market entry can occur through the purchase of an existing market participant or by bidding on market opportunities, such as concessions.

Term	Definition
Major economic infrastructure market	Revenue-generating service that (1) has the potential to be self-financing and (2) has been provided by governments or government-controlled entities in some countries. For the purpose of this institution, the major markets are electricity (generation, transmission, and distribution), water (source and distribution), telecommunications (telephone and internet), and transport (toll roads, bridges, and tunnels; bus; rail; airlines and airport; and shipping and seaport).
Independent regulator	A regulator is "independent" if it is legally an independent agency (that is, not a unit within a government ministry), the agency has legal assurance of professional independence, and it can hire and fire its professional staff.
Well established	For the purpose of this institution, a regulator is well established if it is (1) operating for at least three years, (2) discharging duties and resposibilities defined in law or regulation, and (3) currently employing permanent staff. The three-year operating requirement exists because of the need to establish a pattern of policy making that might lead an investor to infer its future policies.

INSTITUTIONAL DESIGN

This dimension aims to determine whether major infrastructure market environments are competitive, fair, and predictable, and thus encourage long-term private investments. Private investors will generally be cautious about entering markets where there is extensive government involvement, particularly if there is uncertainty about the government view on the future development of this market and lack of transparency about specific government interventions. If the government wants private investment in the market, it must demonstrate its intention to develop a competitive market. Elimination of restrictions on market entry and establishment of independent regulators are important signals in this regard.

- *A low score* indicates that the legal and regulatory framework does not support competition and there are few incentives for private sector engagement. Domestic monopolies dominate many markets, and there are no or few economic regulators.
- *A medium score* implies that the picture is mixed—some markets are open for competition and economic regulators have been established. For this score, there must be an institutional framework that supports competition in a least two important submarkets and at least two regulators must be established. In many countries the markets for telecommunications, bus transport, and electricity generation are among the first to be opened up for competition.
- *A high score* indicates that the legal and regulatory framework supports competition in major economic infrastructure markets. For this score, there must be clear support for competition in at least two of the four major markets (electricity, water, telecommunications, and transport). A major market is competitive if the majority of its subsidiary specialized markets are competitive. There is also a requirement that regulators are independent and well established, and that there are at least two independent regulators, each covering different major infrastructure markets.

IMPORTANT DOCUMENTS

Documents	Uses
List of major economic infrastructure markets, estimated annual turnover in each market	Provide overview of infrastructure markets with potential for competition
Legislation and regulations governing access to specific markets	Assess whether the legal framework supports competition in each market
List of major regulators: name of the regulator, the economic infrastructure market it regulates, year established, and year of major legislation affecting each regulator	Provide overview of key regulators
Legislation and regulations establishing market regulators	Assess the independence and role of each regulator

EFFECTIVENESS

Effectiveness should be gauged by the numbers and types of market participants and their market shares. If all qualified firms are legally allowed to enter a market but have not done so, the market is not competitive. This may be the result of many possible factors. The effectiveness should be downgraded if there is any evidence of cartelization or collusion in those markets. That evidence may be produced by competition authorities or institutionalized observatories, or it may be highlighted by international reputable assessments. The actual independence of regulators is also an important factor to consider.

- *Low effectiveness* implies that there is little actual competition in major infrastructure markets. There may be clear legal impediments to market access, which would show up in the assessment of institutional design. In addition, many countries place barriers to entry that are not transparent. Regulators may not have been established long enough, or demonstrated consistency in their policy making, to give confidence to investors that they can achieve a return on a long-term investment. If a market has been legally competitive for at least three years but there have been no new entrants, then the market should not be considered competitive. If the market shares of private companies are low, then effectiveness would usually be assessed as low.
- *Medium effectiveness* indicates that private companies have significant market shares in at least two major markets. Although state-owned companies still may have a dominant role, market entry by private companies indicates that they see the market as attractive and expect their market share to grow in the future. This situation is common in many markets for electricity generation. Box 5.16 describes the electricity distribution market in Ireland, where there are several private companies but where the main PC still controls about 50 percent of the market.
- *High effectiveness* indicates that private companies have high market shares in at least two major markets. This will often be a mature competitive market with international competition, and state-owned companies will be expected to play a minor role. In many countries, telecommunication markets will have reached this stage.

If an infrastructure market is legally competitive but firms in the market consistently lose money or receive substantial subsidies, then competition may be distorted. This suggests government intervention in the market, for instance, pressure on regulators to keep prices charged to consumers low. This is not uncommon in electricity or transport markets. Such infrastructure markets should not be viewed as fully competitive. However, this assessment should be cross-checked with the number of market participants. In principle, a well-defined subsidy program can be combined with a competitive market. In practice, this is difficult to achieve.

Box 5.16. Competition in Infrastructure Markets in Ireland

Ireland's economic infrastructure markets are either open to both domestic and international competition or regulated monopolies. The former applies to electricity generation and retail distribution, gas supply, telephone, and internet, while the transmission networks (gas, water, and electricity), which are by their nature natural monopolies, are closely regulated. The electricity market covers both the Republic of Ireland and Northern Ireland, and is interconnected with Great Britain, with three private sector players and two additional public sector generators competing with the incumbent Electricity Supply Board. The provision of broadband internet is also highly competitive, with three alternative providers to the incumbent, Eircom Limited, ranging from larger national operators to smaller regional wireless broadband service providers.

The main domestic regulator, the Commission for Regulation of Utilities is responsible for setting the prices for many of the regulated monopolies. The Commission is organizationally, financially, and managerially autonomous. It sets prices for the transmission networks according to a set of economic criteria that take account of both impact on the consumer and maintenance of investment-grade credit ratings for the related companies. In practice, this means scrutinizing closely the company investment plans and the projections for domestic demand that underlie them to avoid over- or under investment. Other regulators include the rail regulator and the Commission for Communications Regulation.

Table 5.16.1. Electricity Distribution in Ireland in the Second Quarter of 2019

Company	No. of Customers	Consumption (megawatt hours)
Electric Ireland	1,102,991	951,672
Bord Gáis Energy	354,116	381,496
SSE Airtricity	244,262	255,699
Energia	157,898	179,413
PrepayPower	147,391	133,379
Panda	41,839	48,116
Pinergy	26,985	25,857
Others	12,153	19,025
Total	2,087,635	1,994,657

Sources: Ireland PIMA 2017; Commission for Regulation of Utilities 2019.

USEFUL DATA SERIES

Data	Questions to Address
Number of market participants and market share of major companies	What is the actual level of competition in each infrastructure market?
Nature of current investors, classified by government or private (domestic and foreign)	To what extent are markets open to private and foreign ownership?
Number of bidders in recent competitive letting of concessions	What is the level of competition for infrastructure concessions?

Dimension 5.b: Has the government published a strategy/policy for PPPs and a legal/regulatory framework that guides the preparation, selection, and management of PPP projects?

QUESTIONNAIRE

Low	There is no published strategy/policy framework for PPPs, and the legal/regulatory framework is weak.
Medium	A PPP strategy/policy has been published, but the legal/regulatory framework is weak.
High	A PPP strategy/policy has been published, and there is a strong legal/regulatory framework that guides the preparation, selection, and management of PPP projects.

DEFINITIONS OF KEY TERMS

Term	Definitions
Publish	See glossary
PPP	Public-private partnership. A contract between the government and a private entity to provide public infrastructure services for a predetermined set of prices, with provisions for sharing of specific risks.
PPP strategy/policy	A document that is formally adopted by government or the legislature.
Legal/regulatory framework	The sum of laws and sublegal acts that authorize the creation and execution of a PPP strategy/policy, or elements of it.

INSTITUTIONAL DESIGN

The purpose of this dimension is to assess the strategic and regulatory framework for development, appraisal, approval, and oversight of PPPs. A PPP strategy/policy is expected to promote some form of PPP and establish a procedure for approving PPPs. A general policy stating that no PPPs will be considered does not constitute a PPP strategy/policy for the purpose of this institution. However, a formal strategy may be restrictive, so that few PPPs are approved.

The legal/regulatory framework for PPPs does not necessarily require specialized PPPs laws and concession laws. The assessment should also look at the treatment of PPPs in other legislation such as the public finance law or the budgetary framework law and in regulations. A strong legal/regulatory framework for PPPs does not require any specific legislation on PPPs (for example, a "PPP law"), and the existence of a "PPP law" does not imply that there is a strong framework. Most relevant is the effective definition of the role and responsibilities of PPP concessionaires, the definition of the process for the preparation, approval, procurement, contract management, and fiscal risk management of PPP projects, and the corresponding budgeting, accounting, and reporting procedures.

- A low score indicates that both the policy/strategy for PPPs is absent and the legal framework is missing or is weak. PPPs may be developed and approved, but this is largely based on ad hoc approaches. In countries where policies and legal frameworks are absent or weak, it is common that PPPs are initiated by private sector interests through unsolicited bids, and there are often significant weaknesses in PPP procurement. A weak legal and regulatory framework is one that addresses PPPs in some form but does not meet the standards for a strong framework.
- A medium score indicates that the government has issued a PPP policy or strategy. This should address most of the following issues: eligible economic infrastructure markets; principles for sharing of risk and risk exposure per PPP; limit or target total financing of PPPs; nature of the PPP contract (for example, build, operate, transfer); preparation of a PPP proposal (that is, methods of analysis); criteria for selection of proposals; review and approval process; management oversight; monitoring and reporting requirements; and roles and responsibilities to carry out activities of preparing, selecting, and managing PPPs.

- A high score indicates that there is also a strong legal and regulatory framework. A strong legal and regulatory framework incorporates and codifies the previously defined components of a PPP strategy/policy. At a minimum, it must determine roles, responsibilities, and procedures for preparation, selection, procurement, and contract management of PPP projects. A legal framework includes law and sublegal acts approved by cabinet or above. It requires more than just regulations issued by a single minister, such as a minister's instruction.

IMPORTANT DOCUMENTS

Documents	Use
PPP strategy or policy document	Assess institutional design
Laws and regulations governing PPPs, not limited to specialized PPP or concession laws	Assess institutional design
Instructions and guidelines for PPPs	Assess the technical support for PPP development

EFFECTIVENESS

The effectiveness of a PPP strategy and legal framework is measured by whether it produces a pipeline of viable and efficient PPP projects that are consistent with the strategy and the legal framework. The purpose of the PPP framework is to strengthen public investment by drawing on private sector skills and resources, in particular to facilitate efficient risk sharing between different stakeholders. Compliance with the legal and regulatory framework can help achieve this goal but is generally not sufficient to achieve the intended results. The share of public investment implemented as PPPs is a useful indicator but must be interpreted with caution. Indicative thresholds are suggested below, but additional indications of effectiveness might lead to other conclusions regarding the scores.

- *Low effectiveness* implies that few public investments are implemented as PPPs and are consistent with the PPP policy and legal/regulatory framework. In some cases, approved PPPs may deviate from the approved strategy and legal/regulatory framework. There may be deviations in areas such as sectors in which PPPs are allowed, limits on the financial size of PPPs, and principles for risk sharing between government and private investors. If there are such deviations, the PPPs in question should not be included in the PPP share of public investment.
- *Medium effectiveness* implies that some public investments the last three years have been implemented as PPPs and are consistent with the PPP policy and legal/regulatory framework. The value should be measured as the total project cost of PPP projects compared with total project cost of all public investment projects approved each year. If this information is not available, the assessment could be based on total annual investment outlays for PPP projects compared with total public investment outlays each year. The assessment can be based on central government or general government public investment, depending on data availability.
- *High effectiveness* implies that approved projects comply with the approved PPP strategy and legal/regulatory framework, and that there is a substantial pipeline of projects approved and implemented. Several public investments the past three years have been implemented as PPPs.

A large number of terminated or amended PPP contracts imply that PPP policies are not fully effective. If some approved PPPs have been terminated or renegotiated before the end of the contract period, the strategy/policy may still be effective. One of the objectives of a PPP strategy/policy is to reduce the potential for conflict between government and its private partners. Some conflict is inevitable. However, a pattern of PPPs not being implemented as originally planned should be investigated to determine its cause. Such a pattern can be identified based on the proportion of early terminations or amendments of PPP contracts, number of PPP contracts challenged in court by either party, or audit conclusions.

USEFUL DATA SERIES

Data	Questions to Address
Number and value of PPPs approved	What is the overall importance of the PPP mechanism?
Number, financing, sector, and type of PPP in the PPP strategy, compared with what has been accomplished to date	Has the PPP strategy been effective in guiding the PPP portfolio?
Number and financing of PPPs prepared, selected, or managed outside the required process or not in compliance with the strategy	What is the level of compliance with the PPP strategy and legal/regulatory framework?
Number of terminated or amended PPP contracts	Are there systematic weaknesses leading to contract termination and amendment?

Dimension 5.c: Does the government oversee the investment plans of PCs and monitor their financial performance?

QUESTIONNAIRE

Low	The government does not systematically review the investment plans of PCs.
Medium	The government reviews the investment plans of PCs but does not publish a consolidated report on these plans or the financial performance of PCs.
High	The government reviews and publishes a consolidated report on the investment plans and financial performance of PCs.

DEFINITIONS OF KEY TERMS

Term	Definition
Government	Any entity within budgetary central government.
Investment plan	For the purpose of this institution, refers to strategic plans, a pipeline of appraised projects, projects selected for funding, and projects being implemented.
Public corporation (PC)	A public entity established to engage in market production (GFSM 2014). PCs are usually separate legal entities, but quasi-corporations (government agencies involved in market activities, for instance, electricity production) also belong to the PC sector according to GFSM 2014. Note that for the purpose of the PIMA, PPPs and any special purpose vehicles created as part of the PPP, are not considered PCs.
Consolidated report	A report comprising information on multiple PCs.
Financial performance	Profit or loss, as reflected in the statement of operations or income statement. Performance may also be assessed in terms of balance sheet developments.
State-owned enterprise (SOE)	Entity organized as an enterprise/corporation and owned by the state. SOEs may comprise PCs, extrabudgetary entities (see Dimension 7.a), and government entities, depending on their activities and the specific management arrangements.

INSTITUTIONAL DESIGN

The aim of this dimension is to determine if there is coordination between government and PCs regarding the provision of economic infrastructure. This will require a legal framework that establishes clear responsibilities, including reporting requirements, and an organizational unit with responsibility for PC oversight. PCs play a key role in infrastructure provision in many countries, and it is important to ensure that these activities are consistent with overall government strategies and plans. It is also important to realize potential synergies between PC investment and regular government investment, for instance, through coordination of implementation plans for a new road and a major electricity generation facility in the same area. The PCs of concern here are those involved in major economic infrastructure markets, as defined in dimension 5.a. Investment plans for economic infrastructure are of interest regardless of financing source—in other words, capital spending using PCs' own funds as well as any other financing source, such as government financing, should be considered.

There may be ambiguities about which government-controlled entities are PCs in a specific country. This PIMA dimension focuses on governance of entities involved in market activities, for instance, electricity or telecommunications. However, in many countries, governance frameworks are based on the legal nature of the entities (SOEs), not on the economic character of their activities. If it is difficult to identify the PCs precisely, the assessment may be based on governance frameworks for SOEs or other applicable categories. In these cases, the assessment should specify which entities are covered.

- A low score indicates that the government has little knowledge of PCs' investment plans. There may be some limited information sharing, for instance, through government-appointed board members on PC boards or through licensing applications, but there are no legally mandated arrangements for systematic and consistent information sharing regarding PC investment activities.
- A medium score implies that there is a legal requirement that the government receives PC investment plans in a systematic manner. The review process should be restricted to major projects. The review process does not imply prior approval or control by government. Review is intended to ensure there is flow of information from PCs to the government regarding its plans for economic infrastructure. Such information may influence projects funded by government or financed by PPPs.
- A high score implies that there is a legal requirement that the government publish a consolidated report on the PCs' investment plans and their financial performance, in addition to the review of the investment plans. The consolidated report should cover the same PCs that are covered in the review process. If it covers substantially fewer PCs than the review, then it does not qualify as a consolidated report for the purpose of this dimension. Confidential market information need not be included in a published report. However, for the purposes of coordinating major economic infrastructure projects, the PC should inform the executive of its overall strategy regarding economic infrastructure.

IMPORTANT DOCUMENTS

Documents	Uses
Legal and regulatory framework for PC oversight and reporting	Assess institutional design and formal requirements for reporting and review
Consolidated reports for PCs (ownership report)	Assess how consolidated reports capture PCs' investments and financial performance
Samples of reports from PCs to government supervisory ministries or agencies	Assess how investments are reflected in reports from PCs
Annual reports of major PCs	Compile information about the financial performance and investment of major PCs (when there is no consolidated ownership report)

EFFECTIVENESS

The effectiveness of this dimension should be assessed by how well information sharing, coordination, and reporting works in practice. What is the share of PCs covered by the reporting arrangements? Do the PCs comply with the reporting requirements? Are there specific examples of coordination of investment activities between the government and the PCs? If there is a consolidated report on PC investment plans and their financial performance, does it provide a good basis for analyzing these activities for each PC and across the government, or is it mainly a formalistic exercise?

- *Low effectiveness* implies that there is no active information sharing and coordination of investments between the government and the major PCs. This may be related to lack of formal requirements, as would be evident by a low score on institutional design. Alternatively, formal requirements may be in place but not followed in practice. Few PC infrastructure investments over the past three years are covered by the review arrangements.
- *Medium effectiveness* indicates that PCs do report their investment plans, but there are few concrete examples of coordination between the PCs and the government. The review process covers the largest PCs measured by assets or many PC infrastructure investments. However, there is no consolidated report and no transparent complementarities between the government and PC investment projects.
- *High effectiveness* indicates that there is extensive information sharing and coordination on public investments, documented in a consolidated ownership report. Formal requirements for reporting, review and disclosure are being followed in practice, and it is easy to assess the consistency and complementarity between government and PC investment projects. The review process covers the largest PCs measured by assets or most of the total PC infrastructure investments. Box 5.17 describes the very comprehensive oversight of PC infrastructure investments in Brazil.

A practice of government employees on the boards of PCs will usually not be considered a system of review of investment plans. These board members will typically focus on sectoral and company issues and will not be involved in broader consideration of public investment. Government-appointed board members representing ministries are also challenging from a conflict of interest perspective. OECD guidelines advise against this practice.

USEFUL DATA SERIES

Data	Questions to Address
The name, size, and economic infrastructure market of PCs that are reviewed and included in a consolidated report	What is the scope and coverage of the consolidated PC report?
Major PCs total capital expenditures (estimates if no consolidated report is prepared)	How important is PC spending on public infrastructure?

Box 5.17. Public Corporation Oversight in Brazil

In Brazil, there is competition in most markets for economic infrastructure and federal oversight of investment and financial performance of PCs. Most markets for economic infrastructure are competitive, with domestic and foreign competition. The share of the private sector can be significant—railways, ports, and most toll roads are concessions run by the private sector. Telecom operators have been private since the privatization of the sector in the late 1990s. Foreign companies are present in some sectors, such as electricity generation and transmission, and dominant in mobile telecommunications and urban mobility.

PCs are important players in the infrastructure sector, especially Petrobras and Eletrobras. After being agreed upon by the executive boards, the investment budgets of all 133 federal PCs are sent to the government for review. These investment budgets are consolidated and approved by Parliament and published as part of the annual budget law (Table 5.17.1). The Ministry of Planning and Budget publishes a consolidated financial view of the PC portfolio annually. Since late 2016, quarterly bulletins provide additional information on PCs' financial performance and execution of investment.

Table 5.17.1. Brazilian Public Corporations' Investments in 2015 and 2016

(Brazilian reals)

Name	Full Form	2015	2016
AmE	Amazonas Distribuidora de Energia S.A.	80,709,710	NA
CDC	Companhia Docas do Ceará	30,066,056	7,273,764
CEPISA	Companhia Energética do Piauí	60,223,385	NA
CHESF	Companhia Hidro Elétrica do São Francisco	12,522,424	NA
CODESA	Companhia Docas do Espírito Santo	65,981,582	49,482,859
CODESP	Companhia Docas do Estado de São Paulo	208,352,723	110,604,696
ELETROACRE	Companhia de Eletricidade do Acre	8,372,163	28,758,754
ELETRONORTE	Centrais Elétricas do Norte do Brasil S.A.	8,688,575	NA
ELETRONUCLEAR	Eletrobras Termonuclear S.A.	1,727,184,863	782,771,481
FURNAS	Furnas—Centrais Elétricas S.A.	60,875,166	14,649,506
INFRAERO	Empresa Brasileira de Infraestrutura Aeroportuária	985,460,787	609,991,964
PETROBRAS	Petróleo Brasileiro S.A.	46,429,818,602	28,675,731,872
PNBV	Petrobras Netherlands B.V.	5,097,875,238	3,920,533,956
TELEBRÁS	Telecomunicações Brasileiras S.A.	590,873,743	313,859,490
TGO	Transenergia Goiás S.A.	NA	53,698,898
TRANSPETRO	Petrobras Transporte S.A.	1,310,588,310	944,658,154
	Others	19,680,944	19,262,721
	Total	**56,677,593,327**	**35,512,015,394**

Source: Country authorities of 2017 Brazil PIMA mission (http://www.pac.gov.br/).
Note: NA = no data available.

6

Allocating Investments to the Right Sectors and Projects

Allocating public investment to the most productive projects requires comprehensive and stringent budgeting practices. There should be consistent medium-term budgets, budget coverage should be comprehensive, and the full cost of investment projects should be identified. Efficient coordination of investments among entities within the central government, within the general government, and between the government and other parts of the public sector is a critical issue. Project selection procedures should ensure that the right projects are chosen, and maintenance allocations should be based on robust methodologies.

Institution 6: Multiyear Budgeting

Does the government prepare medium-term projections of capital spending on a full cost basis?

Major public investment projects take more than one year to implement, and spending is not evenly spread over years. This complicates capital budgeting. The sum of required spending for ongoing and new projects should be within the total amount of money estimated to be available. This type of multiyear analysis can appear in budget documentation even if the budget system is annually focused. The three dimensions under this institution are designed to identify whether this information is systematically available:

- The first dimension evaluates whether there are multiyear estimates of the total amount of money available for public investment spending.
- The second dimension assesses whether the aggregate multiyear estimates are broken down by the ministry or sector ceilings. Because most of the major projects are proposed by line ministries, projects can be prioritized most effectively if the multiyear funding constraint is brought down to their level.
- The third dimension identifies whether the total estimated costs for each project, and the required spending for each year within that total, are known and publicly available. Both types of information are needed to determine the total demand on the capital budget and, conversely, to allocate the capital budget each year.

Dimension 6.a: Is capital spending by ministry or sector forecasted over a multiyear horizon?

QUESTIONNAIRE

Low	No projections of capital spending are published beyond the budget year.
Medium	Projections of total capital spending are published over a 3- to 5-year horizon.
High	Projections of capital spending disaggregated by ministry or sector are published over a 3- to 5-year horizon.

DEFINITIONS OF KEY TERMS

Term	Definition
Projection	An anticipated amount of money available for spending in the future. It reflects policy. It is not a baseline or a mechanical calculation of a percentage of expected future revenue.
Capital spending	See the Glossary
Budget year	Fiscal year for which a budget is being prepared, and thus, typically, it has not yet started.

INSTITUTIONAL DESIGN

The purpose of this dimension is to see whether there is a basis for multiyear prioritization of capital spending. The existence of financing constraints for capital spending is expected to encourage priority setting among projects. A multiyear perspective on financing constraints is necessary because major projects are usually implemented over more than one year. This is similar to the purpose of establishing financial constraints when planning, as described in Dimension 2.b.

- If the budget document only provides budget allocations for one year, or if multiyear estimates do not distinguish capital spending, the institutional design should receive **a low score**. This will often be the case in countries with annual budgets and no systematic medium-term fiscal or budget frameworks.
- If there are medium-term projections of aggregate capital spending, the score should be **medium**. These projections will often be part of a comprehensive medium-term fiscal framework (MTFF), providing aggregate spending projections for all major budget components. Medium-term frameworks will usually cover at least three years, including the budget year, and may have a longer horizon. For a medium or high score, capital spending projections must be published, but not necessarily as part of the budget document itself. Production of internal estimates of future capital spending is not sufficient. It would be most useful if the projections were included in the budget documentation for

information purposes. However, publication of medium-term estimates as part of a fiscal policy document or in an annually updated public sector investment program is also acceptable, as long as these are consistent with the estimates in the budget documents.

- If the medium-term projections for capital are published and presented according to ministry or sector, the design score should be **high**. This will generally be the case in countries with well-defined medium-term budget frameworks (MTBFs). In addition, some countries may produce medium-term projections for capital spending or for major capital projects, even in the absence of a general MTBF. If these projections provide a complete overview of capital spending, the score could be high even in the absence of a full MTBF. Capital spending may be projected by either ministry or sector. The projections should be made using the same high-level categories that appear in the budget classification. The purpose of disaggregating the overall capital funding amount is to guide units preparing detailed budget proposals on the total size of projects they can propose.

Projections of capital spending in national or sectoral plans do not meet the intent of this dimension. Plans are often prepared without regard to fiscal constraints. For this dimension, projections of capital spending must be made by the Ministry of Finance (MoF) and derived from projections of overall fiscal variables, for example, total revenue, expenditure, and deficit. Similarly, ministry and sector projections must be determined in the budget process, typically as part of a top-down budget process in which ceilings are announced at the beginning of the budget preparation cycle.

It is not a requirement for the scoring under this dimension that capital spending projections are binding. As is the case of MTFFs, there are significant benefits in projecting capital spending based on the available information, even if economic and fiscal circumstances, and policies, may change in the future. Under Dimension 6.b, which covers multiyear budget ceilings, there is also a separate assessment of whether the projections are binding. This is not the case under Dimension 6.a.

IMPORTANT DOCUMENTS

Documents	Uses
Medium-term budget documents	Assess whether multiyear estimates for capital spending are presented and in which form
Other documents including medium-term capital projections	Assess whether multiyear estimates for capital spending are presented and in which form

EFFECTIVENESS

If aggregate capital spending forecasts are significantly different from actual total budget spending for capital projects, then the effectiveness is limited. In particular, if the projection is higher than the approved capital budget allocations, then the benefit of making the projection is weaker proportional to the size of the forecast error. The forecast error should be measured as a weighted average across ministries or sectors over the past three years.

If projections of capital spending are prepared but not published, then effectiveness may be higher than the design score indicates. Countries may wish to make capital spending projections but use them internally in the government without publication. Countries may choose not to publish as a political consideration to avoid creating public expectations during periods of economic, fiscal, or policy uncertainty. This is especially true for countries that do not have a formal medium-term budgeting system.

- *Low effectiveness* indicates that medium-term capital spending projections do not exist or that they deviate significantly from the subsequent budget allocations. This applies if budget allocations are significantly higher or lower than projections.
- *Medium effectiveness* indicates that capital spending projections deviate somewhat from budget allocations. This applies if aggregate capital budget allocations are somewhat higher or lower than projections as an average over the past three years. Alternatively, the comparison can be based on capital allocations by ministry or sector, weighted according to their value. The result should be the same. A medium score is

also warranted if medium-term capital spending projections are made by the MoF and made available to line ministries but not published. If the MoF can document that the information is used when preparing budgets, the effectiveness score may be raised from low to medium. However, publication of projections adds to the transparency and consistency of the budget process, and it will generally not be possible to achieve a high score on effectiveness if the projections are not published.

- *High effectiveness* implies that projections are consistent with subsequent budget allocation. Some deviation is always possible, but medium-term projections should on average be broadly in line with budget allocations. Box 6.1 describes the capital projections in Jordan, which have been robust.

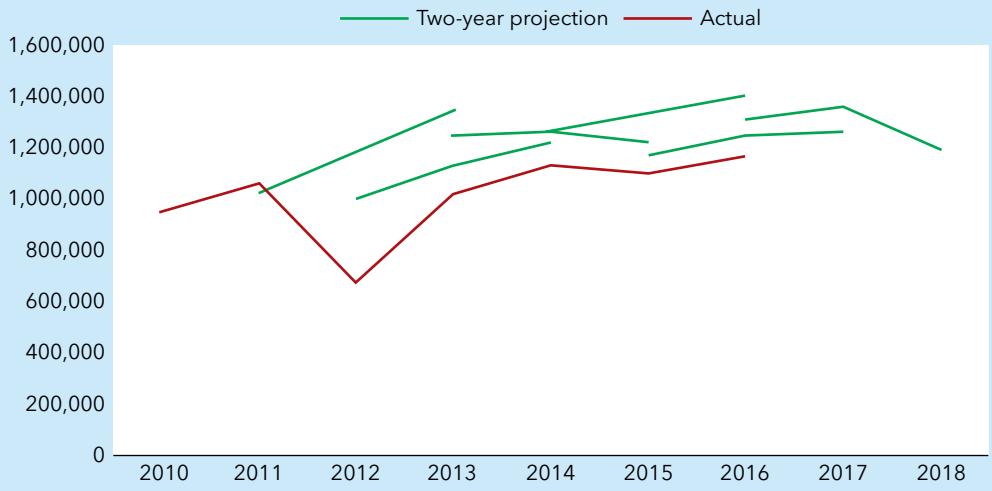
USEFUL DATA SERIES

Data	Questions to Address
Compare projections of capital spending with approved budget amounts for capital spending for the same years	Did capital spending projections effectively facilitate prioritization of capital budget allocations?
If the country has a development budget and an operating budget, provide breakdown of these budgets in capital and current spending	Is analysis based on capital spending, not on development spending?

Box 6.1. Medium-Term Capital Spending Projections in Jordan

In Jordan, capital expenditure is forecasted over a three-year period, on a rolling basis. Both the General Budget Law and the Budget Laws of Government Units provide estimated capital expenditure for the budget year and indicative capital expenditure for the following two years, by ministry, program, governorate, and project. While the ceilings set for the out-years are not binding, the outturns have not exceeded the indicative ceilings set for capital expenditure since 2012. On average, the budget outturn is 11 percent below both the annual budget and the previous year's indicative forecast (Figure 6.1). This indicates that budget allocations on average are broadly consistent with medium-term projections.

Figure 6.1. Medium-Term Budgeting of Capital Expenditure Versus Actual in Jordan, 2010–16
(Jordanian dinars)



Source: Jordan PIMA 2017.

Dimension 6.b: Are there multiyear ceilings on capital expenditure by ministry, sector, or program?

QUESTIONNAIRE

Low	There are no multiyear ceilings on capital expenditure by ministry, sector, or program.
Medium	There are indicative multiyear ceilings on capital expenditure by ministry, sector, or program.
High	There are binding multiyear ceilings on capital expenditure by ministry, sector, or program.

DEFINITIONS OF KEY TERMS

Term	Definition
Multiyear	The budget year plus two years or more after the budget year.
Ceiling	In this context, the maximum funding that can be requested during budget preparation. Given that most budget entities will request funding up to the maximum allowable amount, a ceiling often represents a preliminary budget allocation.
Ministry, sector, or program	As defined in the budget classification.
Indicative	For information purposes only and subject to change.
Binding	A decision that is final (unless fundamental factors change and there are explicit decisions and documented changes to budget ceilings).

INSTITUTIONAL DESIGN

The purpose of multiyear ceilings is to operationalize the financing constraints for capital spending that follow from the MTFF and the multiyear capital spending projections. This is a continuation of the discussion under Dimension 6.a. The difference here is that budget ceilings are more operational in nature, more detailed, and have a shorter time horizon. Projections, as used in Dimension 6.a, are analytical and informational in nature. They are anticipated amounts. Ceilings, as used in Dimension 6.b, are operational limits on budget requests, whether indicative or binding.

- *A low score* on this dimension implies that no multiyear ceilings on capital spending are provided to ministries before the submission of budget requests. Ceilings are intended to constrain detailed budget requests and must be issued before budget preparation is finished. Therefore, ceilings may be issued in an MTFF at the beginning of the budget preparation cycle or in annual budget instructions. If neither document exists, a ceiling must be issued before the deadline for submission to the central budget office of detailed budget requests.
- *A medium score* indicates that capital ceilings are issued, but that they are indicative. Ministries may submit budget requests that go beyond the indicative ceilings without these submissions being rejected. There may, however, be specific requirements for justification or documentation of submissions beyond the ceilings. It is common that the ceilings for the budget year are more binding than the out-year ceilings. For the purpose of this dimension, binding ceilings for the budget year and indicative ceilings for the out-years would still qualify as a medium score.
- *A high score* indicates that the capital spending ceilings are binding, for the budget year as well as the out-years. This does not mean that the ceilings might not change in next year's budget process. However, any changes in budget ceilings would need to be explicit, explained, and documented. The MoF should provide a step-by-step explanation of any changes in budget ceilings from one budget year to the next. Box 6.2 provides an overview of the capital budgeting framework in Mali, which was assessed to be well designed and highly effective in the 2018 PIMA.

Capital spending ceilings may be issued by ministry, sector, or program. The ceilings must correspond to groupings also used in the budget classification. Otherwise, the ceilings will not have direct effects on the budget submissions.

Box 6.2. Multiyear Programming in Mali

Budget ceilings with actual and comprehensive costs have been introduced in multiyear frameworks (Table 6.2.1). Documents issued and published by the units in charge of multiyear programming are both complementary and consistent.

- The Medium-Term Economic and Fiscal Framework (DPBEP) for 2020–22 has been submitted to Parliament during the FY 2020 prebudget debate (end June 2019) and includes multiyear projections by type of expense and by ministry over 2020–22.
- The three-year investment plan (PTI) for 2020–22 prepared by the National Development Planning Directorate (DNDP) provides the three-year rolling investment plan and is appended to the 2020 Budget Law as Annex K *(Etat K).*
- The Special Budget for Investment (BSI), which is the annual component of the three-year investment plan, is incorporated into the budget and presented in the 2020 Budget Law. The PTI reflects all project costs as well as annual expenditure for each project for a three-year period.
- All ministries prepare sectoral Medium-Term Expenditure Frameworks (CDMTs).

Mali's multiyear capital expenditure programming system is largely consistent. The multiyear budgeting mechanism secures the allocation of resources for public investments. The programming tools (DPEBP and PTI) are consistent with the annual budget. The mechanism to carry funds forward is used as follows: systematically for externally financed expenditure or subject to a government's decision for domestically financed expenditure. Progress made in multiyear budget management has been further consolidated by the gradual implementation of commitment control through commitment authorizations and payment allocations, starting in 2018.

Table 6.2.1. Medium-Term Capital Budget in Mali, 2020–22
(Millions of African financial community francs)

Three-year investment plan, 2020–22	2020	2021	2022	Total
Total	643,104	646,448	412,229	1,701,781
Including internal financing	293,104	316,491	251,376	860,971
Including external financing	350,000	329,957	160,853	840,810

Sources: Mali PIMA 2018; Mali Finance Law 2020.

Ceilings on total spending by ministry, sector, or program do not qualify as a capital spending ceiling under this dimension. The ceiling should be specifically for capital spending. If the ministries are only provided with ceilings on total spending, including current as well as capital, the score should be low.

There is no requirement that capital spending ceilings be published. Budget ceilings are primarily a tool for internal management of the budget preparation process and are confidential in many cases. Although Dimension 6.a indicates that it is useful to publish projections for aggregate capital spending, there is no similar requirement for the specific budget ceilings.

IMPORTANT DOCUMENTS

Documents	Uses
Annual budget call	Analyze whether budget call provides multiyear ceilings and in which form
Other document specifying capital budget ceilings	Analyze whether other documents provide multiyear ceilings and in which form

EFFECTIVENESS

If ministry or sector capital spending ceilings are issued but the approved budget amounts are significantly different, then the ceilings do not have the desired effect. This applies for both binding ceilings

(design score high) and indicative ceilings (design score medium). The deviation should be measured as the deviation between total capital ceilings and approved capital budget or as a weighted average across ministries or sectors. The result should be the same. It should be measured over the past three years, if data are available. If data for ceilings in previous years are missing, the assessment can be made on the basis of the ceilings for the last approved budget.

- *Low effectiveness* indicates that approved capital budgets are significantly higher than the ceiling.
- *Medium effectiveness* implies that approved capital budgets are somewhat higher than the ceiling.
- *High effectiveness* indicates that approved capital budgets are broadly in line with the ceiling.

Governments may use other methods than formal budget ceilings to constrain capital spending requests. For example, ministries may be informed that they cannot request more than a certain percentage of the capital budget they received in the current year, or that they must include in their request certain projects but not others. If there is written guidance from a central authority within the executive (for example, MoF, Ministry of Economy, or cabinet) that clearly constrains a ministry's capital budget proposal, this may be considered as an implicit budget ceiling. The effectiveness of such constraints should be assessed by comparing the implicit ceiling imposed by the constraint with actual capital spending, in the same way as when there are formal budget ceilings. If the constraint on capital spending can be formulated as an implicit budget ceiling, and this implicit ceiling has proven to be effective, then this can justify changing the effectiveness score on this dimension as compared with the design score.

USEFUL DATA SERIES

Data	Questions to Address
Compare ministry or sector ceilings for capital spending with capital spending amounts in the approved budget for 3 years	What is the effectiveness of the capital ceilings?

Dimension 6.c: Are projections of the total construction cost of major capital projects published?

QUESTIONNAIRE

Low	Projections of the total construction cost of major capital projects are not published.
Medium	Projections of the total construction cost of major capital projects are published.
High	Projections of the total construction cost of major capital projects are published, together with the annual breakdown of these costs over a 3- to 5-year horizon.

DEFINITIONS OF KEY TERMS

Term	Definition
Total construction cost	The total amount required to plan, prepare, design, construct, and hand over a public investment project. Equivalent to total project cost (see Dimension 8.a).
Publish	See the Glossary.
Annual breakdown	The amount of spending expected each year over the total period of construction.

INSTITUTIONAL DESIGN

Total cost estimates are necessary to ensure funding and to assess the performance of major public investment projects. Because major projects are implemented over more than one year whereas appropriations typically are made annually, publication of the total project cost is necessary to identify financing needed beyond the budget year, including adjustments during project implementation (see Dimension 14.b) and cost overruns. The total project or construction cost for a project equals the sum of actual expenditures through the prior year, planned spending in the current year, and planned spending beyond the current year required to complete the

construction. It should include the cost of feasibility studies and detailed design that may have been supported by separate appropriations. An alternative way to present the total costs of a project would be to publish both the current and the remaining expenditures for the project.

- A *low* score indicates that there are no published estimates of total construction costs for individual major projects. In these cases, it is not possible to assess whether the funds allocated to a project in the budget are sufficient to ensure efficient project implementation or how long it will take to complete the project. It will not be possible to see how total cost estimates for a project evolve over time and whether there are cost overruns.
- A *medium* score indicates that the total costs for each major project are estimated and published, but that there is no indication of the distribution of these costs over time. When cost estimates for major projects are published it is possible to assess how these estimates develop and whether estimates increase over time, but it is still difficult to see whether annual project implementation is in line with plans.
- For a *high* score, the total cost estimates for each major project must be supplemented by indications of how these costs are distributed over time, at least for a three- to five-year horizon. With this information, it will be possible to compare annual and total project costs with available resources over the medium term. It will also be possible to assess annual project implementation compared with plans. However, the information will still be incomplete for projects with an implementation period longer than three–five years.

Total costs of each major project should be published as part of or together with a medium-term expenditure framework (MTEF) or budget documents. This can be done in the MTEF document itself, an annually updated public investment public investment program (PIP), or another suitable document. The information should be available for the purpose of medium-term budgeting. This is different from Dimension 8.a, which asks if information is available to the legislature at the time of budget appropriation.

IMPORTANT DOCUMENTS

Documents	Uses
Budget and PIP preparation regulations	Are there regulatory requirements for publication of total projects costs?
Budget documents	Analyze whether total project costs are published in budget documents
Public investment program	Analyze whether total project costs are published in public investment programs

EFFECTIVENESS

If cost overruns and other changes in budget estimates are not explicitly identified and explained, the effectiveness of cost estimate publication is reduced. Budget documents should explain when and why cost estimates are changed and provide a reconciliation of such changes over time. This should include the initial cost estimate, the changes over time, and the most recent cost estimate along with short explanations.

- *Low effectiveness* indicates that changes in total construction costs are not identified and explained. It may be because there are no published estimates of total construction costs, consistent with a low score on institutional design. In addition, it may be that total construction costs are published at some point, for instance, when a project is approved, but that there is no information about subsequent changes to this estimate.
- *Medium effectiveness* implies that total construction costs are published, and changes in estimates are recorded and explained. These changes may be explained in a published document, such as the annual MTEF or budget documents or a PIP, or in internal government documents.
- *High effectiveness* implies that total construction costs and the annual breakdown of costs on a three- to five-year horizon are published, and changes from one budget to the next are recorded and explained. These changes should be explained in a published document, such as the annual MTEF or budget documents, or a PIP. Box 6.3 describes the Kiribati Development Fund budget, which provides extensive information

Box 6.3. Capital Spending Development Fund in Kiribati

In Kiribati, Development Fund reports provide useful information on the cost of capital projects over time (Table 6.3.1). The detailed Development Fund table in the budget shows project listings organized by ministry. The total cost of each project is approved at its inception. Full funding of projects allows contracting for multiyear projects, prevents end of year funding pressure, and prevents the need to find funding for ongoing projects. The Development Fund includes both recurrent and capital spending organized by ministry. Recurrent spending in many cases is for discrete noncapital activities that will not continue once they have been completed; projects that would not be included in baseline recurrent expenses.

Table 6.3.1. Project Information in Development Fund Reports in Kiribati

Details	Costs and Expenditure Before Current Year	Current Year Information	Budget and Forward Year Information
Implementing ministry	Total Approved Cost of Project	2017 Budget	2018 Budget
Project name	2016 actual	2017 Supplemental Budget	2019 Estimate
Donor (Including the government of Kiribati)	Remaining balance as of January 1, 2017	2017 Revised Budget	2020 Estimate
		2017 Estimated Expenditure	2021 Estimate

Source: Government of Kiribati 2018.

about total costs of each major project and discloses any revisions.

Total cost estimates that are revised frequently can still be effective. Looking forward, they give an updated view of the total cost of a project. If information on all amendments to project costs are clearly documented and explained (starting with initial and showing each revision), then cost overruns and delays can easily be seen (see also Dimensions 13a and 14b).

USEFUL DATA SERIES

Data	Questions to Address
Compare initial cost estimates and final expenditures (aggregate and by year) for selected major projects	What is the change in total project cost during project implementation?
Identify changes in total project costs from one year to the next (that is, rolling updates and the gross amount and percentage of annual change)	How have changes in total project costs occurred over time?

Institution 7: Budget Comprehensiveness and Unity

To what extent are capital spending and related recurrent spending undertaken through the budget process?

A central budgeting principle is that all spending proposals should be evaluated together in order to allocate money most efficiently. First, capital projects should be selected from among all proposed capital projects. This is called the comprehensiveness of the capital budget. Second, capital projects should be selected with the related operating activities in mind. All completed infrastructure must be operated and maintained, and much infrastructure supports activities with goals and objectives expressed in the operating budget. The integration of the operating and capital budgets, which may be complicated, is referred to as the unity of the budget process. This institution does not cover public investment by subnational governments, which was covered by institution 3.

The three dimensions in this institution are designed to measure key aspects of the comprehensiveness of the capital budget and the coordination of the operating and capital portions of the overall budget.

- First, the existence of extrabudgetary entities (EBEs) undermines the comprehensiveness of the budget process overall. EBE are organizations that carry out government functions but are outside regular budgetary procedures. It affects the capital budget to the extent that the EBEs spend money on capital projects.
- Second, the budget process should cover all public investment projects, regardless of how they are financed. Many budget systems treat spending from different financing sources differently. For example, externally financed projects, and projects procured as public-private partnerships, are sometimes not included in the capital budget, which reduces its comprehensiveness. Most public corporations (state-owned enterprises) primarily carry out nongovernment (market) functions and they fall outside the definition of EBEs. Still, public corporations may carry out important public infrastructure investment, often without disclosure in budget documents.
- Third, the process used when preparing the operating and capital budgets, and the presentation of them, determines how well activities and projects financed in the two budgets are coordinated. Budget unity becomes more complicated if budget comprehensiveness is not evenly applied across the overall budget. For example, if extrabudgetary funds pay for capital projects but the operating activities are financed in the central government budget, or vice versa.

Dimension 7.a: Is capital spending mostly undertaken through the budget?

QUESTIONNAIRE

Low	Significant capital spending is undertaken by extrabudgetary entities with no legislative authorization or disclosure in the budget documentation.
Medium	Significant capital spending is undertaken by extrabudgetary entities, but with legislative authorization and disclosure in the budget documentation.
High	Little or no capital spending is undertaken by extrabudgetary entities.

DEFINITIONS OF KEY TERMS

Term	Definition
Significant capital spending	See the box on recommended scoring criteria.
Extrabudgetary entity (EBE)	See GFSM 2014, paragraph 2.41—"government entities with a separate legal identity and substantial autonomy, including discretion over the volume and composition of their expenditures and a direct source of revenue, such as earmarked taxes. Such entities are often established to carry out specific functions, such as road construction or the nonmarket production of health or education services."

Term	Definition
Legislative authorization	Prior approval by the legislature.
Disclosure	Information is included in budget documents to inform the legislature and the public of ongoing activities, for instance, investments by EBEs, but is not subject to approval by the legislature.
Budget documentation	See the Glossary. Note that *budget documentation* under this dimension refers to the government budget documentation, not EBE budget documentation.

INSTITUTIONAL DESIGN

The aim of this dimension is to assess whether selection of projects is made with knowledge of the pool of all possible projects, and therefore if the *right* projects are selected. Dimension 7.a only applies to investments by EBEs. Public corporations (PCs) and special purpose vehicles for public-private partnerships (PPPs) are usually not defined as EBEs and projects funded by PCs or through PPPs should not be considered here. They are considered in Dimension 7.b. As discussed under Dimension 5.c, there may be uncertainty about which state-owned enterprises (SOEs) are PCs and which are EBEs or government units. If this can be ascertained, the SOEs that are EBEs should be discussed under this dimension. Otherwise, the whole SOE sector should be covered under Dimension 7.b. The assessment should in any case clarify the institutional coverage.

- A low score implies that the legal and regulatory framework allows for significant extrabudgetary public investment and there is no formal requirement for legislative authorization or disclosure. This is the case in many countries where key parts of public infrastructure have been moved out of the central government, for instance, road funds. Significant capital spending by EBEs means that it on average constitutes more than 10 percent of capital spending approved in the budget.
- A medium score also implies that the legal and regulatory framework allows for significant extra-budgetary public investment, but this investment is required to be disclosed in budget documentation and subject to some form of legislative authorization. This authorization can take different forms. It can be a detailed approval of each major project, or it can be a more general endorsement of the EBEs' investment plans. Disclosure in the budget documentation exists, for the purpose of this institution, only if individual projects are named and their cost indicated, or if projects of similar purpose are presented as a group. Excessive grouping means that there is not enough information to coordinate EBE-funded projects with projects appearing in the central government budget.
- A high score applies when the legal and regulatory framework requires that the volume of extra-budgetary spending is small compared with the regular budget and is authorized or disclosed in the budget. In these cases, there are restrictive rules for the establishment of EBEs or for investment activities by such entities.

This dimension may be concerned with organizations other than regular EBEs. Some countries use extrabudgetary financial institutions, such as development banks or special funds, to finance projects that could be included in the government capital budget. Such institutions and their public investment activities should be included in the assessment of this dimension as long as they fall under the GFSM 2014 definition of an EBE.

IMPORTANT DOCUMENTS

Documents	Uses
Legal framework for EBEs	Assess definitions of EBEs and requirements for budget approval and reporting
Consolidated overview of EBE activities, including in budget documentation	Assess size of EBE investment activities
Annual reports for major EBEs (If no consolidated overview)	Assess size of EBE investment activities

EFFECTIVENESS

The effectiveness assessment of this dimension should reflect whether the formal rules for capital budget approval and disclosure are applied in practice. If the regulatory framework for EBEs requires that their investments be authorized by, endorsed by, or disclosed to the legislature but this is not done in practice, the effectiveness score could be lower than the design score. Alternatively, if there is a well-established practice to disclose EBE capital projects in budget documents although this is not legally required, effectiveness could be higher than the design score indicates.

- *Low effectiveness* indicates that there is significant extrabudgetary public investment without legislative authorization or disclosure in the budget. This might be because there are no formal requirements, as indicated by a low score on institutional design. Or there may be formal requirements that are not applied or followed in practice.
- *Medium effectiveness* implies that even if extrabudgetary capital spending is significant, actual budget authorization or disclosure covers most EBE capital spending. This score may be higher than or the same as the score on institutional design.
- *High effectiveness* indicates that there is little investment spending by EBEs and that most of this spending is authorized in the budget or disclosed in budget documents. This would generally coincide with a high score on institutional design.

Box 6.4 describes the high level of capital budget comprehensiveness in Armenia, including little extrabudgetary spending.

USEFUL DATA SERIES

Data	Questions to Address
Number and size of EBEs	What is the relative importance of EBEs in the public sector?
Amount of EBE capital spending on economic infrastructure	What is the role of EBEs in the provision of public infrastructure?

Dimension 7.b: Are all capital projects, regardless of financing source, shown in the budget documentation?

QUESTIONNAIRE

Low	Capital projects are not comprehensively presented in the budget documentation, including PPPs and externally financed and PCs' projects.
Medium	Most capital projects are included in the budget documentation, but either PPPs, externally financed or PC projects, are missing.
High	All capital projects, regardless of financing sources, are included in the budget documentation.

Box 6.4. Budget Comprehensiveness in Armenia

Public investments in Armenia are mostly undertaken through the state and municipal budgets. In 2017, the capital expenditure made by extrabudgetary funds was limited to 0.1 percent of GDP, a large majority of which was composed of police equipment and civil servant apartments acquired by earmarked revenue. The capital expenditures undertaken by state and municipal noncommercial organizations were also minimal.

There are no data on the capital expenditures of PPPs and PCs that would be classified as general government units according to GFSM 2014; the former may be relatively small because three out of four PPP contracts were concluded more than 10 years ago, and onlending that funds most of PCs' capital projects is undertaken through the state budget.

Source: Armenia PIMA 2018.

DEFINITIONS OF KEY TERMS

Term	Definition
Capital project	See the Glossary
Not comprehensively presented	Fewer than 75 percent of capital projects in each category (by value) are included in the budget documentation.
Budget documentation	See the Glossary
Externally financed	See the Glossary
Most capital projects	More than 75 percent of capital projects in each category (by value).
Financing source	See the Glossary
All capital projects	More than 90 percent of capital projects in each category (by value).

INSTITUTIONAL DESIGN

The aim of this dimension is similar to Dimension 7.a: to assess whether projects are selected with the knowledge of all possible projects, and therefore if the *right* projects are selected. The difference is that Dimension 7.b focuses on financing sources rather than EBEs. The term *financing source* is used here in a broad sense. It includes PPPs and PC infrastructure investments, as well as government investment financed by external sources. The effects of EBEs on the comprehensiveness of the capital budget are fully addressed in Dimension 7.a. As discussed under Dimension 5.c, there may be uncertainty about which SOEs are PCs and which are EBEs or government units. If this can be ascertained, the SOEs that are EBEs should be discussed under Dimension 7.a. Otherwise, the whole SOE sector should be covered Dimension 7.b. The assessment should in any case clarify the institutional coverage.

- A low score indicates that the legal and regulatory framework requires no budget disclosure of projects financed by any of the three major nonbudgetary financing sources (PCs, PPPs, and external sources). PCs include fully owned as well as partially owned entities. Legal forms may vary—PCs can be statutory bodies as well as joint stock companies. PPPs may also take many different forms (see the discussion under Dimension 5.b). External financing may come from international financial institutions, as well as multilateral and bilateral development partners, and comprise grants, concessional loans, and nonconcessional loans.
- A medium score indicates that most projects are required to be comprehensively presented, but that projects for one of the three financing channels are missing in budget documentation. If no projects are financed by a specific source, that financing source should not be considered in meeting the scoring criteria. For example, if there are no PPPs in a country, then a budget must include either externally financed or PC projects to achieve a medium score.
- A high score indicates that all projects undertaken through the three channels mentioned are required to be included in budget documents:
  - For PPPs, all financing should be shown in the budget, to indicate the size of the project. The budget will usually authorize and control spending for direct expenditures of public funds, for instance, accessibility payments. The budget should show for information purposes private investments related to the PPPs or investments by an independent agency, bank, or fund capitalized with public funds. The budget document should also disclose guarantees and other contingent liabilities related to PPPs, but the assessment of this disclosure is done under dimension 3.c and not here.
  - For PCs, the budget should disclose investment projects related to major infrastructure markets. In most cases, this information should be provided in the budget for information purposes only. The exception would be for countries and PCs for which there are legal requirements that the legislature approve their capital budgets. This is common in many Latin American countries.

- For externally financed projects, all project expenditures should be shown and authorized in the budget on a gross basis. The inflow of external funds should be shown as revenue (for grants) or as financing (for loans) in the budget documents. If the budget only includes government cofunding of externally financed projects, this does not meet the requirements under this dimension.

IMPORTANT DOCUMENTS

Documents	Uses
Legal frameworks for investments by PPPs, externally financed investments, and PC investments	Clarify formal requirements for authorization and disclosure
Summary documents for PPPs, externally financed investments, and PC investments, including in budget documentation	Estimate the value of these investments compared with budget-funded investments
Annual reports for major PCs	Estimate the value of these investments compared with budget-funded investments (if there are no summary PC reports)

EFFECTIVENESS

The effectiveness of this dimension is measured by the compliance with formal disclosure requirements. If a category of projects is only partially presented in budget documentation, the effectiveness score may be lower than the design score. This assessment requires estimating the total value of projects financed from nonbudgetary sources. This will often have to be done in the field and may require compilation of data from different sources. The estimates should be reconciled with the authorities.

- *Low effectiveness* means that few projects implemented by PCs, as PPPs or through external financing, are comprehensively presented. This may be because there are no formal requirements for such disclosure, as indicated by a low score on institutional design, or because the requirements are not complied with.
- *Medium effectiveness* means that most capital projects are disclosed in budget documentation. Projects from one category may be missing, as indicated by a medium design score.
- *High effectiveness* implies that disclosure is full and comprehensive. Most projects are included from each of the three funding categories. Box 6.5 describes how Timor-Leste budget documents provide a complete picture of public investments regardless of financing source.

If countries meet the disclosure criteria in a formal sense, but the information provided is not transparent or is difficult to interpret, the effectiveness could be lower than the design score. This could be the case if information is highly aggregated and does not provide any information on the major projects financed by the different sources. If the information provided on PPPs is limited, the effectiveness of this disclosure may also be lower.

If the number and value of projects in an omitted category is small, the effectiveness score may be higher than the design score. For instance, if externally financed projects and PC investments are fully presented but there is a single, small PPP in a country that is not included, the effectiveness score may still be high. This would require that the value of the projects in the omitted category be negligible.

Box 6.5. All Capital Projects Shown in Budget Documents in Timor-Leste

The budget presents a comprehensive picture of capital investments (Table 6.5.1). Budget Book 3A contains detailed information on the projects approved by the Infrastructure Fund, which is an agency under the consolidated fund (CFTL) and reviews all investment projects of $5 million or more. The information is presented by project and by program undertaken by respective line ministry. Budget Book 3A also contains information on loan-financed components of projects. Budget Book 3B covers projects implemented at the subnational government levels. Budget Book 3C on the special economic zones of Oecusse and Atauro presents information on their planned capital investment. Development partner grants are provided in detail in Budget Book 5, although whether they are fully or partially capital in nature is not easily identifiable.

Information on PPP transactions is fully integrated in the budget documentation. Budget Book 1 contains information on the underlying rationale for PPPs and a detailed description of approved and planned projects.

Table 6.5.1. Budget Expenditures in Timor-Leste, by Sources of Funds, 2018–24
(Millions of US dollars)

	2018 Actual	2019 Budget	2020 Budget	2021 Projected	2022 Projected	2023 Projected	2024 Projected
Combined source budget	1,343.9	1,681.2	2,123.5	2,574.5	2,496.4	2,259.1	2,117.7
Government expenditures, by fund	1,172.7	1,482.0	1,950.0	2,491.6	2,461.1	2,245.4	2,104.0
Consolidated fund (excluding loans)	1,119.0	1,375.0	1,853.1	2,386.5	238.3	2,172.6	2,042.2
Human Capital Development Fund	14.5	20.0	23.9	24.8	25.8	26.9	27.9
Borrowing/loans (disbursements)	39.2	87.0	73.0	80.2	53.9	45.9	33.8
Development partner commitments	171.2	199.2	173.5	82.9	35.3	13.7	13.7

Source: Government of Timor-Leste 2020a.

USEFUL DATA SERIES

Data	Questions to Address
Total financing by source of capital spending within the central budget	Are externally funded projects, PPPs, and PC projects included in the budget?
Total financing by source of capital spending outside the central budget	What is the volume of externally funded projects, PPPs, and PC projects outside the budget? How much of this spending is disclosed in budget documents?

Dimension 7.c: Are capital and recurrent budgets prepared and presented together in the budget?

QUESTIONNAIRE

Low	Capital and recurrent budgets are prepared by separate ministries, and/or presented in separate budget documents.
Medium	Capital and recurrent budgets are prepared by a single ministry and presented together in the budget documents, but without using a program or functional classification.
High	Capital and recurrent budgets are prepared by a single ministry and presented together in the budget documents, using a program or functional classification.

DEFINITION OF KEY TERMS

Term	Definition
Capital budget	See the Glossary
Recurrent budget	For the purpose of the PIMA framework, the same as the current or operating budget.
Budget preparation	The budget is considered to be prepared by senior staff in a ministry (including the minister and other political appointees) who make final decisions concerning a proposed budget that is presented to the cabinet or legislature. Therefore, a budget is prepared by a single ministry even if separate units within a ministry develop documents seen together for the first time by senior ministry staff.
Present together	The capital and recurrent proposed budgets are delivered to the cabinet and legislature at the same time. The budget document could comprise multiple physical volumes. Therefore, the term *together* refers to time, not to inclusion in the same volume.
Budget document	See the Glossary
Program or functional classification	Any segment in the budget classification that relates to output or outcome. A program segment typically is unique to each country. A functional segment may reflect COFOG, the UN Classification of the Functions of Government, or it may be unique to the country.

INSTITUTIONAL DESIGN

This dimension assesses the degree of coordination and integration in the preparation of capital and current budgets. Public investment spending is not efficient if it is not closely coordinated with recurrent spending. Infrastructure supports public services funded largely in the current budget, and the current budget supports operational costs and routine maintenance of infrastructure. The full costs of a project should be presented together at the time the decision is made to proceed with the project. For example, the decision to build a new hospital should consider the staffing costs of more doctors and nurses, as well as maintenance on the hospital and the machinery therein.

- A low score on Dimension 7.c indicates that budget preparation or presentation is highly fragmented. Capital and current budgets may be prepared by separate ministries and they may be presented separately to the cabinet and to the legislature. There will often be separate budget documents, and the budget classification used in the current and capital budgets may not be consistent.
- A medium score implies that regulations require higher degree of coordination and integration. There is a single ministry responsible for preparing the capital and current budgets and they are presented to cabinet and the legislature as a consolidated package. However, capital and current spending is not combined under a program or functional classification, which would provide a more detailed picture of how the two spending categories are linked and allow for trade-offs between current and capital spending.
- A high score indicates that regulations ensure that budget preparation and presentation are fully integrated. Current and capital spending are presented according to a program or functional classification, and there is a solid base for

necessary coordination of information and decision-making processes. The capital and current budgets must use the same program or functional classification. Using the same classification means that a reader can understand how capital and recurrent spending complement each other. Having different program classifications, or if a program classification is used by either the capital or the recurrent budget but not both, does not achieve this purpose.

The capital and current budgets may be prepared by a single ministry even when there is involvement from different stakeholders in the process. The definition of "budget preparation" is based on the notion that only senior decision makers can see how all components of a budget come together to form the budget proposal. It is normal that components of a budget are drafted and analyzed by multiple entities, including line ministries and specialized units within a central finance or planning ministry. Senior ministry decision makers who have authority to direct changes to the draft budget are accountable for it. If decision makers of one ministry are accountable for only the recurrent or only the capital budget proposal sent to cabinet or the legislature, then the budget is prepared by separate ministries.

Budget preparation and budget presentation are separate issues to assess. The definitions of key terms are intended to minimize overlap between these two terms. It is intended that if the capital and recurrent budgets are prepared by separate ministries, they could still be presented together. In theory, it is also possible that a single ministry prepares the capital and recurrent budgets but does not present the two budgets together.

IMPORTANT DOCUMENTS

Documents	Uses
Budget preparation regulations and guidelines	Assess degree of coordination during budget preparation
Budget documents	Assess presentation of budget

EFFECTIVENESS

- *Low effectiveness* indicates that there is little coordination between capital and current budgets. This may be attributable to weaknesses in the institutional setup (low score on institutional design) or to failure to operationalize the provisions in the institutional framework. There may be fragmentation and lack of coordination between capital and current spending within a ministry. Many central fiscal authorities have separate units responsible for detailed analysis of the capital and recurrent budgets. If the current costs of few major capital projects are reviewed by the department responsible for the current budget during budget preparation, then effectiveness is low.[1]
- *Medium effectiveness* indicates that there is consistent and consolidated presentation of capital and current spending in budget documents. If budgets are prepared by separate ministries, but with extensive coordination, effectiveness may be higher than the design scores imply. For instance, current budgets and medium-term estimates should include references to and specific allocations for operational and maintenance expenditures. If the current costs of some major capital projects are reviewed by the department responsible for the current budget during budget preparation, then effectiveness is medium.
- *High effectiveness* implies that there is effective coordination, and there should be several examples of the effect of this coordination on the budget. If the current costs of most major capital projects are reviewed by the department responsible for the current budget during budget preparation, effectiveness is high.

USEFUL DATA SERIES

Data	Question to Address
Examples of capital/current budget linkages in budget documents	How has coordinated budget preparation affected budget allocation?

[1] When doing the PIMA, the MoF should be able to document the operational costs related to capital projects that were considered during the budget process. In the absence of such documentation, effectiveness should be assessed as low.

Institution 8: Budgeting for Investment

Are investment projects protected during budget implementation?

Major public investment projects are typically implemented over multiple years, and this presents challenges for budgeting. Budget and commitment procedures can make it more likely that funds are available when needed over the multiyear construction cycle of major projects. The three dimensions under this institution focus on three such procedures:

- The first dimension assesses whether the future commitments related to investment projects are reflected in budget documents. Most countries appropriate funds annually, even if they have adopted an MTEF. Budget decision makers should always be aware of the total cost of a project, the amount that must be appropriated in the future before a facility becomes operational, and especially the future expenditures presumed under contracts already signed.
- The second dimension concerns whether funds can be reallocated from capital spending during the budget year. The capital budget can be reduced if funds can be shifted to the operating budget, and this can make capital budget implementation more challenging. Virement rules can be written to make this more or less difficult and should be clear and transparent.
- The third dimension covers the prioritization of ongoing projects compared with new ones. If projects already started do not receive enough funding to cover expenditures planned in the budget year, the delay will likely increase total project costs. Cost increases may arise through simple inflation (higher prices compared with original cost estimates), contract penalties, damage from weathering, and loss of materials and vandalism. These costs can be avoided if budget institutions give priority to funding ongoing projects before starting new projects.

Dimension 8.a: Are total project outlays appropriated by the legislature at the time of a project's commencement?

QUESTIONNAIRE

Low	Outlays are appropriated on an annual basis, and information on total project costs is not included in the budget documentation.
Medium	Outlays are appropriated on an annual basis, and information on total project costs is included in the budget documentation.
High	Outlays are appropriated on an annual basis and information on total project costs, and multiyear commitments is included in the budget documentation.

DEFINITIONS OF KEY TERMS

Term	Definition
Outlay	Cash outflow or expenditure. (If a country budgets using accrual principles, the reference to outlays can be replaced with reference to expense.)
Appropriate	Legal authorization for expenditures.
Total project costs	see glossary. Equivalent to *total construction costs* (see Dimension 6.c).
Budget documentation	see glossary
Multiyear commitment	An obligation, in more than one fiscal year, to make a future payment subject to the fulfillment of certain conditions (contractual or otherwise).

INSTITUTIONAL DESIGN

The purpose of this dimension is to identify which information is systematically available to the legislature for capital budget decisions. Given that most countries appropriate annually for capital projects, these decisions can be made best when future

expenditure obligations imposed by ongoing and new projects are known. Some countries have multiyear appropriations for capital projects, and in a few countries the practice is to appropriate the full cost at the beginning of the project. For the assessment of this dimension, we do not distinguish between multiyear information being given through disclosure in the budget or through multiyear appropriations. The dimension is somewhat similar to Dimension 6.c, but the latter focuses on whether total project costs are available for medium-term budget purposes.

- A low score implies that there is no legal or regulatory requirement that information on total project costs be included in the budget documentation. The only available information is the proposed annual budget allocation. There is no information about expected future costs to complete the project in question and no information about multiyear contracts or other obligations related to the projects. The legislature has no basis for comparing the fiscal effects of different projects beyond the budget year.
- A medium score implies that there is a legal or regulatory requirement that the budget provide information about total project costs. For new projects, the allocation for the first year of construction will signal an intention to continue funding the project until it is completed. When deciding on this funding, it is important to have full information about the total costs are likely to be. A medium score on this dimension is similar to dimension 6.c, but in 8.a it is explicitly required that information on total project costs be disclosed in budget documents presented to the legislature.
- A high score indicates that there also is a requirement that information about multiyear commitments related to the project be available. These will typically include commitments related to contractual obligations, such as land purchases or procurement of equipment and construction services. These commitments are different than the ones covered under Dimension 12.a. While both dimensions refer to commitments, the focus is different. *Commitments* are referred to here as a way of communicating the total cost of a project. *Commitments* are referred to in Dimension 12.a as a way of controlling expenditures in-year.

IMPORTANT DOCUMENTS

Documents	Uses
Budget documents	Assess availability of information on project total cost and multiyear commitments to the legislature
Public investment program	Assess whether information outside the budget documents provides useful information on total project outlays

EFFECTIVENESS

If information about total project costs or multiyear commitments is available in another authoritative document, effectiveness may be higher than the design score. A PIP might include this information. However, PIPs may have limited credibility and do not always represent firm commitments. To influence the effectiveness scoring, a PIP should be reconciled with the budget or MTBF and reflect what is expected to happen, rather than being a wish list. Approval by the legislature would also strengthen the credibility of the PIP and its relevance for the effectiveness score on this dimension.

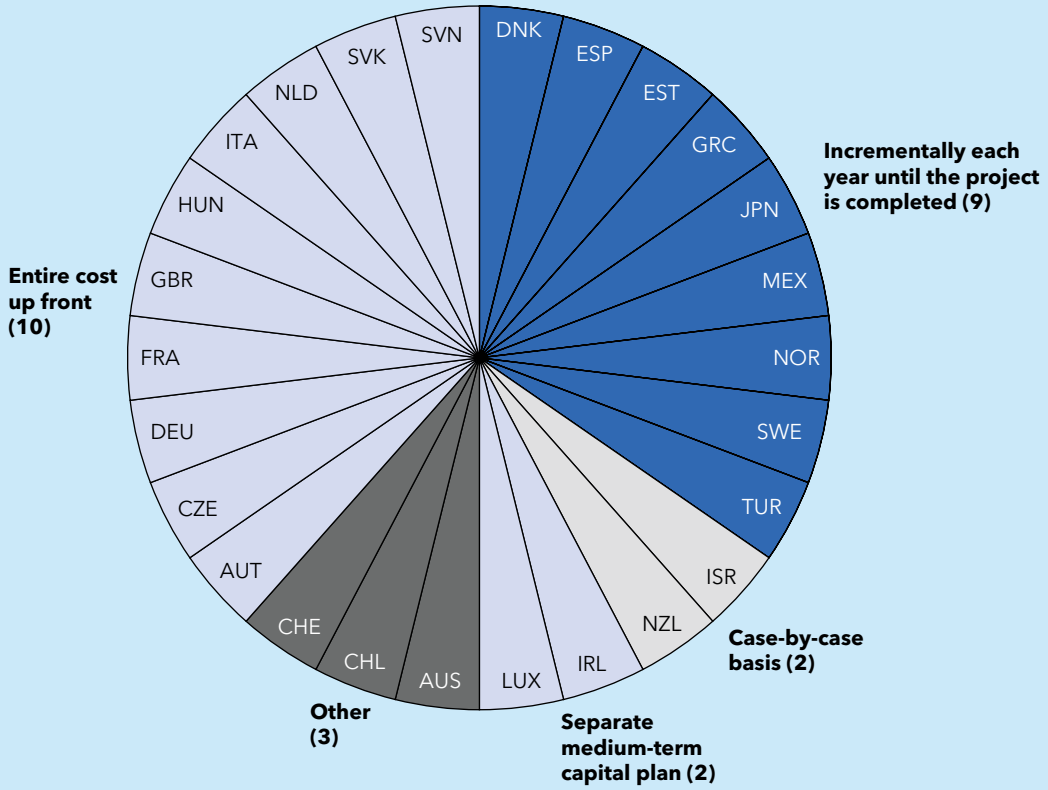
If a country has a formal system of central approval of multiyear commitments but does not include these commitments in budget documentation, this is not a basis for upgrading effectiveness on this dimension. While it is good practice for the MoF to approve multiyear commitments, disclosure to cabinet and the legislature is important. The cabinet and legislature should always know that annual appropriations should at least cover this amount for ongoing projects.

- *Low effectiveness* indicates that there is little information about total project costs in any authoritative budget document. This would usually coincide with a low score on institutional design. Budget documentation includes total project costs for few major projects that are appropriated.
- *Medium effectiveness* indicates that total project costs are disclosed for some major projects. This can be in the budget document itself, consistent with a medium score on design, or in another credible document, for instance, a PIP, that is reconciled with the budget or MTBF.
- *High effectiveness* indicates that total project costs and multiyear commitments are disclosed for most

Box 6.6. OECD Multiyear Budgeting Practices

Many OECD countries have multiyear authorizations or appropriations for capital investment projects. Figure 6.6.1 gives an overview of the approaches in different OECD countries.

Figure 6.6.1. OECD Country Budget Practices for Multiyear Investment Projects



Source: 2018 OECD Survey of Capital Budgeting and Infrastructure Governance
Note: OECD = Organisation for Economic Co-operation and Development.

major projects. This can be in the budget itself, or in another credible document, for instance, a PIP that is reconciled with the budget or MTBF. Box 6.6 illustrates that there are several OECD countries where total project costs are either appropriated or disclosed when the project is approved.

USEFUL DATA SERIES

Data	Questions to Address
Estimated total multiyear cost of approved projects	What is the total volume of multiyear project spending compared with annual budget spending? (below)?
Size of commitments carried over from prior year	What is the relative importance of multiyear commitments compared with the annual budget?
Annual cost of all ongoing projects, which can be compared with commitments carried over	What is the share of commitments carried over compared to annual project costs?

Dimension 8.b: Are in-year transfers of appropriations (virement) from capital to current spending prevented?

QUESTIONNAIRE

Low	There are no limitations on virement from capital to current spending.
Medium	The finance ministry may approve virement from capital to current spending.
High	Virement from capital to current spending requires the approval of the legislature.

DEFINITIONS OF KEY TERMS

Term	Definition
Virement	Movement of budgetary resources between line ministries, programs, policy areas, expenditure categories or line items.
Current spending	Spending authorized in the current, or operating, budget.

INSTITUTIONAL DESIGN

This dimension assesses how in-year budget transfers (virements) from capital to current spending are controlled and the legal and regulatory framework for such virements. If the total capital budget can be reduced during budget execution, the institutions designed to plan, appraise, and select projects cannot fully realize their potential. For the purpose of this dimension, virements reduce total funding for the capital budget. In-year reallocations between capital projects, with no net change to the capital budget, are addressed in Dimension 13.b.

- A low score indicates that there are no legal or regulatory limitations on in-year transfers of appropriations (virement) from capital to current spending. Funds can be freely transferred during the year. There is no formal protection of capital spending and it is up to each ministry whether they will implement their capital budget according to plans or reallocate funds to other purposes. There may be formal rules for how virements are authorized and carried out, but these rules do not provide any protection of capital spending.
- A medium score indicates that reallocation of funds from capital to current spending requires approval by the MoF or an equivalent ministry. The procedures for such virements will typically be regulated in budget laws and regulations, and there may be strict limitations on when virement is allowed and how this is carried out.
- A high score indicates that the executive has no authority to transfer appropriations from capital to current spending; this can be approved only by the legislature. This provides a high degree of protection of capital spending. Any transfer of appropriation from capital to current spending requires supplementary budget decisions.

IMPORTANT DOCUMENTS

Documents	Uses
Legislation and regulations regarding virements, in particular for virements from capital to current spending	Assess how in-year budget transfers (virements) from capital to current spending are controlled and the legal and regulatory framework for such virements

EFFECTIVENESS

The effectiveness of virement rules should be measured by data for the level of virements over the past three years. If the rules are open-ended but actual virement is low, effectiveness may be higher than the design score. If there are strict formal rules on virements, but substantial virement actually takes place, effectiveness may be lower than the design score.

If there are frequent supplementary budgets that transfer appropriations from capital to current spending, the effectiveness is lower than the design score implies. The purpose of having the legislature approve virements is to make virements from capital to current budget difficult to accomplish. However, in many countries, supplementary

Box 6.7. Budgeting for Capital Investment in Jordan

In Jordan, capital investments are appropriated on an annual basis. Costs of projects are presented as indicative information for the two years following the budget year and do not cover the projects' full lifecycle. Appropriations may be transferred from current expenditures items to capital expenditures items under the same chapter upon the approval of the Minister of Finance, but transfer from capital expenditure to other current expenditures can be authorized only by law. Unspent capital allocations should fully lapse at the end of the year and project-related expenditure should always be reappropriated during the next year.

In practice, capital allocations are reasonably protected. Multiyear contracts are allowed and incorporated in the budget preparation process. The indicative budget allocation for the two years following the budget year provides references to define the line ministries' ceilings. In-year reallocations remain limited: in 2016, reallocations from capital expenditure to recurring expenditure represented 4.9 percent of total capital expenditure. Reappropriation of unspent resources from the previous year is prioritized and rarely leads to project interruption. In addition, the utilization of trust funds to set aside resources needed to pay some commitments for which the invoice has not been received at the end of the fiscal year provides a de facto mechanism to carry over some spending.

Source: Jordan PIMA 2017.

budgets are common. If supplementary budgets are common and there is a pattern of the proportion of total budget shifting from capital to current, then virement rules are not effective.

- *Low effectiveness* indicates that there is substantial virement from capital to current spending. If supplementary budgets are systematically used to shift funds from capital to current spending, and this on average constitutes a substantial share of the capital budget, effectiveness should also be assessed as low.
- *Medium effectiveness* indicates that there is some virement from capital to current spending during the year. The same criterion applies to systematic shifting of funds through supplementary budgets.
- *High effectiveness* indicates that there is little virement from capital to current spending during the year. The same criterion applies to systematic shifting of funds through supplementary budgets. Box 6.7 describes the restrictive virement practices in Jordan.

USEFUL DATA SERIES

Data	Questions to Address
Total net reduction in the capital budget through virements	What is the effectiveness of the provisions on virement from capital to current spending?
Gross and proportional changes in the capital budget from budget supplements Number of budget supplements	Do frequent budget supplements have similar effects as extensive virement from capital to current spending?

Dimension 8.c: Is the completion of ongoing projects given priority over starting new projects?

QUESTIONNAIRE

Low	There is no mechanism in place to protect funding of ongoing projects.
Medium	There is a mechanism to protect funding for ongoing projects in the annual budget.
High	There is a mechanism to protect funding for ongoing projects in the annual budget and over the medium term.

DEFINITION OF KEY TERMS

Term	Definition
Mechanism	The laws, organizations, systems, or procedures available to achieve an objective.
Protect funding	To increase the probability that funding will be provided in accordance with the cost and implementation schedule estimated when the project was first approved in the budget process.
Ongoing projects	See the Glossary
Medium term	See the Glossary

INSTITUTIONAL DESIGN

The purpose of this dimension is to ensure that lack of funding does not lead to delays in implementation of ongoing projects. In many countries, there is a strong political interest in initiating new projects, which may be more politically visible than the ongoing projects. Funding for new projects may crowd out the continued funding of the ongoing projects and lead to delays in their implementation. Such delays may lead to increases in total project costs and to inadequate project performance.

- A low score indicates that the legal and regulatory framework provides no mechanism that protects funding of ongoing projects. In some cases, the government has a general policy that ongoing projects should be prioritized, but this is not operationalized in a specific mechanism. A policy will usually not be recognized as a mechanism for the purpose of this dimension.
- A medium score indicates that there is a mechanism that protects funding of ongoing projects. This may be a legal provision, or it may be embedded in budget preparation regulations. It is common that budget regulations or the annual budget call specifies that the ministries need to identify funding for all ongoing projects before they can suggest any new projects.
- A high score implies that the protection of funding for ongoing projects also covers medium-term budget estimates. Again, this can be embedded in law or it can be a provision in the instructions for preparation of medium-term budget estimates.

IMPORTANT DOCUMENTS

Documents	Uses
Legal and regulatory framework for budget preparation	Assess what mechanism is available to protect funding for ongoing projects

EFFECTIVENESS

The effectiveness of the mechanisms in place should be assessed in light of the actual budget allocations to ongoing and new projects over the past three to five years. The data may demonstrate that there is customary practice, without a formal mechanism, to give funding priority to ongoing projects. If *all* ongoing projects have received enough funding to spend according to the approved project plan and fully meet outstanding commitments for the past three to five years, effectiveness could be rated as medium or high, even if there is no formal mechanism in place.

- *Low effectiveness* indicates that ongoing major projects have received significantly less than the assessed funding needs. If it is not possible to estimate the level of funding compared with needs, this assessment must be based on whether there are many examples of major projects not receiving sufficient funding. A budget with many projects receiving small allocations compared with project cost is a clear indication of funding constraints. If there are many projects that are delayed because of funding shortages over time, effectiveness is low.
- *Medium effectiveness* indicates that ongoing major projects have received somewhat less than the assessed funding needs. If it is not possible to estimate the level of funding compared with needs, medium effectiveness requires that there are few examples (not more than one or two each year) of major projects not receiving sufficient funding.
- *High effectiveness* indicates that all ongoing major projects have received the assessed

Box 6.8. Capital Budgeting Practices in the Philippines

In the Philippines, budget legislation provides an effective framework for the protection of capital investment during budgeting. Ongoing projects (Tier 1) are required to be considered before new projects. Annual budget estimates for ongoing projects are first prepared by the line agencies, discussed with the budgeting department, and then approved by the Development Budget Coordination Committee (DBCC) and included in the published Budget Priorities Framework (BPF). The allocation of new spending is discussed later during new projects (Tier 2) hearings. Outlays are appropriated on an annual basis, with multiyear obligation authority for new projects and multiyear commitments included in the budget documentation. However, information on total project costs is not included in the budget documentation. Virement from capital to current spending within a project or program is allowed with the approval of the Department of Budget and Management (DBM).

In effect, capital investments are generally protected during project implementation. The two-tier budgeting approach protects funding for ongoing projects in the annual budget and over the medium term. Multiyear contracts are allowed and authorized by DBM. For projects of one-year duration, it may be difficult to protect the investment with appropriations on a cash basis if early procurement cannot be done in a timely manner. Insignificant amounts of in-year transfers of appropriation from capital to current spending have taken place with the approval of DBM.

Source: Budget law, staff assessment.

funding needs. If it is not possible to estimate the level of funding compared with needs, high effectiveness requires that there are no examples of major projects not receiving sufficient funding. Box 6.8 describes how capital investments are effectively protected in the Philippines.

USEFUL DATA SERIES

Data	Questions to Address
The share of funding for new projects versus ongoing projects in the annual budget, compared with assessed funding needs for the ongoing projects	How effective are the provisions to prioritize ongoing spending?
Average delays in implementation of major projects in budget	Is funding sufficient to ensure efficient project implementation or are there indications of long implementation times caused by funding constraints?
Reference to data on project delays, noted in Dimension 13.a	Are project delays related to funding shortfalls for ongoing projects?

Institution 9: Maintenance Funding

Are routine maintenance and major improvements receiving adequate funding?

Infrastructure cannot deliver the benefits promised in its design if it is not maintained properly. This institution focuses on whether maintenance needs are known, and how these maintenance needs are reflected in the budget and in planning.

- The first dimensions focus on the existence of methodology for determining the need for routine maintenance. For practical purposes, routine maintenance is maintenance funded in the operating budget.
- The second focuses on the existence of methodology for determining the need for capital maintenance (major repairs and reconstruction). For practical purposes capital maintenance is maintenance funded in the capital budget.
- The third dimension focuses on the availability of information to determine how much funding is included in national or sectoral plans, and allocated in the budget, to meet maintenance needs.

Dimension 9.a: Is there a standard methodology for estimating routine maintenance needs and budget funding?

QUESTIONNAIRE

Low	There is no standard methodology for determining the needs for routine maintenance.
Medium	There is a standard methodology for determining the needs for routine maintenance and its cost.
High	There is a standard methodology for determining the needs for routine maintenance and its cost, and the appropriate amounts are generally allocated in the budget.

DEFINITION OF KEY TERMS

Term	Definition
Standard methodology	Methods, rules, or procedures that consistently guide the actions of persons or organizational units. Must be written and issued or designated by an appropriate government body.
Routine maintenance	Typically, cosmetic and preventive maintenance that is performed regularly to keep an asset operating according to its design. Funding needs are usually calculated using the age and number of assets in an asset class, not project by project. In other words, budgeting for routine maintenance can be estimated with a formula, rather than on the basis of asset-by-asset inspection. Maintenance funded through the operating budget is usually routine maintenance. See GFSM 2014 paragraph 8.25–8.27.
Generally allocated	Allocated within an acceptable range over time.

INSTITUTIONAL DESIGN

The aim of this dimension is to determine if there are methodologies to assure that the funding needs for routine maintenance are known. This is essential information to know if infrastructure asset values and service levels are to be retained over time.

- A low score on this dimension implies that there are no standardized methodologies for assessing current maintenance needs. Maintenance planning and allocations will then often be based on mechanical approaches, such as continuing the funding levels from last year's budget. In some cases, maintenance allocations might be residual, reflecting what remains within the overall budget ceiling after, higher-priority programs have received their allocations.

- A medium score on institutional design indicates that there are standard methodologies used for assessing maintenance needs. Standard methodologies will often vary based on type of asset to be maintained, and standard methodologies may not be developed for small asset classes. The methodology should describe the asset class to which it should be applied. For the purpose of this dimension, standard methodologies for routine maintenance exist if they address at least buildings and roads and are consistently applied to those asset classes.
- A high score on design implies that standard methodologies exist and that there is a formal requirement that budget submissions are based on these methodologies. The responsible ministries and agencies are required to provide an assessment of maintenance needs based on the relevant methodologies when submitting their budget proposals to the MoF. On the other hand, the MoF will be expected to prioritize the funding of these maintenance needs within the available fiscal envelopes.

IMPORTANT DOCUMENTS

Documents	Uses
Regulations regarding maintenance of infrastructure assets	Assess overall requirements for current maintenance
Maintenance guidelines—general and for main asset classes	Assess detailed methodologies for current maintenance

EFFECTIVENESS

It is difficult to know the appropriate amount of funding without a standard methodology. Countries often use ad hoc approaches and rules of thumb for assessing maintenance needs and allocating resources to maintenance. Without a consistent methodology, it is not possible to determine whether the priorities and funding needs estimated through these ad hoc approaches are fully appropriate and adequate.

However, maintenance funding levels compared with asset replacement values do provide a rough indicator for the effectiveness of ad hoc maintenance approaches. Annual maintenance cost needs vary with assets classes, but a minimum level across several different asset classes is at least in the range of 2–3 percent of replacement values, and often more. If there are data available for actual maintenance levels compared with asset replacement values for main asset classes, effectiveness can to some extent be assessed, even in the absence of systematic methodologies. In the absence of comprehensive data, the assessment should be based on maintenance of buildings and roads, which usually are important government assets in all countries.

In the absence of comprehensive asset registers and balance sheets, asset replacement values can be estimated from standard construction costs. Table 6.1 provides an overview of average costs for road construction in different countries, taken from an extensive international study. These can be used as a basis for discussion with relevant country authorities about asset replacement values and maintenance requirements in their country. Most countries will have some information on the volume of assets that can be used for this discussion (for example, square meters of building, kilometers of roads).

- *Low effectiveness* indicates that maintenance levels are clearly inadequate to retain asset values. If standard methodologies are systematically used, actual maintenance allocations that only provide a small share of estimated needs would imply a low score on effectiveness.
- *Medium effectiveness* indicates that maintenance levels are better matched to the funding needs to retain asset values. If standard methodologies are systematically used, actual maintenance allocations of a significant share of estimated needs would imply a medium score on effectiveness.
- *High effectiveness* indicates that maintenance levels are clearly adequate to retain asset values. If standard methodologies are systematically used, actual maintenance allocations should be in line with estimated needs. This requires that there is a standard methodology for assessing maintenance needs, as indicated by a medium

Table 6.1. Standard Construction and Maintenance Costs for Roads, Various Countries
(Thousands of US dollars per kilometer)

	N	Mean	Minimum	Maximum
Construction				
New 6-lane expressway	1	5,571	5,571	5,571
New 4-lane expressway	65	2,839	937	7,810
New 4-lane highway	11	2,196	660	4,561
New 6-lane highway	2	1,990	1,289	2,691
Widening and reconstruction	108	874	178	6,533
Widening	138	843	9	5,786
New 2-lane highway	68	750	22	1,986
Partial widening and reconstruction	117	261	8	682
Upgrading	360	250	4	941
Partial widening	12	138	67	168
New 1-lane road	7	92	58	168
Total (Average)	889	678	4	7,810
Preservation				
Concrete pavement restoration	4	539	69	788
Reconstruction	745	220	2	2,616
Strengthening	422	139	27	554
Asphalt mix resurfacing	458	65	12	211
Surface treatment resurfacing	230	25	3	17
Gravel resurfacing	275	18	2	113
Bituminous pavement preventive treatment	47	7	1	31
Unsealed preventive treatment	101	4	2	8
Routine maintenance	119	2	0.3	9
Grading	23	0.5	0.1	3
Total (average)	2,424	110	0.1	2,616

Source: Collier, Kirchberger, and Söderbom 2015.

Note: Updated information is available from the Road Cost Knowledge System at https://www.doingbusiness.org/en/reports/thematic-reports/road-costs-knowledge-system.

or high score on institutional design. Box 6.9 provides an example of maintenance practices in Estonia. Because maintenance is based on standard methodologies and funding is broadly in line with the assessed needs, Estonia had a high score on both institutional design and effectiveness for this dimension in the 2019 PIMA.

Box 6.9. Maintenance Practices in Estonia

In Estonia, routine and capital maintenance needs are determined on the basis of sector-appropriate methodologies and systematic physical monitoring of the infrastructure (Table 6.9.1). For example, the Road Administration maintains a database of 16,600 km of national roads, and physical road condition inspections as well as electronic testing methods are conducted at regular intervals to determine maintenance requirements. Planned service levels have been set, and each road has been categorized accordingly. Estimates are comprehensive and include reconstruction and maintenance of road surfaces, lighting, pedestrian walkways and bridges, reconstruction of hazardous areas, and other items, such as road furniture and road markings. All costs for routine and capital maintenance are calculated per item as per object type in a standardized template.

Maintenance of public assets is seen as a high priority and prioritized over new construction. Capital project allocations will be reduced, if the capital maintenance needs cannot be met. Seventeen road maintenance contracts have been awarded to conduct routine maintenance on the road network to maintain service levels. For Estonian Railways, five out of seven major projects are dedicated to maintenance and renovations, to preserve the network and to modernize the network control system.

Table 6.9.1. Budget Allocation for Road Maintenance in Estonia
(Thousands of euros)

Funding	2018	2019	2020	2021	2022
State funding	242,784	253,259	249,260	209,260	209,260
External funding	45,821	46,750	65,610	50,000	10,000
Total funding	288,605	300,009	314,870	259,260	219,260
Road network preservation	159,451	143,349	148,364	140,248	163,059
Development of road network	101,949	128,956	138,152	90,131	26,782
Administration	27,205	27,704	28,354	28,882	29,419
Road management works	288,605	300,009	314,870	259,260	219,260
Road maintenance cost as percentage of total budget	55.2	47.8	47.1	54.1	74.4

Source: Estonia PIMA 2019.

USEFUL DATA SERIES

Data	Questions to Address
Estimated funding need for routine maintenance, based on standard methodology Funding for routine maintenance included in budgets	How do funding needs compare with actual allocations?
Estimates for asset replacement values for main asset classes	What is the ratio of maintenance funding levels compared with asset replacement values (simplified indicator of effectiveness)?

Dimension 9.b: Is there a standard methodology for determining major improvements (for example renovations, reconstructions, enlargements) to existing assets, and are they included in national and sectoral investment plans?

QUESTIONNAIRE

Low	There is no standard methodology for determining major improvements, and they are not included in national or sectoral plans.
Medium	There is a standard methodology for determining major improvements, but they are not included in national or sectoral plans.
High	There is a standard methodology for determining major improvements, and they are included in national or sectoral plans.

DEFINITIONS OF KEY TERMS

Term	Definition
Standard methodology	See definition in Dimension 9.a.
Major improvement	Capital maintenance (renovations, reconstructions, and enlargements) to existing assets that increase their productive capacity, extend their service lives, or both. Maintenance funded through the capital budget will generally be considered capital maintenance. See GFSM 2014 paragraph 8.25–8.27.
National or sectoral plans	See Dimension 2.a.

INSTITUTIONAL DESIGN

The aim of this dimension is to determine whether the funding needs for capital maintenance are assessed and funding for capital maintenance is evaluated against other project proposals in national or sectoral plans. Capital maintenance is often necessary to enable an asset to reach its planned life. Without periodic rehabilitation, for instance, every 10 years, the asset may have to be phased out earlier than planned. Capital maintenance also includes activities to enable an asset to extend its life and to increase its capacity. This is often referred to as reconstruction. Rehabilitation and reconstruction activities typically are funded through the capital budget and are collectively referred to as capital maintenance.

- A low score implies that there is no systematic use of standardized methodologies for assessing capital maintenance needs. There may be some ad hoc assessment of rehabilitation and reconstruction needs, but often there is no analysis at all. When the needs become sufficiently pressing, rehabilitation or reconstruction of key assets, such as major roads, may be defined as separate, new projects and funded as any other new project.
- A medium score indicates that there is a standard methodology that is used for assessing capital maintenance needs, but these assessments are not reflected in national or sectoral plans. Methodologies will differ across sectors and may not cover all asset classes. For the purpose of this score, there should be standard methodologies for capital maintenance at least for roads and buildings.
- A high score implies that standard methodologies exist and that the capital maintenance needs are fully reflected in national and sectoral plans. It is preferable that capital maintenance projects are included in national or sector plans and are subject to appraisal.

IMPORTANT DOCUMENTS

Documents	Uses
Regulations regarding maintenance of infrastructure assets	Assess overall requirements for capital maintenance
Maintenance guidelines—general and for main asset classes	Determine which methodologies are used to assess capital maintenance needs
National and sectoral plans	Identify how capital maintenance projects are reflected in national and sectoral plans

EFFECTIVENESS

The effectiveness of this dimension depends on whether the assessed needs for capital maintenance are reflected in budget allocations. The needs for capital maintenance should be reflected in national and sectoral plans, but the actual prioritization will be determined during budget selection. This assessment is difficult when there are no standardized methodologies or there is a lack of data on capital stocks. Average annual allocations for capital maintenance vary with asset classes, but a minimum level across several different asset classes are at least in the range of 2–3 percent of replacement values, and often more (see Box 6.10 for South Africa's guidelines for adequate maintenance of public infrastructure). See the discussion under Dimension 9.a for suggestions on how to make rough estimates for capital replacement values.

- *Low effectiveness* indicates that capital maintenance levels are clearly inadequate to retain asset values. If actual capital maintenance allocations only provide a small share of estimated needs, effectiveness is low.

Box 6.10. Maintenance Guidelines for Public Infrastructure in South Africa

Many countries have established guidelines and standards for maintenance of public infrastructure, to ensure that maintenance levels are sufficient to avoid deterioration of public asset values. In South Africa, the cabinet approved the National Infrastructure Maintenance Strategy in 2007. The Department of Public Works and Infrastructure has a lead role in implementing the strategy, which includes indicative budget requirements for maintenance of different types of assets (Table 6.10.1).

Table 6.10.1. South Africa Maintenance Budget Guidelines

Type of Infrastructure	Average Annual Maintenance Budget as a Percentage of Replacement Cost	Replacement or Major Rehabilitation Over and Above the Annual Maintenance Budget Requiring Specific Capital Budget	
		Every 20–30 years	Every 30–50 years
Bulk water storage	4–8		×
Water treatment works	4–8	×	
Water reservoirs	2–3	×	
Water reticulation	4–8	×	
Sewage treatment works	4–8	×	
Sewer reticulation	4–8	×	
Roads and storm water	5–10	×	
Electricity reticulation	10–15	×	
Public buildings	4–6		×
Hospitals	5–8	×	
Schools	4–6		×
Electricity generation	5–8		×
Electricity reticulation	10–15	×	

Source: Construction Industry Development Board 2021.

- *Medium effectiveness* indicates that capital maintenance levels are better matched to the funding needs to retain asset values. If actual allocations for capital maintenance provide a significant share of estimated needs, this would imply a medium score on effectiveness.
- *High effectiveness* indicates that capital maintenance levels are clearly adequate to retain asset values. Actual maintenance allocations should be in line with estimated needs. This requires that there is a standard methodology for assessing maintenance needs, as indicated by a medium or high score on institutional design.

USEFUL DATA SERIES

Data	Questions to Address
Estimated funding need for capital maintenance, based on standard methodology Funding estimates for capital maintenance in national or sectoral plans	How do funding needs based on standard methodologies compare with estimates included in national and sectoral plans?
Funding for capital maintenance in budgets	How do capital maintenance funding needs compare with actual allocations?

Dimension 9.c: Can expenditures relating to routine maintenance and major improvements be identified in the budget?

QUESTIONNAIRE

Low	Routine maintenance and major improvements are not systematically identified in the budget.
Medium	Routine maintenance and major improvements are systematically identified in the budget.
High	Routine maintenance and major improvements are systematically identified in the budget and are reported.

DEFINITIONS OF KEY TERMS

Term	Definition
Routine maintenance	See Dimension 9.a.
Major improvement	See Dimension 9.b.
Reported	Approved budget allocations and actual spending are included in standard reports as part of the budget documents.

INSTITUTIONAL DESIGN

The aim of this dimension is to determine whether budget allocations and spending on maintenance are systematically disclosed in budget documents in a consistent manner over time. This information is necessary for the legislature to have a view on the medium- and long-term adequacy of maintenance allocations.

- A low score indicates that it is not possible to identify either routine maintenance or capital maintenance in the budget documents. In some cases, maintenance is combined with other spending items and does not appear as a separate category in the budget classification. In other cases, maintenance might be identified under some ministries or programs but not under others, because there is no common budget classification for this type of expenditure. Maintenance might appear at different levels of the economic or program classification.
- A medium score implies that maintenance funding can be identified using either the budget classification or the analytical information regularly provided in budget documentation. The program or activity classification, if available, is best suited to identifying routine maintenance. If at least some routine maintenance is carried out by government employees, the economic classification should not be used because such maintenance requires spending on wages, equipment, and material. Grouping routine maintenance expenditures into one economic classification item distorts reporting on other economic classification items. However,

capital maintenance can be identified using the economic classification. Capital projects are sometimes considered activities, if that classification exists.

- For a high score, both routine maintenance and capital maintenance must be systematically identified and regularly reported. At a minimum, there must be standard reports that show the approved budget allocations and the actual spending for routine and capital maintenance by ministry or agency responsible for it. Preferably, reports should aggregate such spending to show total spending on current maintenance and capital maintenance in the budget. Additional detail, such as maintenance funding by program or by asset class, is desirable. Budget documentation frequently includes analysis of the capital budget by type and geographic location of projects, and this could also include capital maintenance.

IMPORTANT DOCUMENTS

Documents	Uses
Budget classification	Analyze how maintenance is reflected in the budget classification
Budget documents	Assess disclosure and reporting of maintenance budgets and spending

EFFECTIVENESS

The effectiveness of this dimension should reflect what share of maintenance spending is transparently disclosed and reported in budget documents. In many cases, maintenance spending is identified in the budget but not systematically, and there is no explicit reporting. To get a picture of overall maintenance spending it may be necessary to compile data from different parts of the detailed budget through manual, ad hoc methods. There may also be uncertainty about whether all maintenance data are fully reflected. In these cases, effectiveness may be low even if the design score is medium. The assessment could focus on maintenance of buildings and roads, which presumably would constitute a significant share.

The effectiveness also depends on whether maintenance data are used systematically for analysis and for decision-making. If maintenance reporting is merely a technical routine exercise with no analysis and no follow-up, effectiveness may be only medium even if the design score is high. If external audits regularly address needs and spending on maintenance, this does not meet the intent of this dimension. The auditor general is usually independent, and the nature and subject of audits can change at any time. Thus, audits do not systematically identify maintenance budgets or expenditures.

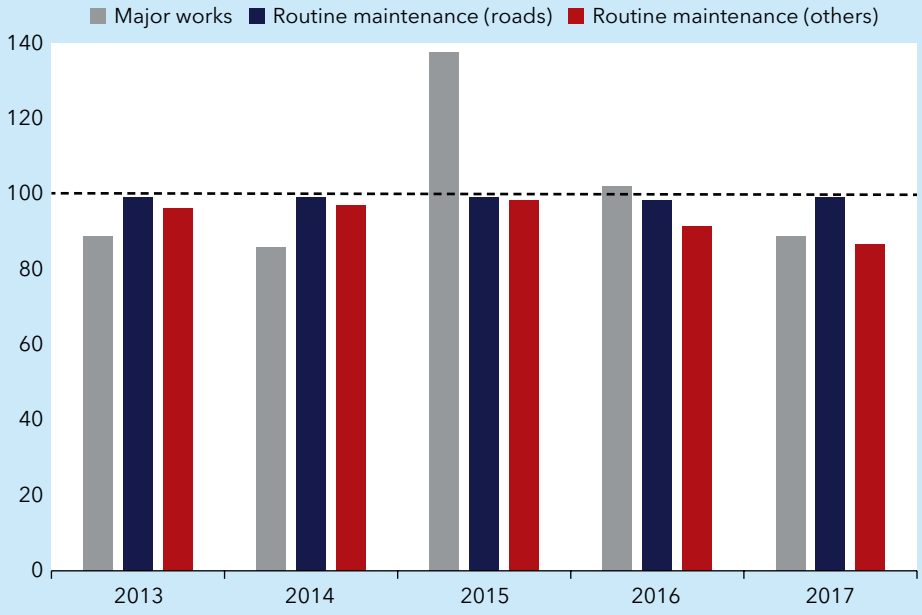
- *Low effectiveness* indicates that maintenance data are not transparent and not actively used for analysis or decisions. Only part of estimated maintenance funding is identified in the budget. There are no specific examples that the data are used during planning or budgeting.
- *Medium effectiveness* indicates that maintenance data are reasonably transparent and there are some examples of analysis or decisions based on these data. Most estimated maintenance funding is identified in the budget. Budget documents could include analysis that has led to adjustments in maintenance funding.
- *High effectiveness* indicates that maintenance data are transparent and used actively and systematically for analysis and decision-making. Most estimated maintenance funding is identified in the budget and there are regular published reports of budget allocations compared with actual spending, by ministry. Budget documents may also provide an overview of actual maintenance spending compared with target levels and outline how the government will bridge this gap. Box 6.11 illustrates the transparent reporting of maintenance expenditures in Armenia's budget documents.

Box 6.11. Budget Visibility of Maintenance Spending in Armenia

Expenditures related to routine maintenance and major works are visible in the state budget and consistent with GFSM 2014 definitions on page 124, paragraph 6.45 ("goods and services consumed for the ordinary maintenance and repair of fixed assets constitute use of goods and services. However, major renovations, reconstructions, or enlargements of exiting fixed assets are recorded as an acquisition of fixed assets."). There is a budget line for current repairs and maintenance under the goods and services category and a separate line for the capital repairs of buildings and construction under nonfinancial assets. As part of the MTEF process, line ministries submit project details that specify allocations to these budget lines. It is possible to assess execution of these lines in the quarterly and annual budget execution reports. The same report also contains an annex on the execution for routine road maintenance.

Maintenance spending has been well protected during budget execution. Figure 6.11.1 illustrates that all three major components of the maintenance budget have maintained significant levels of execution, suggesting these budget lines are not vulnerable to in-year cuts. The execution rate for capital maintenance (major works) has been the most volatile, with an execution rate of 86 to 89 percent for three of the past five years but an execution rate well over 100 percent in one year. Routine road maintenance averaged 99 percent and routine maintenance for all other sectors averaged an execution rate of 94 percent over the five-year period.

Figure 6.11.1. Budget Execution Rates for Maintenance in Armenia, 2013–17
(Percent)



Sources: Armenia budget implementation reports; and IMF staff estimates.

USEFUL DATA SERIES

Data	Questions to Address
Summary table for maintenance data reported in budget documents	How transparently are maintenance data reported?
Examples of analysis and subsequent decisions on revised maintenance approaches or funding	How are maintenance data used for analysis and decision-making?

Institution 10: Project Selection

Are there institutions and procedures in place to guide project selection?

Project selection is in its nature a separate process from planning and appraising projects, although many real-life public investment systems fail to recognize this distinction. Plans commonly offer more projects than can be funded in a single year or a medium-term budget timeframe, and project appraisals typically address the qualities of an individual project without ranking it relative to other projects. Project selection involves picking and choosing projects from a plan or from a pool of appraised projects, with due consideration to relevant economic, social, environmental, and political conditions. This is not only a technical process; it involves fundamental political considerations, for instance, regarding the role of the state and future development paths (Beetsma and Van der Ploeg 2007). Selection criteria address how to pick and choose in this context. This institution covers the following issues:

The first dimension addresses the review of major projects before their inclusion in the budget. The unit that reviews projects should be objective—meaning it is not the organization that developed the project proposal. In addition, projects should be reviewed centrally to reap the benefits of comprehensiveness.

Published selection criteria and a clearly defined selection process, addressed in the second dimension, increase the objectivity of project selection. These also make the work of line ministries more efficient by focusing their attention during budget preparation on projects that are more likely to be selected for funding.

The third dimension focuses on the existence of a pipeline of eligible projects. Projects should be selected only from projects already appraised.

Dimension 10.a: Does the government undertake a central review of major project appraisals before deciding to include projects in the budget?

QUESTIONNAIRE

Low	Major projects (including those funded by donors or PPPs) are not reviewed by a central ministry before inclusion in the budget.
Medium	Major projects (including those funded by donors or PPPs) are reviewed by a central ministry before inclusion in the budget.
High	All major projects (including those funded by donors or PPPs) are scrutinized by a central ministry, with input from an independent agency or experts before inclusion in the budget.

DEFINITIONS OF KEY TERMS

Term	Definition
Major projects	See the Glossary.
Central ministry	Carries out a function that potentially affects many or substantially all ministries. Typical examples are a ministry of finance, a ministry of economy, and a planning ministry or agency. Some countries establish specialized agencies for public investment oversight and support.
Scrutinize	Same meaning as "review."
Input	Submission of data, comments, analysis, conclusions, or recommendations. This does not imply approval.
Independent	See the Glossary.

INSTITUTIONAL DESIGN

The aim of this dimension is to determine whether there is a required process for reviewing major projects objectively before their selection for inclusion in the budget proposal. As mentioned earlier, the selection process is separate from the appraisal process. Institution 4 focuses on filtering out projects with poor or negative value, whereas institution 10 focuses on prioritizing projects among those previously appraised. Still, there are close links between the two and the assessments of institutions 4 and 10 must be closely coordinated, to ensure consistency.

- A low score on this dimension means that there is no formally required central review process for major capital investment projects before they are considered for inclusion in the budget. This will often mean that projects are selected and submitted by the sector ministry without systematic involvement from other parts of the government. The sector ministry will generally have strong incentives to give as positive a picture of the project as possible, and projects that have not been subject to independent review will often have optimistic assumptions regarding costs, benefits, and timetables.
- A medium score indicates that there is a formally required central review process for major projects. This review will often be undertaken by a specialized department in the MoF or the Ministry of Planning, or by a specialized agency. These entities will be more objective than the ministry promoting the project and have more realistic expectations for the project. There should be a thorough review of the key features of the project, including strategic alignment, project concept, costs, benefits, and implementation plans. The review should be conducted before budget consideration—the general budget process will usually not include a project review of this type.
- A high score implies that there is a formal requirement that major projects are reviewed and that this review include inputs from an independent agency or independent experts. Some countries have set specialized agencies for this purpose, while others rely on independent expertise from technical universities or from private consultants. The use of independent experts adds another layer of objective scrutiny and further promotes the realism of the project proposals.

The review process will often lead to projects being returned to the promoting ministry for further development. The reviewers may raise specific questions regarding the strategic alignment of the project with government priorities, whether the specific concept that has been proposed is best suited to meet project objectives, and whether project costs, benefits, and implementation plans are realistic and viable. These questions must be addressed before the project can be resubmitted for central review.

The operation of a special mega-project unit, separate from the customary budget office, will usually not constitute central review and scrutiny. This dimension assumes that line ministries propose projects that are reviewed centrally. Central review, then, suggests that a disinterested party conducts the review, and that the review of a single project is made in light of all projects being proposed. If a mega-project unit develops mega-projects and reviews only mega-projects, then it does not review projects centrally for the purposes of this dimension.

IMPORTANT DOCUMENTS

Documents	Uses
Regulations for project selection and approval	Verify the existence of required central review of project proposals
Guidelines for project review	Assess the stringency and consistency of methodologies for central project review
Project review documents	Assess the rigor of a representative sample of project reviews

EFFECTIVENESS

The assessment of effectiveness of this dimension should focus on how well formal review requirements are complied with in practice and the effects of these reviews. The assessment should be based on a representative sample of documents from the major project review process. These should include examples of the initial project proposals, the documents produced by the central ministry conducting the review, inputs from independent experts, and e adjustments to initial project proposals. Project selection effectiveness requires a review process that translates into recommendations for improvement, with some projects returned for further development. Consistent and systematic central review of major projects should foster a culture of rigor in sector ministries, and therefore the number of rejected projects would be expected to be reduced over time.

A high degree of external financing of capital projects will usually not add to the effectiveness of this dimension. The focus is on the government's review process. Development partners and international financial institutions cannot be considered as independent in the context of this institution. They will typically be involved in promoting specific projects that are aligned with their country or business strategies and will often have interests similar to the ministries promoting the projects. Some international financial institutions have rigorous internal processes that include independent scrutiny, but this is not always the case. Many development partners and international financial institutions do not have procedures for independent scrutiny of projects.

- *Low effectiveness* implies that there is no central review of major project proposals or that it is formalistic and cursory, and few projects are rejected or returned for further development. Documentation of the review process is missing or limited. The number of projects rejected or returned is low.
- *Medium effectiveness* implies that central review has a reasonable level of rigor, and some major projects are rejected and returned. The review process is documented and some projects are rejected or returned.
- *High effectiveness* implies that there is rigorous central review of major project proposals and proposals are regularly rejected or returned for further development. In this case, the rigor of the review process should be clearly documented in project review documents and at least 10 percent of the reviews should include independent inputs. It would be expected that several project proposals are rejected or returned for further development. Box 6.12 describes the central review process in Ireland.

USEFUL DATA SERIES

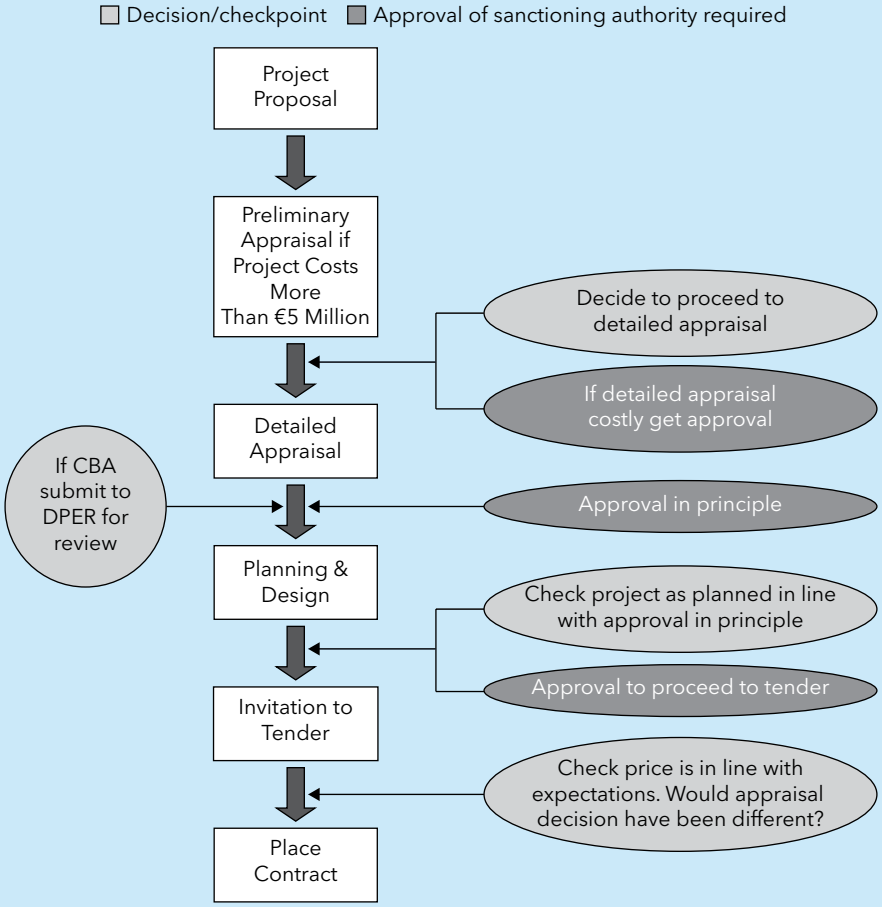
Data	Questions to Address
Number and value of projects submitted for central review Number and value of projects rejected or returned for resubmission (with examples of central review reports recommending further development)	What is the share of project proposals that are rejected or returned? Do central review reports include relevant recommendations for further development of the project?
Number of project reviews that involve external independent inputs	What is the share of project proposals that benefit from external independent inputs?

Box 6.12. Central Review of Project Appraisals in Ireland

The appraisals of all major projects are subject to review by the Irish Department of Public Expenditure and Reform (DPER) (Figure 6.12.1), with input from external experts on an "as-needed" basis. The Public Spending Code requires the sponsoring agency to seek the views of the DPER before the sanctioning authority makes its official "decision in principle" to proceed with the project. The sponsoring agency sends the appraisal to the relevant vote section in the DPER, who then confers with the in-house Irish Government Economic and Evaluation Service (IGEES) team, with whom the department's project analysis capability is situated. Depending on the nature of the project, the DPER will also draw on expert advice from the National Development Finance Agency (NDFA) and New Economy and Recovery Authority (NewERA), when necessary.

There is no formal obligation for the sponsoring agency to take account of the DPER's views, but it is implicitly understood that not doing so would be detrimental to future requests for funding. As a kind of sanction, the Public Spending Code allows for the DPER to publish its review on the department website, although this lever seems to be rarely used, if at all. The review function is reinforced by the secondment of IGEES staff to departments acting as sanctioning authorities in investment-heavy sectors. These teams—the Economic and Financial Evaluation Unit in the Department of Transport, Tourism and Sport (DTTaS) being the best example—review appraisals using the same criteria as central IGEES staff, thus ensuring consistency of approach and greater objectivity in the sanctioning authorities' decision making.

Figure 6.12.1. Appraisal and Selection Process in Ireland



Source: Ireland PIMA 2017.
Note: CBA = cost-benefit analysis.

Dimension 10.b: Does the government publish and adhere to standard criteria, and stipulate a required process for project selection?

QUESTIONNAIRE

Low	There are no published criteria or a required process for project selection.
Medium	There are published criteria for project selection, but projects can be selected without going through the required process.
High	There are published criteria for project selection, and generally projects are selected through the required process.

DEFINITION OF KEY TERMS

Term	Definition
Publish	See glossary
Required process	A process defined in law, regulation, or instructions governing the budget process. "Process" implies that there are tasks assigned to organization units, with specified outputs, that must be carried out in a specific sequence.
Project selection	The government's decision to implement a specific investment project.

INSTITUTIONAL DESIGN

The aim of this dimension is to verify that there are specific criteria and a well-defined selection process to ensure that projects are selected in an objective and comprehensive manner. Project selection may be done before the budget decision, for instance, through a separate cabinet decision or as part of the budget decision process. The institution focuses on the *government's* decision regarding the project, although this may be subject to subsequent endorsement by the legislature.

- With a low score, there are no published, specific criteria for project selection and the project selection process is not explicitly defined in law, regulation, or instructions. In this case, projects are often selected through ad hoc methods and approaches. Project discussions may include references to strategic priorities and goals, but there are no detailed criteria for assessing whether the project contributes to these. The actual selection is often done implicitly through the budget process, without any attention to project benefits and the realism of implementation plans.
- A medium score implies that there are published selection criteria, but that these are general and do not provide clear guidance on which projects should be selected or not. It is common that countries require projects to be consistent with national plans and priorities. However, these documents are often general and do not necessarily provide clear guidance. If all or most projects are deemed to be consistent with the selection criteria, these are not precise. The legal framework may include some exemptions from the standard process and criteria, for instance, for priority projects or emergency projects.
- A high score indicates a stringent selection process defined in law or regulation: there are published selection criteria, and these provide clear guidance on which projects are to be selected. There can be more than one required process. For example, a separate process may be required for mega-projects. The main issue is that there is a defined process for selecting all projects for the budget and that the same selection criteria are applied.

IMPORTANT DOCUMENTS

Documents	Uses
Regulations for project selection and approval	Verify the existence and stringency of project selection process and criteria
Project review documents	Assess the application of project selection criteria in practice

EFFECTIVENESS

The effectiveness assessment should include a discussion of the actual stringency of the selection process and criteria. If projects are selected outside the required process and without applying the defined selection criteria, effectiveness is limited.

- *Low effectiveness* implies that actual project selection is not significantly affected by a required selection process and defined selection criteria. These may be missing completely. Alternatively, if there is a required process and criteria but many projects are selected outside the formally required process, effectiveness is low. In some countries, it is not uncommon that some projects are presented and approved at cabinet meetings, without any prior analysis or review by the administration. Unfortunately, these may be large and complex mega-projects, where the needs for stringent project preparation, appraisal, and selection are particularly high.
- *Medium effectiveness* would indicate that the majority of projects (by value) are selected in accordance with the prescribed process and criteria. In many countries, there are dual processes, whereby some projects go through the prescribed procedures and others are selected through ad hoc approaches.
- *High effectiveness* requires that the entire capital budget is selected in accordance with the specified criteria and through the required process. Box 6.13 describes the well-regulated project selection process in Mexico.

USEFUL DATA SERIES

Data	Questions to Address
Number and value of projects that were selected outside published criteria and outside the prescribed selection process	Which share of projects is selected in accordance with prescribed criteria?
Number and value of projects that have been rejected because they did not meet the defined selection criteria	How stringently is project selection criteria applied? Total number and value of projects that have been analyzed using the defined selection criteria/ needed to determine the share of projects selected outside process or rejected.
Total number and value of projects that have been analyzed using the defined selection criteria.	Needed to determine the share of projects selected outside process or rejected.

Box 6.13. Project Selection Process and Criteria in Mexico

The process for selection of public investment projects for the federal budget is governed by Article 34 of the Federal Budget and Fiscal Responsibility Law. The law is supplemented by project selection guidelines. Following the criteria set out in the law, selection is carried out in two phases; the first-level prioritization is for what is called "irreductible investment" (for example, pluri-annual projects, ongoing projects, and maintenance for productive infrastructure, followed by administrative acquisitions and maintenance, and then new projects).

The second level of prioritization (primarily for new or reformulated projects) uses the following criteria: (1) progress on feasibility studies; (2) net present value; (3) regional effects; (4) extensiveness of beneficiaries; and (5) support to the Green Budget initiative. Each project is ranked following a valuation of all projects based on weights assigned to each of these five criteria. The project ranking relative to the total expenditure budget ceiling generates the list of selected projects. This list of projects is reviewed and formally approved

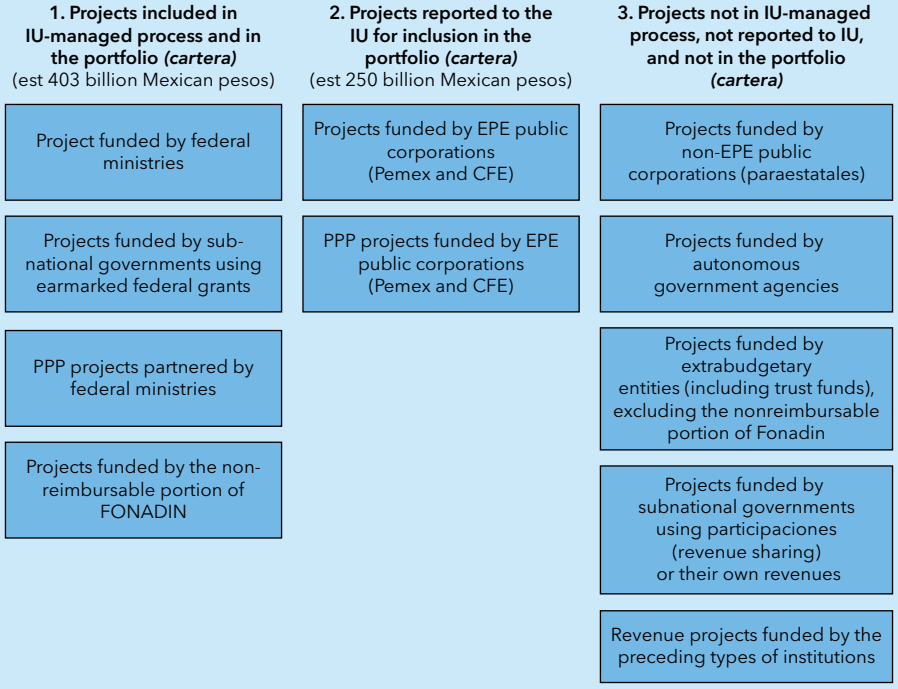
Box 6.13 *continues on next page*

Box 6.13 (*continued*)

by the Inter-ministerial Commission for Public Expenditure, Financing and Disincorporation (Comisión Intersecretarial de Gasto Público Financiamiento y Desincorporación).

The selection of projects for inclusion in the budget follows a clear, criteria-based, and consistent process (Figure 6.13.1). This process is applied to all ministry submitted projects approved by the Ministry of Finance Investment Unit (IU) and registered in the project portfolio *(cartera)*. Additional projects of up to 10 percent may be proposed by Congress for inclusion in the budget. These projects must be registered in the *cartera* and thus go through the same IU review and selection process required for ministry-submitted projects, including socioeconomic and financial analyses. In principle, the IU can reject poor projects proposed by Congress. Active project selection by the IU is limited to projects funded by the federal budget; other projects funded by nonbudgetary sources (for example, EPE public corporations such as Pemex or CFE, or extrabudgetary sources and from some trust funds are not part of the selection process.

Figure 6.13.1. Types of Projects Covered by the Mexican Government's Project Selection Process



Source: Mexico PIMA 2019.

Note: CFE = Federal Electricity Commission; EPE = Empresas Productivas del Estado (category of public corporation, such as PEMEX and CFE); FONADIN = Fondo Nacional de Infraestructura (federal infrastructure fund); IU = Ministry of Finance Investment Unit; Pemex = Mexican Petroleum.

Dimension 10.c: Does the government maintain a pipeline of appraised investment projects for inclusion in the annual budget?

QUESTIONNAIRE

Low	The government does not maintain a pipeline of appraised investment projects.
Medium	The government maintains a pipeline of appraised investment projects, but other projects may be selected for financing through the annual budget.
High	The government maintains a comprehensive *pipeline* of appraised investment projects, which is used to select projects for inclusion in the annual budget, and over the medium term.

DEFINITIONS OF KEY TERMS

Term	Definition
Pipeline of appraised investment projects	A group of projects that have been appraised and through the appraisal have been judged to be eligible for selection for the budget. The pipeline can be an unsequenced list of projects or it can be a list of projects sequenced by year.
Comprehensive pipeline	A pipeline is comprehensive if it includes enough projects, across all types of projects and all financing sources, to fully absorb estimated aggregate funding for the capital budget. Such a pipeline is continuously built and updated, not only to feed the coming budgetary space, but also to prepare for subsequent budgets.
Medium-term	See the Glossary.

INSTITUTIONAL DESIGN

The aim of this dimension is to determine if there is a pool of appraised projects, to which the selection criteria and process are applied. This pipeline or pool is important to facilitate efficient project selection.

- A low score indicates that there is no formal requirement for a pipeline of appraised investment projects. This may be because there is no pipeline at all, so that investment projects are not identified before the line ministries propose them, often during budget deliberations. Alternatively, there may be a pipeline of projects, but the projects in this pipeline have not been subject to appraisal. In both cases, there is a clear risk that projects are selected for implementation without having gone through the necessary preparation and appraisal.
- A medium score implies that there is a pipeline of appraised projects, but no formal requirement that projects be selected only from this pipeline. The pipeline exists and there is a mechanism in place to facilitate efficient selection from this pipeline, but there is no requirement that this mechanism is always applied.
- For a high score, there must be a comprehensive pipeline in place, and there is a formal requirement that this pipeline must be used to select previously appraised projects in the annual budget and in the medium term. The pipeline should encompass all funding modalities, including externally financed projects and PPPs. Several practices may meet the intent of the condition that the pipeline must be used to select projects in the medium term:
  - There is an MTEF and specific projects are shown for forward years, even on an indicative basis, or
  - There is an annual budget process and budget documents show for information projects expected to be funded for future years, or
  - There is a multiyear PIP wherein projects are scheduled by year and the total cost of projects for each year is constrained by forward estimates of aggregate funding available for the capital budget.

For the purpose of this dimension, projects in the pipeline must be appraised before selection. It is not sufficient if projects are appraised *afterward.* If projects are added by cabinet or the legislature and were not previously appraised, it is unlikely that an appraisal would be rigorous or the supplemental selection process objective and comprehensive.

The pipeline could include projects that have been subject to different levels of appraisal. It is common that appraisal guidelines differentiate between small, routine projects that may be subject to simplified appraisal procedures, and large, complex projects that are subject to comprehensive appraisal procedures. See institution 4 for a discussion on this.

IMPORTANT DOCUMENTS

Documents	Uses
Regulation for preparation of investment project pipeline (or similar)	Assess institutional design
Project pipeline document	Assess comprehensiveness and coverage of projects in the pipeline

EFFECTIVENESS

The effectiveness assessment should reflect how consistently projects are selected from the pipeline. If the design score is medium, then there may be projects selected from outside the pipeline. If this is common, then effectiveness is low. If it rarely or never happens, although it is allowed, then effectiveness could be assessed as being high:

- *Low effectiveness* indicates that many projects are selected from outside the pipeline.
- *Medium effectiveness* indicates that the majority of projects are selected from the pipeline.
- *High effectiveness* indicates that all projects are selected from the pipeline. Box 6.14 describes Chile's integrated project pipeline, which was probably the first fully operational system of this type in the world during the 1980s.

USEFUL DATA SERIES

Data	Questions to Address
Number and value of projects that have been appraised and are viewed as eligible for selection (i.e., a pipeline) Number and value of projects that were appraised and rejected as being inefficient and thus were not included in the project pipeline	What is the rigor and objectivity of the selection process?
Number and value of projects selected for implementation from the pipeline in past 5 years List of projects selected for implementation from outside the pipeline in past 5 years	What is the effectiveness of this dimension?

Box 6.14. Integrated Project Pipeline in Chile

Chile is a pioneer in the development of public investment management systems. The Chilean System of National Investment was developed during the 1980s and has been a model for similar systems in many countries. It includes a framework for identification and development of project proposals, with a database of projects that are available for funding decisions (Integrated Project Bank—BIP). The BIP is available online for all public institutions, and the public can access summary information about specific projects and programs.

Projects are subject to extensive analysis before being allowed to enter the BIP. Table 6.14.1 shows the value of projects in different sectors that were included in the project pipeline for each of the years 2008–11, as well as the percentage of proposals that were allowed to enter the pipeline each year (bottom line).

Table 6.14.1. Cost of Projects in Chile's Integrated Project Database, by Sector, 2008–11

(Million US dollars)

Sector	2008	2009	2010	2011
Water supply and sewerage	24.5	35.5	13.9	11.8
Communications	1.2	12.6	0.0	0.0
Defense and security	45.8	70.4	63.6	96.0
Sports	7.7	42.9	11.8	38.3
Education and culture	734.0	705.1	582.2	426.8
Energy	0.0	0.6	0.7	0.2
Industry, commerce, finance, and tourism	27.3	20.4	14.3	19.0
Justice	136.9	125.0	94.7	111.8
Mining	1.3	1.2	0.7	0.0
Multisectoral	150.8	140.4	256.6	466.7
Fishing	5.8	5.0	36.2	58.3
Health	95.7	196.3	201.8	205.7
Agricultural and forestry	38.2	29.4	36.9	16.1
Transport	164.9	199.3	182.0	462.1
Housing	85.6	74.9	22.1	7.0
Total	1,519.7	1,659.0	1,517.5	1,919.8
Percentage of approved initiatives	76.8%	74.6%	68.8%	65.4%

Source: Gómez-Lobo 2012.

7

Delivering Productive and Durable Public Assets

Timely and cost-effective implementation of public investment projects requires institutions that ensure projects are fully funded, transparently monitored, and effectively managed throughout their implementation. Procurement practices must be transparent and encourage competition, and funds must be made available to ensure timely capital budget execution. Project management and portfolio monitoring must contribute to effective implementation, identification, and resolution of implementation challenges, as well as systematic and continuous learning. Capital assets must be transparently and efficiently managed.

Institution 11: Procurement

Is procurement based on effective competition and subject to adequate oversight?

The procurement process aims to operationalize the key characteristics of a project as it was appraised and selected. The contract and choice of contractor establish, but do not finalize, estimates of (1) the cost of the project, (2) the schedule of contract implementation (which determines when the benefits from operating the facility begin), and (3) the quality of the physical structure (which determines, in part, the likelihood that the design function and life of the facility will be realized). The three dimensions of this institution cover the following topics:

The first dimension relates to the competitiveness, openness, and transparency of the tender process. In other words, whether the system encourages all qualified contractors to bid. If so, then the award is most likely made to the bidder who is able to deliver the most advantageous combination of cost and quality.

The second dimension requires that there is a system in place to ensure that procurement is monitored adequately. The monitoring arrangements for the procurement process should be established to determine whether the system is working according to legal requirements and obtaining the intended results.

The third dimension analyzes if the procurement complaints review process is conducted in a fair and timely manner. Complaints by bidders have the effect of monitoring the tender process from the perspective of a participant in the procurement system. The fairness and transparency of the complaints mechanism is an indicator of the quality of the procurement system.

This institution covers all central government procurement, including procurement of public-private partnerships (PPPs). If public corporation (PC) investments are included in budget documents and approved by the parliament, then they should also be covered by the assessment of this institution. In some countries, PCs follow the same procurement framework as central government even if they are not included in the budget, but this is not a requirement under this institution.

Dimension 11.a: Is the procurement process for major capital projects open and transparent?

QUESTIONNAIRE

Low	Few major projects are tendered in a competitive process, and the public has limited access to procurement information.
Medium	Many major projects are tendered in a competitive process, but the public has only limited access to procurement information.
High	Most major projects are tendered in a competitive process, and the public has access to complete, reliable, and timely procurement information.

DEFINITIONS OF KEY TERMS

Term	Definition
Tender	The process of inviting bids, evaluating them, and awarding contracts
Competitive	Competitive procurement involves opening the process to multiple bids to generate competition among bidders and obtain the best value. In contrast, noncompetitive procurement happens when the buyer either selects the company to buy from or restricts the bidding process to certain suppliers. Procurement from a list of prequalified bidders is considered competitive if the prequalification process has been open to all potential bidders.
Access to information	See "published" in the Glossary.
Procurement information	Includes • The notice of procurement opportunities • Procurement documents (including technical standards and evaluation criteria) • Number of presented bids, number of accepted bids, and identification of bidders • Notice of award of contract

It may also include procurement plans, summary of contract, standard procurement monitoring reports, and decisions on bidder complaints.

INSTITUTIONAL DESIGN

The aim of this dimension is to determine whether the system of procuring capital projects is structured to maximize value for money. The focus of the design assessment is on the legal and regulatory framework for procurement. A general requirement for competitive procurement does not mean that all procurement will have to be competitive. Procurement legislation will often specify circumstances in which other procurement methods may be accepted. However, the provisions for exceptions should not be so broad that they undermine the general requirement for competitive procurement. For that purpose, in addition to monitoring and legal action by procurement-supervision departments and agencies, competition authorities will often have a mandate to oversee relevant markets and impose sanctions in case of violations.

- A low score on institutional design implies that the legal and regulatory framework for procurement is weak. Competitive procurement is not required and there are no strong provisions for public disclosure of procurement information. Limited access to information means that procurement information is not easily available, for instance, on an open website. If information must be requested directly from the procuring agency, or if access to information requires website-user registration, then access should be considered limited.
- A medium score indicates that the legal and regulatory framework requires competitive procurement of major projects but that it does not establish requirements for access to timely and complete procurement information. If major projects are only competitively procured when externally financed, then the procurement system does not qualify for medium scoring in this dimension.
- A high score indicates that there are legal and regulatory requirements for competitive procurement of major projects, and publication of timely and complete procurement information is required. Open, transparent, and competitive procurement is required for major projects. There are institutions mandated to monitor and propose correction of noncompetitive behavior of procuring agencies and bidders. Cartelization and collusion among bidders are legally punishable. Complete, reliable, and timely information should be proactively disclosed. Procurement laws or regulations specify the type of information and timetable for publishing procurement information. Box 7.1 describes procurement legislation in Bulgaria, which was assessed high on institutional design but lower on effectiveness in 2018.

Box 7.1. Procurement in Bulgaria: Legal Framework and Institutions

Bulgaria's public procurement law was substantially overhauled in 2006 as part of the country's accession to the EU and has been amended frequently, including in 2016 and 2018 (Table 7.1.1).

The Public Procurement Agency (PPA) is an independent body under the Ministry of Economy. Its mandate includes drafting law on public procurement, giving methodological and other forms of guidance, performing mandatory ex ante controls, monitoring and analyzing procurement markets, alerting supervision authorities to possible irregularities, and maintaining an electronic database with information on all procurement procedures that contracting authorities are required to submit the Public Procurement Register. In cases of irregularities, the PPA would inform the National Audit Office, the State Financial Inspection Agency, and the respective managing authorities.

The Commission for the Protection of Competition (CPC) is charged with implementing the Law on Protection of Competition, as well as with control of procedures under the procurement and concessions laws. As the first-instance review body, the CPC examines and decides on claims of irregularities in public procurement and may interrupt public procurement procedures and impose sanctions for noncompliance.

Box 7.1 continues on next page

Box 7.1. (*continued*)

The National Audit Office performs independent audits of national public finance for legality, efficiency, and effectiveness in the use of public funds. It audits ministries, departments, and municipalities. However, it has limited ability to sanction and can only forward its findings to the Financial Inspection Agency.

Under the Ministry of Finance, the Financial Inspection Agency is an entity set up in 2006 to ensure the protection of public financial interests. It carries out inspections of the budget and the financial-economic and accounting activities of public bodies, and it has the authority to impose sanctions.

In addition, the managing authorities of each individual operational program and the Audit of EU Funds Executive Agency carry out audits and controls on the distribution and use of EU funds in Bulgaria.

If a claimant is not satisfied with the decision of the CPC, it may appeal against the decision before the Supreme Administrative Court. The decision of its three-member chamber will be final and binding for all parties in the case.

Sources: Public Procurement Law 2018; PPA.

If procurement is conducted by multiple entities, under several parallel procurement systems, then scoring should be based on the two most widely used systems. Some countries, instead of an integrated procurement system, allow some ministries, agencies, or class of projects to follow specific procurement legislation—in such cases, the assessment should address at least the two major procurement systems involving major projects.

If procurement of PPPs (including concessions) does not follow the general procurement legislation, then their procurement systems should be assessed. The military, intelligence agencies, and police, being sectors in which security reasons sometimes constrain competition, should not be considered in the assessment—extension of this exemption to other sectors should be avoided.

IMPORTANT DOCUMENTS

Documents	Uses
General procurement legislation, plus legislation including alternative provisions for specific sectors, ministries, PCs, and PPPs, including concessions	Assess provisions for competitive procurement
Legislation establishing procurement monitoring departments or agencies	Assess provisions for monitoring procurement and correcting deviations from standard practices Assess provisions against cartelization and bidder collusion
Procurement regulations, including regulations for specific sectors	Assess if regulations also support competitive procurement
Periodic or sporadic reports of procurement monitoring departments and agencies, including statistics, procurement analysis, and notice of corrective action and punitive legal processes	Assess the existence and functioning of monitoring provisions and corrections mechanisms (also relevant for the assessment of effectiveness regarding effective competition)
Call-for-tender documentation of several major projects	Assess qualification requirements and selection criteria (also relevant for the assessment of effectiveness)
Procurement audits	Assess whether audits indicate systemic weaknesses in procurement practices

EFFECTIVENESS

The effectiveness rating should apply the three reference answers to PIMA question 11.a (Is the procurement process for major capital projects open and transparent?), looking at actual procurement results. Procuring entities may engage in tailoring of qualification requirements and selection criteria in ways that repel competition. And, in the absence of anticollusion legislation and corresponding enforcement tools, bidders may neutralize formally competitive public procurement. The effectiveness assessment should cover whether poor practices result from deficiencies in the institutional design (for example, restricted mandate for competitive procurement; too-broad exceptions to competitive procurement; absence of institutions aiming at monitoring procurement and fostering competition; absence of legal provisions against cartelization and collusion) or from implementation issues (for example, low capacity, corruption).

The assessment should clarify the share of procurement that is subject to national procurement rules. Many international financial institutions (IFIs) and development partners (DPs) have their own procurement rules that have to be followed unless there is an explicit decision to rely on national rules or the rules of another agency (see Box 7.2 on World Bank practices in this regard). If a significant share of procurement is done according to IFI or DP rules, then this may affect the share of competitive procurements and the effectiveness on this dimension.

The effectiveness assessment should be based on procurement statistics and verify whether the system is working as intended. It is not uncommon that formal procurement regulations require that most procurement be competitive, but that the actual share of competitive procurements is considerably lower. Effective competition means not only open, transparent, and competitive tenders, but also more than one bidder presenting accepted bids, as well as absence of evidence of cartelization or collusive behavior. Also, formal regulations often mandate a high degree of transparency in procurement activities, but actual transparency is much lower, for instance, because procurement websites have limited coverage or are not updated in a timely manner.

- *Low effectiveness* implies that few major projects are subject to clearly perceived effective competition.
- *Medium effectiveness* implies that many major projects are subject to clearly perceived effective competition.
- *High effectiveness* indicates jurisdictions where the vast majority of major projects are effectively competitively procured and where there is proactive, open disclosure of complete, reliable, and timely procurement information.

The ministry in charge of public procurement policy and control, or the main contracting agencies, should be able to provide evidence that procurement rules are complied with. If this cannot be documented, then there may be discrepancies between formal requirements and actual practices. The scores should be downgraded if the assessment team perceives evidence of significant challenges to an effective competitive procurement, such as pervasive corruption or mismanagement of the procurement processes, unreliable data, or lack of critical relevant data.

If there are many failed tenders or the average number of bidders for competitive and open tenders is consistently low, then the competition may be impaired. Absolute absence of failed tenders for lesser projects may also signal competition issues, particularly when

Box 7.2. World Bank's Alternative Procurement Arrangements

At the Borrower's request, the Bank (subject to its policies and rules, and applicable fiduciary and operational requirements), may agree to the following:

- rely on and apply the procurement rules and procedures of another multilateral or bilateral agency or organization, and may agree to such a party taking a leading role in providing the implementation support and monitoring of procurement activities; and
- rely on and apply the procurement rules and procedures of an agency or entity of the Borrower.

Source: World Bank 2018.

most tenders have a single bidder–hinting at market partition among bidders. In those cases, monitoring reports and action plans addressing poor competition should be requested from authorities for analysis.

These issues should be explored and commented on in the assessment, in particular whether they are a result of an ineffective procurement system design or whether there are other causes.

Table 7.1.1. Public Works Contracts in Bulgaria (2016 to Mid-2017)

	Procurement with a value equal to or above 5 million Bulgarian lev				Procurement with a value greater than 2 but less than 5 million Bulgarian lev			
Type of Procurement	Number	Percent	Amount (millions of leva)	Percent	Number	Percent	Amount (millions of leva)	Percent
Open tender	238	94	6,790	94	325	95.3	1,022	95
Negotiated with a prior call for particiaption	5	0.20	40	0.50	1	0.30	5	0.50
Negotiation without prior notice	2	0.08	15	0.20	6	1.70	22	2
Limited	3	0.12	177	2.30	5	1.50	13	1.25
Undefined	6	0.25	211	3	4	1.20	13	1.25
Total	254	100	7,233	100	341	100	1,075	100

Sources: Public Procurement Law 2018; PPA.

USEFUL DATA SERIES

Data	Questions to Address
Number and value of tenders conducted by the category of procurement process ((for example, international open tender, open tender, restricted tender, direct award) Number and value of major projects conducted by the category of procurement process	What is the share of different procurement methods?
Average number of received bids and accepted bids for each tender, using competitive and open tender classes Average number of received bids and accepted bids for each major project	What is the actual degree of competition in competitive tender processes? What is the actual degree of competition in major projects?
Number of failed tenders (tenders announced but for which no contract was issued) Average number of failed bids for each major project	What share of tenders is unsuccessful? What share of major projects is unsuccessful?
Shares of competitive procurement following national rules and following IFI/DP rules, by category of tender process and by major project	What is the importance of IFI and DP projects in the tender process? What is the importance of IFI and DP projects in major projects?

Dimension 11.b: Is there a system in place to ensure that procurement is monitored adequately?

QUESTIONNAIRE

Low	There is no procurement database, or the information is incomplete or not timely for most phases of the procurement process.
Medium	There is a procurement database with reasonably complete information, but no standard analytical reports are produced from the database.
High	There is a procurement database with reasonably complete information, and standard analytical reports are produced to support a formal monitoring system.

DEFINITIONS OF KEY TERMS

Term	Definition
Procurement database	Relational database software that includes a dataset in which all major steps of each tender are recorded.
Phase of the procurement process	A step defined in procurement regulations, which may vary based on the tender type. Examples include public announcement of tender, clarifications, receipt of bids, evaluation of bids, notice of tender award, and contract signing.
Reasonably complete information	Information should be available according to the steps described above under "Phases of the procurement process."
Standard analytical report	A standard report drawing information from the procurement database, centrally designed and readily available. It may be periodically published or ready to be run at any time with no additional programming required. It should not only present statistical information, but also present some analysis of the degree of effective competition in public procurement. A user-defined report does not qualify as a standard report.
Formal monitoring system	A set of activities designed to evaluate the ongoing performance of the procurement system and propose improvement or corrective action.

INSTITUTIONAL DESIGN

This dimension aims to determine whether there is a procurement database to monitor whether the procurement system is operating as intended. Legal systems that aim at competitive procurement must require mechanisms for monitoring procurement and acting when actual procurement practice deviates from the standard and when bidding behavior signals cartelization or collusion among bidders. As recommended by the OECD, the system should allow free access through an online portal for all stakeholders, including civil society and the general public, to public procurement information (OECD 2018). The database and the monitoring mechanism should help identify problems in the procurement system and bring these problems to the attention of responsible officials.

- A low score implies that, there is no procurement database or the information in the database is incomplete or not timely. Significant parts of government may be excluded from the requirement to feed the procurement database or be obliged to provide only limited information. There may also be inadequate rules to ensure that information is recorded in a timely manner.
- A medium score means that the database has reasonably complete information. It should be used by all procuring agencies, with possible exceptions for remoteness and lack of communication capabilities. It should record information on at least 75 percent by value of all nonmilitary public procurement. The information should have a level of detail that is consistent with what is required under the different steps of the government procurement process. Procurement not subject to tender should be recorded in the database.
- A high score implies that the database is used to produce standard analytical reports and support a formal procurement monitoring system. The existence of a standard report conveys that the report represents the views of management and is expected to be run frequently. It is generally not possible to produce reasonably complete standard reports without a procurement database—standard reports must be timely and reasonably complete, which is difficult to achieve if data are collected and reports are prepared

manually. A formal monitoring system constitutes a set of activities designed to evaluate the ongoing performance of the procurement system. It must be required by law or regulation and define a responsible entity and requirements for data collection, data analysis, and reporting.

IMPORTANT DOCUMENTS

Documents	Uses
Procurement database documentation	Assess scope and functionality
Regulations on the collection and recording of information in the procurement database	Assess whether regulations ensure comprehensive coverage and timeliness
Analytical reports produced from the procurement database.	Assess quality, comprehensiveness, and timeliness of reports

EFFECTIVENESS

A formal monitoring system must consist of more than distribution of standard reports. Standard reports, by definition, facilitate some type of analysis, if nothing more than by the way data is presented. A monitoring system needs to (1) analyze data in standard reports; (2) draw conclusions and possibly make recommendations; (3) communicate those conclusions and recommendations to senior officials for the purpose of improving the procurement system. A formal monitoring system is not effective if it does not perform these activities based on standard reports.

An effective monitoring system requires dedicated and independent staff. Just publishing standard reports on the procurement system website does not constitute an effective monitoring system. At least one person must be dedicated to monitor the procurement system, and that person must have freedom to identify and report problems with the procurement system. Ideally, the monitoring system should be operated by a unit separate from the primary procuring agency. The monitoring system should be considered less effective if it does not appear to operate independently, even if not located organizationally within the primary procuring agency. The rating can be downgraded if the assessment team perceives evidence of significant misrepresentation of procurement data or recommendations deviating from open, transparent, and competitive practices.

Timeliness of analytical reports is a key indicator of effectiveness. If analytical reports are not released in a timely manner, then problems cannot be identified and addressed in a timely manner. Ideally, analytical reports should be available within one month of the end of the reporting period, if not on a real-time basis.

If there is no procurement database or the information in the database is incomplete or not timely and analytical reports are not available at all, or are published more than six months after the analyzed period, effectiveness should be low.

Medium effectiveness implies that the procurement database is reasonably comprehensive, but analytical reports are missing or produced more than six months after the analyzed period or do not cover annual procurement.

The *high effectiveness* rating is reserved for jurisdictions where the procurement database is used by a monitoring system that produces monthly or quarterly analytical reports drawing conclusions and making recommendations for improvement. Box 7.3 describes the e-procurement system in Bangladesh.

USEFUL DATA SERIES

Data	Questions to Address
Frequency of analytical reports (for example, monthly, quarterly, annual)	What is the frequency of analytical reports? Are monthly, quarterly, or annual procurement performance results analyzed? Are results compared over time? Are actual results compared with performance goals? Are procurement practices analyzed and recommendations produced?
Publication dates for analytical reports	What is the timeliness of analytical reports over time?

Box 7.3. Electronic Procurement System in Bangladesh

With assistance from the World Bank in 2011, the Bangladeshi government introduced a web-based electronic government procurement system, e-GP. The system is managed by the Central Procurement Technical Unit, part of the Implementation Monitoring and Evaluation Division, Ministry of Planning. The system is currently used by 1,252, or 95 percent, of 1,324 procuring entities, with the 71 entities not participating being small rural units of government. The system covers procurement of works, goods, and services, with the exception of consulting services. Therefore, virtually the entire development budget that requires procurement is acquired through e-GP, which captures data on each step in the procurement process. The public has access, through the e-GP website, to tender documents, bid statistics and summary contract data relating to each tender, and key performance information covering all tenders announced. Bangladesh plans to extend use of the e-GP to all procuring entities by 2022. The procurement methods used in e-GP have been overwhelmingly competitive, as shown in Table 7.3.1.

Table 7.3.1. Methods Used for Tendering in Bangladesh's e-GP Procurement System, July 2011 to September 2018

Procurement Method	Tenders Initiated	Percent	Value (billions of taka)	Percent
Open-tendering method	141,529	68.0	1,628.6	86.8
Limited-tendering method	63,318	30.4	183.3	9.8
Request for quotation	1,777	0.9	0.2	0.0
One-stage, two envelopes tendering	1,452	0.7	64.9	3.5
Direct procurement	23	0.0	0.0	0.0
Selection under a fixed budget	8	0.0	0.0	0.0
Selection-based consultant qualifications	5	0.0	0.0	0.0
Quality cost-based selection	4	0.0	0.0	0.0
Total	208,116		1,877.2	

The e-GP system has the capability to produce analytical reports. The system has a reporting module containing a variety of standard reports to monitor the procurement system. Additional standard reports can be added as desired. Data on manual procurements by the 5 percent of procuring entities that do not use e-GP are not entered into the system and thus are not reflected in system reports. This problem will diminish over time as the remaining procuring entities use e-GP. The e-GP system currently publishes quarterly on its website a performance indicators report covering 42 indicators. Data contained within the report are cumulative, beginning in fiscal year 2015/16. Two enhancements are currently being developed that will promote transparency: a data dashboard available to the public and a civil engagement feature that will allow the public to provide feedback on contract implementation.

The e-GP system represents a significant achievement. The system is a modern, fully functional information system, containing all the features expected of such systems. The main challenges going forward are to expand the coverage of the system, disclose more information on tenders processed, and ensure that discretionary data not captured through mandatory system controls, for example, complaint information, are entered accurately and in a timely manner. The last of these challenges may be the most difficult to achieve, as it relates to human behavior. Detailed monitoring of the system can minimize shortcomings in this regard.

Source: e-GP, MOP.

Dimension 11.c: Is the procurement complaints review process conducted in a fair and timely manner?

QUESTIONNAIRE

Low	Procurement complaints are not reviewed by an independent body.
Medium	Procurement complaints are reviewed by an independent body, but the recommendations of this body are not produced on a timely basis, nor published, nor rigorously enforced.
High	Procurement complaints are reviewed by an independent body whose recommendations are timely, published, and rigorously enforced.

DEFINITIONS OF KEY TERMS

Term	Definition
Tender	must be registered according to procurement law, regulation, or written procedure.
Independent	See glossary
Timely	A recommendation is timely if it is made before the contract is signed.
Publish	See glossary
Rigorously enforce	Implement as intended.

INSTITUTIONAL DESIGN

This dimension aims to assess if there is a complaints system to ensure that the procurement system is properly designed and is operating as designed. Complaints may suggest procurement procedures were not properly followed for a single tender. They can also mean that the procedures are not well designed. The complaints system should identify these types of issues and make recommendations to resolve them or prevent them in the future. A complaints review system does not exist if bidders are not given a reasonable time window, compatible with the complexity of the tender, for presenting complaints. For example, in Estonia complaints must be presented within 10 days (Box 7.4.)

The independence of the complaints system regarding the procuring agency will be assessed. There is no independence if the review entity is the procuring agency, an entity dependent from it, an entity dependent on the same parent line ministry, or the parent ministry itself. Independence is sometimes difficult to assess, given that in some countries, membership in a complaint review body may be short term—even appointed for review of a single tender. At a minimum, independence requires that the majority of the reviewers are not employees of the procuring agency.

- A low score indicates that the legal and regulatory framework does not require an independent complaints system. In some cases, there is no formal complaints mechanism at all. In other cases, complaints may be filed, but they are handled by an entity not independent from the procuring agency.
- For a medium score, the legal and regulatory framework does require an independent complaints body, but the arrangements for enforcement of the decisions of this body are inadequate. Recommendations of the review body are not required to be delivered on a timely basis, to be published, or to be rigorously enforced.
- For a high score, the legal and regulatory framework ensures that the independent complaints body has the necessary legal standing and capacity to produce recommendations that are timely, published and rigorously enforced. The recommendations of the review body should have legal force and cannot be institutionally disregarded.

IMPORTANT DOCUMENTS

Documents	Uses
Legal framework for procurement complaints review body	Assess institutional design
Representative sample of decisions issued by the complaints review body	Analyze whether decisions are published in a timely manner

Legal framework for decision review after issuance of complaints review body recommendations Representative sample of procurement decision revision after issuance of complaints review recommendations	Analyze whether complaints review recommendations are rigorously enforced and whether procurement legislation allows for nonenforcement

EFFECTIVENESS

The effectiveness assessment should include analysis of the performance of the complaint mechanism. This should include the number of complaints that have been lodged the past three years, the average time to consider a complaint, and the share of complaints for which procurement decisions are overturned or penalized. A breakdown by type of procurement and by government sector could be useful. The rating can be lower if there are indications of corruption, significant misrepresentation of complaints, or unfair recommendations. The assessment should give adequate weight to the complaints related to major projects.

High fees to file a complaint may undermine the effectiveness of the complaint system. Small fees may be appropriate to discourage frivolous complaints. However, large fees might discourage genuine complaints, and thus reduce openness and transparency. See Box 7.4 for examples of fees in the Estonian procurement complaints mechanism.

Even if there is no system for compiling and analyzing complaints, the complaint system may be partly effective. The complaint system is aimed at addressing irregularities on an individual tender and bid basis, and this function may be filled even in the absence of a system for compiling and analyzing complaints. However, complaints also have a bearing on system design and overall operations of the procurement system.

The timeliness of the complaint mechanism, as well as its independence and the disclosure and enforcement of review decisions, are core indicators for its effectiveness.

Low effectiveness implies that the average time to resolve complaints is more than six months. A low number of complaints can also be an indication that it is difficult to lodge complaints and that the mechanism is not effective.

If independent reviews are not published or enforced, the complaints review system could receive a *medium effectiveness* rating in terms of efficiency if the average time to resolve complaints is two to six months.

Independent reviews that are published and rigorously enforced could receive a *high effectiveness rating* if the average time to resolve complaints is less than two months. Box 7.4 describes the procurement complaint system in Estonia, which was deemed to be highly effective in the 2019 PIMA.

USEFUL DATA SERIES

Data	Questions to Address
Number of complaints as a percentage of total tenders	Do the complaint shares indicate that the complaint mechanism is well established?
Number of complaints related to major projects as a percentage of tenders of major projects	Do the complaint shares indicate that the complaint mechanism is well established for major projects?
Average time for a decision on a complaint to be made, by stage of review	What is the effectiveness of the complaint mechanism?
Actual time for the decisions on complaints related to all major projects in the last 3 years	What is the effectiveness of the complaint mechanism regarding major projects?
Number of tenders audited and percentage in which violations of procedure are noted	Does the complains mechanism indicate systemic weaknesses in the procurement system?
Number of complaints that end up in court. Number of court ruling confirming the Review Committee's rulings	How timely and fair are decisions about complaints?

Box 7.4. Procurement Complaints Mechanism in Estonia

Estonia has a well-organized public procurement system, and the legal and institutional framework is in line with the relevant European directives. Making a complaint to the independent Public Procurement Review Committee, whose proceedings are organized by the Ministry of Finance (MoF), is the mandatory first step to settle disputes as stipulated in the Public Procurement Act. Its decisions are binding unless challenged in courts. This provides a three-level dispute resolution mechanism in accordance with the judicial system.

A request for review must be received by the Review Committee within 10 days as of the day when the requester learned or had to learn of the infringement of its rights or harming of its interests, except in certain specified cases, but not after the award of the public contract.

After the awarding of the public contract, a request for compensation of damage may be filed with the Review Committee by an economic operator not awarded the public contract because of an unlawful decision of the contracting authority or entity or because of a procurement document, unless the economic operator failed to contest the decisions of the contracting authority or entity or the procurement documents in a timely manner even though it had the opportunity. A request for compensation of damage may be filed with the Review Committee within one year from the award of a public contract.

Upon filing a request for review and a request for compensation of damage, requestors will be required to pay a state fee in one of the following amounts:

- €640 if the estimated value of a public procurement is below the international threshold
- €1,280 if the estimated value of a public procurement equals or exceeds the international threshold

The Review Committee may, based on a reasoned request of the requester, decide to suspend the public procurement at any stage of the review proceedings, taking account of the possible consequences of the suspension to all interests that might be harmed. The Review Committee hears a request for review based on submitted documents in a written procedure or holds a public hearing of the request for review with the participation of the parties to the proceedings, if the Review Committee considers it necessary for adjudication of the request or if the requester and the contracting authority or entity both demand it.

About 2 percent of the procedures are challenged by the economic operators and generally concern the result of the evaluation process. Review Committee decisions must be issued within 30 days and are usually handed down within 20–25 days. Only about 10 percent of the decisions are appealed in court, with the court proceedings generally confirming the Review Committee's rulings.

Sources: Republic of Estonia PIMA 2019, Public Procurement Review Committee.

Institution 12: Availability of Funding

Is financing for capital spending made available in a timely manner?

This institution addresses the systems, processes, and tools in place to ensure the availability of cash when needed to make payments for public investments. In a modern treasury system, the term "cash" is equivalent to liquid resources that are readily available—mainly cash or equivalent in bank accounts, but also sometimes cash kept in money chests—to make payments. Depending on the public financial management system system in a country, government payments for public investments could either be centralized through the Treasury or Ministry of Finance (MoF) or decentralized to line ministries and agencies that are in charge of executing the public investment projects.

Government payments to contractors during project implementation are often large, and the date of payment could be difficult to predict precisely because it is typically based on completion of certain milestones as specified in respective contracts. These characteristics increase the risk that cash may not be available when payment orders are issued to make payments against the invoices received from contractors, even if there is adequate budget authority to spend. If payments are not made on time, arrears emerge and could accumulate over time, leading to a substantial increase in government liabilities. The arrears also increase project costs directly through explicit late payment penalties (typically under the contract) and indirectly through higher tender bids if contractors see a pattern of delayed payments by government agencies.

The first dimension under this institution addresses cash flow forecasting and the predictability of cash flows. Government cash planning is based on a system of forecasting cash inflows and outflows for the period ahead. Recording expenditure commitments helps capture the size of planned expenditures or payments but does not precisely identify the dates of payments, particularly when multiple payments in stages are envisaged for a single commitment or contract. Typically, the anticipated dates of major expenditures or payments are estimated by regularly seeking information from project implementing agencies.

The second dimension looks at cash management arrangements to ensure timely payments. Payment can be made in a timely manner after approval of a payment request if there is adequate cash balance. This requires taking cash management measures to address any expected temporary cash shortfalls as informed by the cash forecast. If cash shortfalls cannot be addressed, and cash rationing or arrears are the only options, then money is not available when needed. Cash rationing can occur without arrears if monthly or quarterly budget allocations are reduced, contracts for approved projects are not signed, or contractors are told to slow down their work.

The third dimension addresses whether external financing flows are integrated with the government bank account structure that is under the oversight of the treasury or MoF. The ownership and location of bank accounts carrying external fund proceeds (either external grants or loans) make it easier or harder for governments to track external financing flows and balances, and to forecast and manage their cash resources accordingly.

Dimension 12.a: Are ministries/agencies able to plan and commit expenditure on capital projects in advance on the basis of reliable cash flow forecasts?

QUESTIONNAIRE

Low	Cash flow forecasts are not prepared or updated regularly, and ministries/agencies are not provided with commitment ceilings in a timely manner.
Medium	Cash flow forecasts are prepared or updated quarterly, and ministries/agencies are provided with commitment ceilings at least a quarter in advance.
High	Cash flow forecasts are prepared or updated monthly, and ministries/agencies are provided with commitment ceilings for the full fiscal year.

DEFINITIONS OF KEY TERMS

Term	Definition
Cash	Funds readily available in government bank accounts to make payments through a treasury system.
Cash flow forecast	A forecast of cash inflows and outflows that shows gross flows and cash balances (net) on daily, weekly, monthly, or quarterly intervals.
Prepare or update	The word "prepared" suggests that there is a clear starting point. In some countries, cash flow forecasts start anew each fiscal year and are updated during the year. More commonly, forecasts are always rolling, looking forward for a fixed period. In these cases, cash flow forecasts are being updated on a rolling basis.
Commitment Ceiling	Limit on a ministry's or agency's authority to commit to future spending, that is, incur a potential future obligation to pay, for instance, through signing a contract. Ceilings may relate to either (1) the maximum sum of new commitments that can be entered into in a period, or (2) the cumulative total of outstanding commitments.

INSTITUTIONAL DESIGN

The aim of this dimension is to determine whether there are mechanisms to ensure that cash to make payments is available when needed. The detailed focus is on the formal regulations regarding commitments, and on cash flow forecasting and management.

In-year budget or payment ceilings contribute to cash management. Budget appropriations are recorded in the treasury expenditure control system as authorizations to spend (make payments). Many countries sub-divide the annual appropriation into monthly or quarterly allocations. These have a similar, but less direct, effect to commitment controls and could be seen as an alternative to commitment controls when assessing the design of the system.

- A low score indicates that there is no legal or regulatory requirement for systematic cash flow forecasting. In this environment, cash management will often be ad hoc and there may be uncertainty regarding whether an investment project will be able to make payments in a timely manner to ensure efficient project implementation.
- For a medium score, there is a legal or regulatory requirement for cash flow forecasts to be prepared at least quarterly and ministries are provided commitment ceilings at least a quarter in advance. The commitment ceilings may cover all spending, or be limited to certain types of spending, for instance, capital investments.
- A high score implies that there is legal or regulatory requirement for an advanced cash management system. This includes monthly cash forecasts, and commitment ceilings for the whole fiscal year are provided at the beginning of the year.

IMPORTANT DOCUMENTS

Documents	Uses
Legal framework for cash planning and cash management	Assess formal requirements for cash planning
Regulations for expenditure/ commitment control and/or budget execution	Assess design of commitment control mechanism

EFFECTIVENESS

The effectiveness assessment should focus on how consistently the mechanisms defined in laws and regulations are applied in practice. This assessment should be based on specific data for cash flow forecasts and commitment ceilings, compared to actual cash flows, commitments, and payments, for the past three years. Does government make

cash with fund capital expenditure available as and when needed?

- *Low effectiveness* indicates that cash forecasts are not reliable. Cash forecasts may be missing altogether, or not documented. Alternatively, actual cash payments tend to be lower than forecast and cash payments during the year are lower than commitment ceilings.
- *Medium effectiveness* indicates that the reliability of cash forecasting is mixed and ministries are provided commitment ceilings at least a quarter in advance. There may be examples of commitment ceilings not being funded in terms of ensuring cash availability.
- *High effectiveness* means that cash forecasts are reliable and commitment ceilings for the whole fiscal year are provided at the beginning of the year. There are no examples of commitment ceilings not being funded. Box 7.5 describes cash forecasting arrangements in Armenia.

USEFUL DATA SERIES

Data	Questions to Address
Cash flow forecasts, broken down by quarter or months	Is there a bias toward restricting funding early in the year?
Actual cash flow, broken down by quarter or months	Are there systematic differences between forecasts and actual cash flows?
Commitment ceilings compared with commitments and actual spending for the same set of projects	How effective is the commitment control system?

Box 7.5. Cash Forecasting in Armenia

Almost all payments in Armenia for general government capital expenditure are currently made from the Treasury Single Account (TSA) at the Central Bank of Armenia. Central and local government noncommercial organizations currently execute their capital expenditures through commercial bank accounts, but their proportion of total general government capital expenditure is minor, and these expenditures will in the near future also be executed through the TSA. The bank accounts for donor-funded projects, including those in foreign currencies, have been subaccounts of the TSA since 2012; these subaccounts are under the control of the line ministry's Project Implementation Units established and operating according to agreements with the relevant donors.

For capital expenditures funded by general state budget resources, monthly cash flow forecasts at aggregate and line ministry levels are prepared for the fiscal year. Cash forecasts are used as the basis of the quarterly budget allocations approved by the government following parliamentary appropriation of the annual budget. This is a bottom-up process that starts with the officials in the MoF's budget departments responsible for monitoring line ministry expenditures. These forecasts are updated monthly on the basis of actual inflows and outflows. The forecasts are broken down by month and week, and the cash planning processes is structured around weekly meetings. Line ministry commitment limits are the annual appropriations. Although expenditures may be contractually committed by line ministries with a time horizon for payments up to one year, payments during the year are still subject to the quarterly payment limits equal to the quarterly budget allocation breakdowns. Line ministries may request adjustments to these limits if warranted by circumstances (for example, contractors submitting payment certificates according to schedules different from planned). The centralized cash planning and commitment control does not apply to donor-funded capital expenditures, as these are subject to the cash planning and commitment controls of the donors' procedures.

Since the economic and financial crisis year of 2009, there have been no significant problems in releasing cash for capital expenditures in a timely manner. For capital expenditures funded by general state budget resources, the Treasury maintains a cash buffer to enable it to cope with shortfalls of receipts; this, together with well-established and highly automated cash forecasting and commitment control systems, means that supplier invoices are usually paid on a timely basis. For donor-funded projects, the Project Implementation Unit TSA subaccounts are usually prefunded by donors so that contractor invoices are paid promptly.

Source: Armenia PIMA 2018.

Dimension 12.b: Is cash for project outlays released in a timely manner?

QUESTIONNAIRE

Low	The financing of project outlays and payments are frequently subject to cash rationing.
Medium	Cash for project outlays is sometimes released/paid with delays.
High	Cash for project outlays is normally released/paid in a timely manner, based on the appropriation.

DEFINITIONS OF KEY TERMS

Term	Definition
Outlays	See glossary
Cash rationing	Cash is rationed when there are more invoices to be paid than can be paid, and invoices are paid selectively. This leads to cash not being released within due time (usually 30 days from the date of an invoice, but it can vary among countries, sometimes being 45 or even 60 days).
Cash release	Cash is released when a payment request is approved. It is assumed that if the payment request is approved, the payment is made—in other words, that cash rationing decisions are made before a payment request is approved. The mode of payment can be electronic, check, or replenishment of petty cash.
Timely manner	Payment is made in due time, based on the date of the invoice.
Cash release based on the appropriation	Expenditures are made according to the intended purpose and maximum amount authorized in an appropriation. This assumes that expenditures can be made by the end of the fiscal year up to the amount of the appropriation.

INSTITUTIONAL DESIGN

The aim of this dimension is to determine whether there are formal mechanisms to ensure that contractual obligations for payment can be met. Such mechanisms can be based on laws and regulations or on lower-level instructions, for instance, treasury guidelines. The language in the questionnaire refers to the actual effects. The effects should be covered in the effectiveness assessment, while the assessment of institutional design should focus on the formal mechanisms established to handle this issue.

- A low score on institutional design means that there are no formal mechanisms to ensure timely release of project funds when payments become due. In this situation, the Treasury may have full flexibility in delaying payments in times of cash shortages, and to reduce cash releases or payments below approved appropriations for the year as a whole.
- A medium score implies that there are formal mechanisms to ensure timely release of project funds, but they are not sufficiently strong to ensure that funds always are released for payment in line with appropriations. The treasury may be authorized to delay release of funds within certain confines, for instance, for a limited period of time, or curtail releases to a certain level of appropriations if this is required. Some countries have legal provisions that budget releases can be limited to 90 or 95 percent of appropriations if there are cash shortages.
- A high score indicates that there are strong mechanisms to ensure timely release of funds for payment, in line with the annual appropriations. This may include a legal provision that all appropriated funds shall be released during the year, unless there is a formal budget amendment.

IMPORTANT DOCUMENTS

Documents	Uses
Legal and regulatory framework for budget execution	Assess institutional design
Detailed guidelines for treasury operations	Assess detailed provisions for cash releases

EFFECTIVENESS

The effectiveness asses`sment should use the criteria in the questionnaire to assess the actual performance of the cash management system:

- *Low effectiveness* means that "frequently" cash is rationed—several invoices for major projects are not paid in a timely manner.
- *Medium effectiveness* indicates that "sometimes" cash is rationed—most invoices for major projects are paid in a timely manner.
- *High effectiveness* implies that invoices are always paid in a timely manner, except for incidental human errors. In addition, cash releases should be in line with the appropriations.

The assessment should look at cash releases compared with budget appropriations, including any budget amendments during the year. Payment delays may be caused by a fiscal shock, poor fiscal forecasts, and poor budget estimates, as well as poor cash management. If these lead to formal budget amendments, the assessment of cash management practices should be based on the revised appropriations. Box 7.6 illustrates that even a robust institutional design may be insufficient to ensure effectiveness in a difficult situation.

- If there is limited information on whether invoices are paid in a timely manner, an alternative could be to look at whether major projects have accumulated payment arrears due to cash shortages:
- If cash shortages frequently lead to arrears, effectiveness would be low.
- If cash shortages have caused arrears in a few major projects, effectiveness is medium.
- If there are no accumulated arrears, effectiveness is high.

USEFUL DATA SERIES

Data	Questions to Address
Size of new, or the cumulative total of, arrears for capital projects	Does cash rationing lead to systemic arrears?
Average time between the date of invoices and the authorization of payment	What is the average maturity of outstanding invoices?

Box 7.6. Legal Framework for Cash Rationing in Moldova

In Moldova, cash rationing is regulated by paragraph 69 of the Law on Public Finance and Fiscal Responsibility (LPFFR). According to this law, any cash rationing is a short-term measure, and expenditure sequestration must be authorized through budget amendment within two months.

Major spending agencies plan their annual cash flow in collaboration with the MoF, and smaller agencies generally get the cash to cover authorized expenditures. Paragraph 67 of the LPFFR establishes a clear priority among budget payments. The MoF generally plans priority payments, including salaries, pension, and external debt, during the first half of each month, and nonpriority payments, which include procurement of goods and capital spending, during the second half of the month. If payment orders for capital are submitted early in the month there may be some weeks before they are paid, but all payments are processed by the end of the month.

A 2019 moratorium on contract registration was an exception to the otherwise predictable arrangements for budget commitments. In February 2019, preelection spending decisions had created significant uncertainty about the realism of the approved fiscal deficit for 2019. The Minister of Finance decided that the Treasury should temporarily refrain from registering contracts for spending that was not strictly needed for the ongoing operations of ministries and agencies. According to law, government commitments are only created when a contract is registered with the Treasury. This measure served as an ad hoc commitment control on nonessential government expenditures, including discretionary capital spending. The measure was in force until a new government took office in July 2019.

Source: Law on Public Finance and Fiscal Responsibility.

Dimension 12.c: Is external (donor) funding of capital projects fully integrated into the main government bank account structure?

QUESTIONNAIRE

Low	External financing is largely held in commercial bank accounts outside the central bank.
Medium	External financing is held at the central bank but is not part of the main government bank account structure.
High	External financing is fully integrated into the main government bank account structure.

DEFINITIONS OF KEY TERMS

Term	Definition
External financing	See the Glossary.
Commercial bank	Provides retail banking services to private individuals and organizations, including government agencies. It may be privately owned or owned by the government.
Main government bank account structure	If a treasury single account (TSA) system exists, the structure includes all bank accounts and their subaccounts that make up the TSA system, with a top account that consolidates cash resources by netting off balances in other accounts. Some accounts included in the TSA system may be in commercial banks. If a TSA does not exist, the main account structure includes only accounts and their subaccounts held in the name of the Treasury or MoF in the central bank.

INSTITUTIONAL DESIGN

The purpose of this dimension is to assess how well external financing of capital projects is integrated with government funds. For some countries, external financing can be an important component of the capital budget. Integration of donor bank accounts into the government's bank account structure gives the government an opportunity to see donor bank balances and flows, and thus to better plan and manage cash flows related to project expenditures. The assessment of institutional design focuses on the formal rules, policies, and agreements governing the external financing, whereas the influence of these are covered in the effectiveness assessment below.

- A low score indicates that there is no legal or regulatory requirement that external financing flows are at the central bank. External funds are largely outside the scope of government cash forecasting and cash flow management. The government will usually have limited consolidated information about the balances in the commercial bank accounts containing external funds, and the inflows and outflows through these accounts. Some partial information may be available from different sources, but this can generally not be used for cash management.
- A medium score indicates that external financing is required to be held at the central bank, but not as part of the main government bank account structure. Information about the balances and the transactions in these accounts will often be available to the government and can be used for cash forecasting purposes. However, the funds held in these accounts are not fungible with other government funds and thus cannot be incorporated in the government cash management function.
- A high score indicates that there is a legal or regulatory requirement for full integration of external funds in the main government bank account structure. The external funds can be considered part of the government's cash planning and management framework, although there will often be limitations on how these funds can be utilized in the agreements with the financing sources.

IMPORTANT DOCUMENTS

Documents	Uses
Funding agreements with major donors	Clarify requirements for banking arrangements and access to external funds
Overview of government banking arrangements	Assess consistency between banking arrangements for internal and external funds

EFFECTIVENESS

The effectiveness assessment should include an analysis of the volumes of external funds available in commercial bank accounts, in the central bank outside the TSA, and in the TSA. If there are inconsistencies between the formal arrangements for external funds and the actual practices, then effectiveness could be lower or higher than what the design score implies.

The assessment of effectiveness should focus on whether there is adequate treasury or MoF oversight of external financing flows and whether flows are available when needed. If an IFI or a DP exhibits a pattern of not providing financing when needed, then the bank account structure is not effective in achieving the aims of this dimension. On the other hand, if the external source keeps money in commercial banks but the Treasury or MoF is promptly informed about the external financing flows and they are available when needed, the system may be more effective than indicated by the design score.

The assessment should be based on how promptly the information on external financing flows is provided to the the Treasury or MoF so that it can be incorporated in the government's cash management framework. The information should include the date and amount of cash releases or payments for the related projects. Some financing releases, for instance, the first release under a new financing arrangement, may be subject to special safeguards and not be representative. Delays related to conflicts between the country and the donor, for instance, because reporting requirements are not being met, should not be included in this assessment.

- *Low effectiveness* means that there are significant delays in providing information to the MoF or treasury on accessing and releasing external funds.
- *Medium effectiveness* means that there are some delays in providing information to the MoF or treasury on accessing and releasing external funds.
- *High effectiveness* means that information on external funding is up to date and the funding is always available when required. Box 7.7 describes banking arrangements for external financing in Mauritius.

USEFUL DATA SERIES

Data	Questions to Address
External funds held under different banking arrangements	What is the volume of financial resources under the different banking arrangements?
Processing time for releases of external financing	Are there delays in the releases of external financing?
Time taken/delay in informing the MoF/treasury about the release of external funding	When and how do the donors inform the MoF/treasury about the cash releases/ payments made by them on projects funded by them?

Box 7.7. Banking Arrangements for External Funds in Mauritius

Most external financing in Mauritius is processed through a TSA, with a few exceptions for which funds are held in commercial accounts. The Treasury maintains one main account at the central bank plus several foreign currency accounts that have a direct link to the central bank. Only a small part is held in commercial banks (0.6 percent of total external financing in 2013, 1 percent in 2014, and 3.8 percent in 2016) because of donor requirements. Although the system does not sweep funds on a nightly basis, the bank accounts of self-accounting ministries and departments are only replenished on a daily basis for the amount to be paid out on that particular day, thus leaving minimal balances overnight. External finance is fully reflected in the budget estimates and in the annual financial statements prepared by the Accountant General.

Source: Mauritius Ministry of Finance.

Institution 13: Portfolio Management and Oversight

Is adequate oversight exercised over implementation of the entire public investment portfolio?

Monitoring of the public investment portfolio should include all capital projects previously approved in the budget. There is an important difference between issues that require the financial oversight of projects by the Ministry of Finance in the context of the overall capital budget, and those issues that deal with their physical implementation and project management by sector ministries and agencies. This institution looks at the former; institution 14 looks at the latter.

The first dimension under institution 13 covers monitoring of project implementation. Financial and physical monitoring identifies projects experiencing delays and cost overruns, and action can be taken to address these problems. The sooner a project is completed, the sooner planned benefits of the project can be realized. Some countries establish high-level committees to identify and remove obstacles to implementing major projects.

The second dimension examines reallocation of funds between investment projects. Because projects progress at different rates, budget allocations to projects experiencing delays might be shifted to those progressing quickly. In this way, the average time to implement projects is shortened. Such re-allocations do not reduce total funding for the capital budget, and thus should be distinguished from virements (see Institution 8).

The third dimension examines ex post project reviews. Broad lessons can be learned, which will improve design, costing, and implementation of future projects, by conducting reviews of completed projects. Ex post project reviews are carried out by the government, while ex post audits, which are covered in institution 14, Management of Project Implementation, are conducted by the external auditor.

Dimension 13.a: Are major capital projects subject to monitoring during project implementation?

QUESTIONNAIRE

Low	Most major capital projects are not monitored during project implementation.
Medium	For most major projects, annual project costs, as well as physical progress, are monitored during project implementation.
High	For all major projects, total project costs, as well as physical progress, are centrally monitored during project implementation.

DEFINITIONS OF KEY TERMS

Term	Definition
Major capital projects	See the Glossary.
Monitor	Monitoring should capture physical and financial progress for major projects under a ministry and is separate from supervision of individual projects. A supervising engineer employed by the government who supervises and certifies work done in compliance with the contract does not constitute monitoring in this context.
Project implementation	Implementation in this context means the work performed from budget approval to when the physical structure is ready to become operational.
Physical progress	Construction contracts typically have well-defined milestones of physical work to be done. The milestones are usually the basis for making progress payments to the contractor, allowing for measuring physical execution against financial execution.

INSTITUTIONAL DESIGN

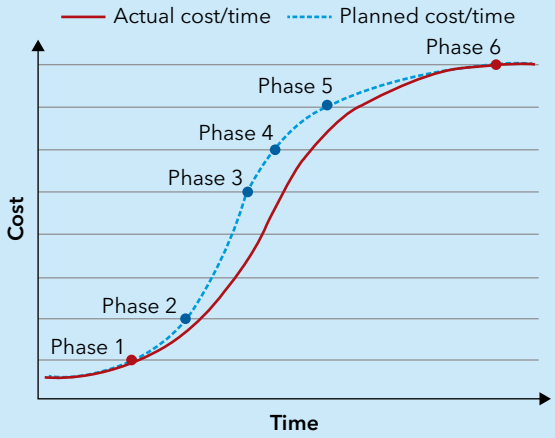
The aim of this dimension is to ascertain if there are legal or regulatory requirements that the government have a monitoring system for major capital projects. This system should assess, on a regular and relatively frequent basis, if project implementation is going according to the plan, or if the project faces cost overruns, delays, or other problems.

- A low score implies that there is no legal or regulatory framework for systematic monitoring of major capital projects. Projects are managed individually, and there is no consolidated information about project progress across government departments.
- A medium score implies that there is a legal or regulatory framework for monitoring annual project costs, as well as physical progress for most major projects. Monitoring of costs typically is made against appropriations and against the project implementation plan or contracts. Physical monitoring should indicate the project status compared with the broad stages in the project cycle, the project implementation plan, or physical milestones in the contract. The monitoring information may be reported and consolidated for groups of ministries or the whole government.
- A high score means that there is a legal or regulatory framework for central monitoring of all major projects, including for in-year reports. Central monitoring means that information on the implementation status of all major projects is brought together in one place. This allows identification of overall trends, such as a pattern of delays or cost overruns, and creates the potential to reallocate funds between projects. The monitoring should cover developments in expected total project as well as annual costs. Central monitoring can be conducted by a wide range of organizations, including a specialized monitoring unit. Box 7.8 describes the S-curve approach that is commonly used for project monitoring.

Box 7.8. S-Curve Project Monitoring

The S-curve provides a simple early-warning tool to monitor whether projects are on track. Based on cash flow forecasts contained in the implementation plan, an S-curve chart can set out a lower and higher bound for expected project expenditure during the implementation timeframe. If observed project expenditure and revised forecasts stay between the two boundaries, the project is on track. However, if expenditures proceed too slowly, the project is delayed and likely facing challenges, which will result in cost overruns. Intervention by the supervisor can be initiated as soon as warning signs emerge.

Figure 7.8.1. S-Curve for Project Management



Source: IMF staff, based on Pinto and Venkataraman (2008).
Note: The S-curve is used to monitor actual cost/time against planned cost/time.

IMPORTANT DOCUMENTS

Documents	Use
Regulations for project and portfolio monitoring	Assess legal requirements for monitoring
Guidelines for project and portfolio monitoring	Analyze methodologies and templates for monitoring
Representative sample of monitoring reports	Assess how methodologies are applied in practice

EFFECTIVENESS

The assessment of effectiveness should be based on how monitoring information is used to improve portfolio performance. The greatest benefit of monitoring implementation of a group of projects is to identify trends that might warrant actions. If information is collected on implementation status, but no analysis is made or conclusions drawn, the monitoring system is not effective. Likewise, if the monitoring system is focused on resolving problems for individual projects in isolation, the monitoring is not effective for the purpose of this dimension.

The assessment of the effectiveness of monitoring should cover all projects in the public investment portfolio, regardless of funding sources. It should include projects procured as PPPs as well as externally financed projects.

- *Low effectiveness* implies that systematic data on portfolio delays and cost overruns are missing for the majority of projects in the portfolio or that many projects in the portfolio are behind schedule or over budget (average past three years).
- *Medium effectiveness* implies that there are systematic data on portfolio delays and cost overruns for the majority of projects in the portfolio and that some monitored projects are behind schedule or over budget.
- *High effectiveness* implies that there are systematic data on portfolio delays and cost overruns for the majority of projects in the portfolio and that few projects are behind schedule or over budget. Box 7.9 describes portfolio monitoring arrangements in Honduras.

USEFUL DATA SERIES

Data	Questions to Address
Number and cost of major projects that are subject to monitoring	What is the overall scope of portfolio monitoring?
Number of major projects that are behind schedule, and by how much	What are average project delays?
Number of major projects experiencing cost overruns, and by how much	What are average cost overruns?
Examples of corrective actions taken based on monitoring reports	How does monitoring affect issue resolution?

Box 7.9. Portfolio Monitoring in Honduras

Important investment projects in Honduras are monitored during their execution, from the financial and physical progress point of view. The executors are responsible for monitoring the projects. They report via the integrated financial information system, with additional reporting on presidential priority projects. Monthly, the Budget Directorate produces budget execution reports by institution and for the central administration. Reports of physical and financial execution of the programs and projects incorporated in the public investment program (including companies and decentralized entities) are published quarterly and forwarded to the National Congress. Likewise, enhanced monitoring is carried out on strategic and high-risk projects, and portfolio reviews are carried out periodically with the main international financing agencies. The Public Investment Directorate (DGIP) prepares reports of projects and programs at risk, calling attention to situations that warrant corrections or more detailed investigation.

DGIP data for 186 projects started and concluded between 2003 and 2015 show that US$1,765 million was executed, of a total of US$2,446 million budgeted (72 percent, Figure 7.9.1). The average duration was percent higher than initially planned, and the variations in the execution period were significant (Figure 7.9.2).

Box 7.9 continues on next page

Box 7.9. (*continued*)

Figure 7.9.1. Final Project Cost Compared With Plan, 2003–15
(*Percent*)

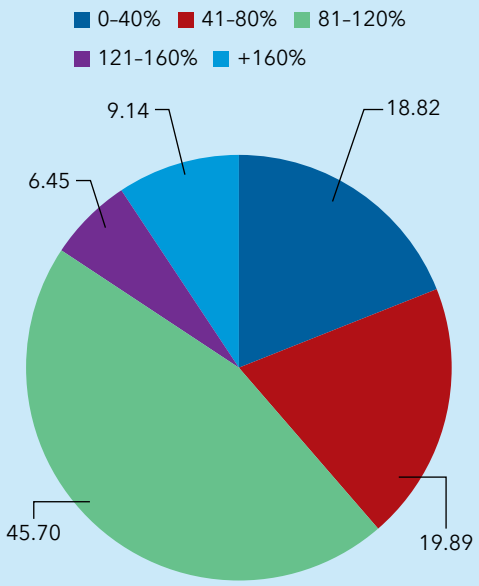
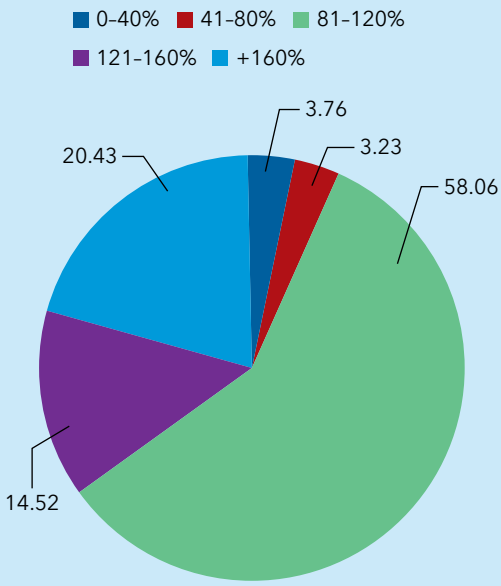


Figure 7.9.2. Final Project Duration Compared With Plan, 2003–15
(*Percent*)



Sources: IMF staff estimates, Honduras Ministry of Finance.

Dimension 13.b: Can funds be reallocated between investment projects during implementation?

QUESTIONNAIRE

Low	Funds cannot be reallocated between projects during implementation.
Medium	Funds can be reallocated between projects during implementation, but not using systematic monitoring and transparent procedures.
High	Funds can be reallocated between projects during implementation, using systematic monitoring and transparent procedures.

DEFINITIONS OF KEY TERMS

Term	Definition
Reallocation	Revision to appropriations specific to capital projects by moving funds from one appropriation to the other. Reallocations are made by the executive with authority delegated to it by the legislature. This might show up in budget execution reports as "revised budget."
During implementation	In this context, means any time after a project appropriation has been approved.
Systematic	See the Glossary.
Monitor	See Dimension 13.a.
Transparent	See the Glossary.
Procedure	Includes both process and criteria

INSTITUTIONAL DESIGN

The aim of this dimension is to see whether fund reallocations can be used to expedite implementation of the portfolio of projects. This is done by shifting funds to projects that are progressing more quickly than planned from those that are progressing slower than planned. Shifts between projects for the purpose of this dimension require that projects fall under separate appropriations. When multiple projects are included under a single appropriation, the legislature is giving explicit authority to the executive to shift funds between projects within that appropriation. This dimension is oriented to a portfolio-wide perspective, which assumes multiple appropriations.

- A low score indicates that the legal or regulatory framework does not allow reallocation of funds between projects under different appropriations during project implementation. It is not possible to transfer unspent funds under one appropriation to another project requiring additional funds, without going through a budget amendment process.
- A medium score indicates that the legal or regulatory framework does allow reallocation of funds between projects under different appropriations, but the mechanism does not ensure that reallocation decisions are based on systematic monitoring and transparent procedures. There is therefore a risk that funds are reallocated from a project that might be able to utilize the funds or to another project that will not be able to use all the additional funding. There may also be ambiguities regarding the rules for when reallocations are allowed and any restrictions on the reallocations, for instance, as a share of the initial budget.
- A high score indicates the legal or regulatory framework allows reallocation of funds between projects under different appropriations based on systematic monitoring and transparent procedures. This framework provides clear rules for when reallocations are allowed and how they are carried out, often with limits on the amount or share that can be reallocated, and depends on a monitoring system of the type described under dimension 13.a. Systematic monitoring, including of total project costs, would imply that if the score on 13.b is high the score on 13.a should be medium or high.

IMPORTANT DOCUMENTS

Documents	Use
Legal framework for reallocation of funds between investment projects	Assess institutional design
Documents for projects that have had reallocation of funds and the effects on project implementation.	Analyze how reallocation effects implementation

EFFECTIVENESS

The analysis of effectiveness should be based on whether reallocations have allowed for accelerated implementation of some projects and whether there have been delays in the projects the funds were reallocated from. The analysis should use data for actual reallocations in the past three years and show how much has been reallocated as share of the total capital budget.

The effectiveness assessment should include whether rules regarding reallocations have contributed to high execution rates for the capital budget. There may also be other reasons for high capital budget execution, but reallocations have a major effect on budget execution rates. Low execution rates indicate that the mechanism is not effective, whereas high execution rates imply the opposite:

- *Low effectiveness:* There is no evidence that reallocation has promoted accelerated implementation of projects or capital budget execution is low.
- *Medium effectiveness:* There is some evidence that reallocation has promoted accelerated implementation of projects and capital budget execution is medium.
- *High effectiveness:* There is significant evidence that reallocation has promoted accelerated implementation of projects and capital budget execution is high.

USEFUL DATA SERIES

Data	Questions to Address
Total amount of money that has been reallocated between projects, and as a percentageof the total capital budget	What is the importance of the budget reallocation mechanism?
Rate of overall capital budget execution—under- or overspending compared with initial approved budget	How effective is capital budget execution?
For a sample of projects subject to reallocation, financial and physical progress reports	Has the reallocation allowed for accelerated implementation of projects? Has the reallocation caused delays in the projects the funds were reallocated from?

Dimension 13.c: Does the government adjust project implementation policies and procedures by systematically conducting ex post reviews of projects that have completed their construction phase?

QUESTIONNAIRE

Low	Ex post reviews of major projects are neither systematically required nor frequently conducted.
Medium	Ex post reviews of major projects, focusing on project costs, deliverables, and outputs are sometimes conducted.
High	Ex post reviews of major projects focusing on project costs, deliverables, and outputs are conducted regularly by an independent entity or experts and are used to adjust project implementation policies and procedures.

DEFINITIONS OF KEY TERMS

Term	Definition
Ex post review	See glossary for a definition of "review." Ex post means that reviews are conducted after construction has been certified as completed or if the project has been officially terminated before completion.
Deliverable and output	In this context, the deliverable is the physical structure built. This is synonymous with output as defined in Dimension 2.c.
Independent	See glossary
Project implementation policy and procedure	A policy or procedure included in regulations or manuals and other written documents intended to guide project implementation.
Systematic	See glossary

INSTITUTIONAL DESIGN

The aim of this dimension is to determine whether the executive has procedures in place to learn from implementation experience and whether this learning is used to improve implementation policies and procedures. The assessment of the institutional design should focus on the formal mechanisms in place to initiate such review, whether they are established in law, by regulation, or through practice. It should focus on ex post reviews carried out by government agencies. Ex post reviews carried out by IFIs and DPs will inform the collaboration between the government and these institutions but will usually have limited effect on general government practices. If there is uncertainty about whether an ex post review constitutes a government review, the assessment should look at who defines the terms of reference and manages the review process.

- A low score implies that there is no formal requirement for ex post review of major projects. Projects will usually be subject to financial control and audit, but this does not qualify as an ex post review. In most cases, project completion reports will not qualify as ex-post reviews either. Ex post

reviews should as a minimum assess final project costs and outputs, compared with initial plans.

- A medium score indicates that there is a formal requirement for ex post review of major projects focusing on project costs, deliverables, and outputs. The review should also cover the timeliness of project implementation. This dimension is focused on procedures of the executive designed to improve implementation policies and procedures for all projects. Review conducted by an internal audit entity would qualify as ex post review for this purpose, provided it includes assessment of final project costs and outputs. External audits do not qualify as ex post reviews from the perspective of the executive, but are covered separately under Dimension 14.c.
- A high score indicates that there is a formal requirement for ex post review of major projects focusing on project costs, deliverables, and outputs conducted by independent parties and systematically used to adjust policies and procedures. There should be a clear policy for when ex post reviews are carried out.

IMPORTANT DOCUMENTS

Documents	Use
Legal framework for investment projects, including for ex post reviews	Verify requirements for ex post review
Guidelines and templates for ex post reviews	Assess methodologies and specific content of reviews
Representative sample of ex post review documents	Assess how guidelines are applied and the quality of the reviews

EFFECTIVENESS

The effectiveness assessment should be based on how ex-post reviews are conducted in practice, including how the results are presented and used. This should be compared to the formal requirements, to see whether the number of reviews and the contents of these are in line with the intentions. Systematic presentation of review findings to senior officials will strengthen the review mechanism. Specific effects of ex post reviews on policies and practices should be identified and documented.

- *Low effectiveness:* Government ex post reviews cover few major projects
- *Medium effectiveness:* Government ex post reviews cover some major projects
- *High effectiveness:* Government ex post reviews cover many major projects and the information has been systematically used to adjust policies and procedures

There must be a demonstrable link between the ex post reviews and changes to implementation policies and procedures. Policies that are affected might relate narrowly to the requirements for a proper project implementation plan or address broader issues such as the use of eminent domain for land acquisition or bulk purchasing of construction materials. Box 7.10 describes arrangements for project monitoring (13.a) and ex post reviews (13.c) in Malaysia.

USEFUL DATA SERIES

Data	Questions to Address
Number of ex post reviews conducted annually	What is the scope of ex post reviews?
Number of ex post reviews that led to revisions to project preparation, appraisal or implementation manuals, or their equivalent.	What are the effects of ex post reviews?

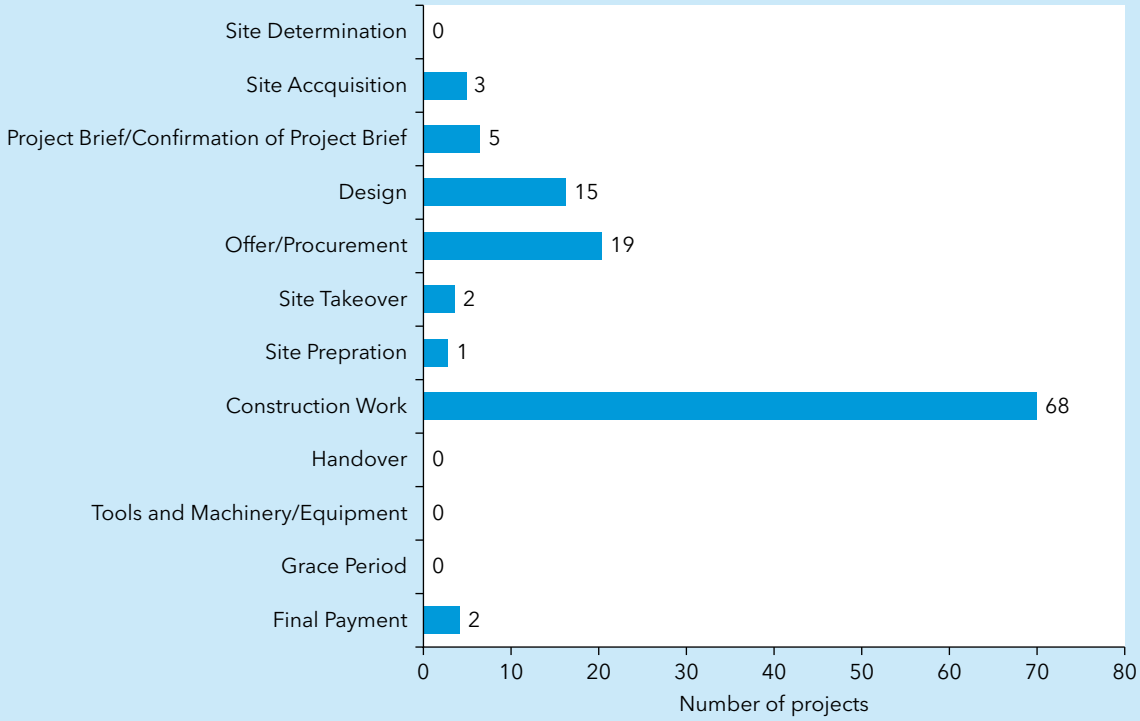
Box 7.10. Project Monitoring and Ex Post Project Reviews in Malaysia

The Malaysia Project Monitoring System II, called SPPII, assists the Malaysian government in the effective monitoring of all projects. The system generates monitoring reports that can be used for weekly monitoring by ministries and agencies, as well as producing monthly monitoring reports that are helpful for senior management (Figure 7.10.1). Yearly reports are generated to enable politicians to have a condensed view regarding progress and status of all projects.

The objective of the system is to monitor the financial and physical progress and status of all projects, both at the federal- and at the state-level execution of government funding. It also identifies project risks monthly. This empowers project managers and central agencies to act quickly when problems are identified in projects. The system measures the projects through the California Expenditure Curve (S-curve) principle, which indicates percentage of time lapsed versus percentage of money spent and generates an early warning on project issues and risks. The system contains vital project information such as the Geographic Information System Module that enables the users of the system to have a clear view of the physical location of the project. This information is also of vital importance to monitor progress by region.

The SPPII system generates a problem identification report that identifies all categories of issues that were not managed well during the year and that resulted in cost overruns as well as time overruns. The purpose of the problem identification report is to compile a lessons-learned matrix. Reports are simple to interpret and understand and can be interpreted by technical and financial personnel and by politicians. There is no wasted information to clutter the system.

Figure 7.10.1. Status of Physical Projects behind Schedule in Malaysia, by Activity, March 2017



Source: Malaysia PIMA 2017.

Box 7.10 continues on next page

Box 7.10. (*continued*)

Ex post reviews are conducted routinely by the Implementation Coordination Unit (ICU) through the SPPII Project Management System on projects after their completion, and results are presented to the National Action Working Committee. ICU has also issued a guideline for line ministries on evaluation of development programs. Aside from coordinating evaluation on programs and projects by all line ministries, ICU has since the 10th Malaysia plan undertaken annual assessment to determine lessons learned and best practices in project management in all phases of the project cycle. This initiative covers 10 percent of completed projects. The ex post reviews led by ICU provide the opportunity to identify deficiencies that occurred during the life cycle of the project and to learn from them.

Source: Malaysia PIMA 2017.

Institution 14: Management of Project Implementation

Are capital projects well managed and controlled during the execution stage?

This institution focuses on the management of individual projects, whereas the oversight of the portfolio of projects was the subject of institution 13. Ideally, project management begins at the project concept stage, because different staff with different skills are needed to perform preliminary design, costing, and risk assessment even before approval in the budget. Project management ends with ex post audits or ex post reviews, whichever is later. Efficient public investment requires that projects are appraised, selected and implemented as planned. Public investment spending is, by definition, not efficient if there are significant delays in implementation, cost overruns, or shortfalls in project outputs or outcomes.

The first dimension under institution 14 assesses the project management arrangements that are established, in particular whether there is a senior officer responsible for every major project and when implementation plans are prepared. The project implementation plan lays out the major tasks, schedule, and resources required to implement a project.

The second dimension addresses how project adjustments are done and what might trigger a fundamental review of the project before it is completed. If circumstances change during implementation in a way that significantly affects the assumptions on which the project was appraised and selected, the project might be modified or even terminated.

The focus of the third dimension is whether ex post audits are conducted for major projects. These audits provide a basis for the legislature to ensure that the implementation plan was written and carried out effectively, money was spent appropriately, the planned project outputs were produced, and the intended outcomes were achieved.

Dimension 14.a: Do ministries/agencies have effective project management arrangements in place?

QUESTIONNAIRE

Low	Ministries/agencies do not systematically identify senior responsible officers for major investment projects, and implementation plans are not prepared before budget approval.
Medium	Ministries/agencies systematically identify senior responsible officers for major investment projects, but implementation plans are not prepared before budget approval.
High	Ministries/agencies systematically identify senior responsible officers for major investment projects, and implementation plans are prepared before budget approval.

DEFINITIONS OF KEY TERMS

Term	Definition
Senior responsible officer	Has authority to make project management decisions and is accountable for its overall success or failure; will often be designated as project owner or project manager.
Implementation plan	A project implementation plan breaks down a project into the distinct steps required to accomplish a particular goal. (See Box 7.11).
Budget approval	Approval by the legislature.

INSTITUTIONAL DESIGN

The aim of this dimension is to ensure that project implementation proceeds according to expected scope, cost, and schedule. The assumption is that this requires at least two key elements and there

must be formal requirements for these in the regulatory framework:

- A senior officer who is responsible for the project and accountable for successful implementation. Often, this person oversees all facets of project implementation on a day-by-day basis, but not always. For major projects, it is becoming increasingly common to separate the functions of project owner and project manager. If a staff engineer supervises project implementation day to day but must clear project management decisions with a supervisor (project owner), then the senior responsible officer is the supervisor, not the staff engineer. The purpose of naming a responsible officer is to establish a point of contact, provide consistent guidance over project implementation, and ensure accountability. The person responsible must also have the necessary capacity to carry out project management. If a department director is the formal project manager for several different projects under the department's responsibility, he or she will have limited capacity to carry out real project management.
- A comprehensive project implementation plan to guide the detailed implementation of the project. This plan should include roles and responsibilities of the project manager and key staff, major tasks, schedule, budget and necessary resources, major risks and key success factors, reporting, and document management. It should be prepared before project approval, to ensure effective project mobilization after approval.

The assessment of institutional design should reflect the legal and regulatory requirements for a senior responsible officer and for a project implementation plan:

- A low score implies that there are legal or regulatory requirements for neither of these two features. Project responsibilities may be diluted, for instance, they are is shared among different departments, or if projects are allocated to an organizational unit that has no accountability for the results. In many countries, implementation plans are rudimentary and prepared late in the project cycle.
- A medium score implies that there are legal or regulatory requirements that senior responsible officers be appointed for all major projects, but not for implementation plans before projects are approved. These plans may be prepared later in the process, or the projects may go ahead without proper implementation plans. The failure to have implementation plans in place before project approval is a major factor in project delays and cost overruns in many countries. The preparation of such plans will bring out key project preconditions, risks, and bottlenecks, all of which should be addressed before project approval. If there are requirements for implementation plans, but not for senior responsible officers, the score will also be medium.
- For a high score, there are legal or regulatory requirements for both senior responsible officers for all major projects and implementation plans prepared before projects are approved.

Implementation issues can affect the scope, cost, and schedule in the original project definition. For this reason, it is important that the implementation strategy is discussed as early as possible, preferably in the project appraisal process. The detailed implementation plan should build on this strategy and be included in the project submission to MoF in the budget preparation process. The implementation plan must capture all key project features, including risk identification and risk management. Box 7.11 outlines the key elements of a project implementation plan.

IMPORTANT DOCUMENTS

Documents	Uses
Legal and regulatory framework for project management	Assess institutional design
Guidelines for project management and templates for project implementation plans	Assess comprehensiveness of project management guidelines
Representative sample of project implementation plans	Assess quality of project implementation plans
Decision documents for appointment of project managers	Assess when project managers are appointed and what their responsibilities are

Box 7.11. Project Implementation Plan

The project implementation plan is a document that sets the key arrangements for the implementation of an investment project, to be then managed and monitored during the implementation stage.

It contains the following elements:

- Description of project management approach
- Scope statement
- Work breakdown structure
- Cost estimates, scheduled start dates, and responsibility assignments
- Performance measure baselines for schedules and cost
- Major milestones and target dates for each milestone
- Key staff required
- Key risks

Source: IMF staff, based on Blumenthal and Stoddard (1999).

EFFECTIVENESS

The effectiveness assessment should focus on how well the formal regulations are followed in practice. It is not uncommon that the formally appointed project managers have little direct involvement in project management and limited accountability. In some countries, the appointments follow organizational lines and managers are formally in charge of several hundred projects. Therefore, the effectiveness assessment must look at what are the actual practices when it comes to senior responsible officers. When these are appointed and how active are they in managing the project implementation process? Are they actually held accountable for project progress? How comprehensive are project implementation plans, when are they developed, and how high is the quality of these plans? The assessment should be based on review of a representative sample of project implementation plans.

- *Low effectiveness* implies that many major projects have neither identified senior responsible officers nor project implementation plans before project approval.
- *Medium effectiveness* means that most major projects have identified senior responsible officers *or* project implementation plans before project approval.
- *High effectiveness* indicates that most major projects have identified senior responsible officers *and* project implementation plans before project approval. Box 7.11 describes the content of a project implementation plan.

IFIs and DPs often require specific project management arrangements for projects in which they contribute to the financing. This may affect the effectiveness score on this dimension. If there are many externally funded projects and these are based on effective project management practices, this may influence the overall share of major projects that meet the requirements of this dimension. To influence the effectiveness assessment, both the project management practices that are applied and the share of projects covered by these should be documented.

USEFUL DATA SERIES

Data	Questions to Address
For a sample of major projects recently completed and projects currently ongoing, the stages of project implementation at which the project manager was appointed	What is the effectiveness of requirements for identified project managers?
List of implementing agencies that consistently produce project implementation plans, and at what project stage they are produced	What is the effectiveness of requirements for implementation plans prepared before projects are approved?
Share of major externally financed projects that apply stringent project management practices	Do externally financed projects increase the overall share of projects that are effectively managed?

Dimension 14.b: Has the government issued rules, procedures, and guidelines for project adjustments that are applied systematically across all major projects?

QUESTIONNAIRE

Low	There are no standardized rules and procedures for project adjustments.
Medium	For major projects, there are standardized rules and procedures for project adjustments, but do not include, if required, a fundamental review and reappraisal of a project's rationale, costs, and expected outputs.
High	For all projects, there are standardized rules and procedures for project adjustments and, if required, include a fundamental review of the project's rationale, costs, and expected outputs.

DEFINITIONS OF KEY TERMS

Term	Definition
Standard	See the Glossary.
Project adjustment	Changes to the project scope, location, function, schedule, or cost.
Major projects	See the Glossary.
Fundamental review and reappraisal	Repeated assessment of the project concept, project appraisal, and selection, without regard to sunk costs.

INSTITUTIONAL DESIGN

The purpose of this dimension is to assess whether project adjustments are based on clear and transparent rules. Standardized rules and procedures for adjustments aim to identify the full effect on the project, as soon as possible, of major changes in assumptions used when the project was first selected.

- A low score implies that there are no standardized rules and procedures for project adjustments. This could mean that project adjustments are not done—once a project is approved the project parameters remain unchanged, at least formally. It could also mean that any project adjustments are done ad hoc, without a clear regulatory basis. In some countries, there are rules for adjustment of contracts related to projects, but these adjustments do not lead to documented changes in the project plans (cost estimates, timetables, and expected results). Such contract adjustments do not constitute project adjustment from the perspective of this dimension.
- For a medium score, there are standardized rules in place. Standardized rules and procedures must address two issues: what triggers an adjustment, and how a project is adjusted. Projects have different risk profiles and vary regarding the ease with which project adjustments can be made. Rules and procedures may be different for school projects than for road projects. However, rules and procedures must be standard for similar types of projects.
- A high score indicates that the rules require a fundamental review of a project under predefined circumstances. For instance, if the cost for milestone X increases by 20 percent, then a fundamental review and reappraisal of the project must be conducted. This may lead to major project changes and even to cancellation. Rules and procedures may differ based on the sector or size of the project.

IMPORTANT DOCUMENTS

Documents	Uses
Regulatory framework for project adjustment	Assess institutional design
Guidelines and templates for project adjustment	Assess comprehensiveness of project adjustment guidelines
Representative sample of documents prepared for proposed project adjustments	Assess comprehensiveness and quality of project adjustment proposals

EFFECTIVENESS

The effectiveness of this dimension depends on how adjustments are made in practice and whether they follow the issued rules. If the design score is medium or high, but the regulations are not systematically applied and enforced, the effectiveness score should be lower than the design score.

The effectiveness assessment should look at the rationale for project adjustments. If project adjustments are made routinely, without careful consideration of the causes and the justification, the process is not effective. This is particularly true when scope change and cost escalation is accepted without being challenged and discussed. This factor should be assessed by reviewing a representative sample of project adjustment documents.

The assessment should also reflect how often projects are subject to formal adjustment. Given the uncertainty related to major investment projects, it is reasonable to assume that it will be necessary to make adjustments in project plans for at least some of the major projects under implementation. If this never happens, project implementation is unlikely to be effective. In a well-functioning system, it is also reasonable to assume that at least some projects may need to be cancelled or substantially redesigned following fundamental review. When adjustments are done, there should be a consistent update of cost estimates, timetables and implementation plans. Adjustments should not be done implicitly by allowing annual budget allocations to exceed initial project estimates without transparent disclosure.

- *Low effectiveness* means that project adjustment proposals are not analyzed and documented or no or few major investment projects are subject to formal adjustment over the implementation period.
- *Medium effectiveness* means that project adjustment proposals are consistently analyzed and documented, and a few major investment projects are subject to formal adjustment over the implementation period.
- *High effectiveness* indicates that a few projects are subject to formal adjustment over the implementation period and some of these projects are cancelled or substantially redesigned following fundamental review. Box 7.12 describes the arrangements for project adjustments and fundamental review in Korea.

Adjustments can be made through the budget process as well as in-year by the executive. The focus is on ongoing projects. The executive has authority to stop work on a project. However, the revised total project cost must be reflected in the budget process, along with an explanation for any change in the project and project implementation plan. The budget process should include references to projects that have been terminated.

USEFUL DATA SERIES

Data	Questions to Address
Number and size of major projects, number that were formally adjusted—how and why	What is the share of projects that are adjusted?
Number and size of projects that were terminated or substantially redesigned before completion	What is the frequency of project cancellation or substantial redesign?

Box 7.12. Project Adjustments in Korea

In Korea, a fundamental review is triggered if the costs of a project rise in real terms by more than 20 percent, or if forecast demand falls by more than 30 percent. The review process involves the Korea Development Institute, which is a specialized, independent agency that reviews all major public investment projects, including PPPs.

During 2006–10, 24 out of 140 projects subjected to a fundamental review in Korea were terminated because they were no longer viable. Total project cost savings of 18 percent were achieved (compared with the requested adjustments) on those projects that continued.

The adjustment process is governed by guidelines on total project cost management, which set out detailed procedures for the review and project adjustments. The review entails the following phases:

- Reassessment study of feasibility to determine the validity of the project and to suggest alternatives
- Reassessment of project plan to review the appropriate project scale, total project cost, and efficient alternatives of the project
- Reassessment of demand forecast to enhance the efficiency of financial investment and prevent the waste of budgets in advance by closely managing the change in demand in large-scale public investment projects
- Assessment of design modification to review the design changes proposed

Source: Government of Korea 2013.

Dimension 14.c: Are ex post audits of capital projects routinely undertaken?

QUESTIONNAIRE

Low	Major capital projects are usually not subject to ex post external audits.
Medium	Some major capital projects are subject to ex post external audit, information on which is published by the external auditors.
High	Most major capital projects are subject to ex post external audit information that is regularly published and scrutinized by the legislature.

DEFINITIONS OF KEY TERMS

Term	Definition
External audit	In-depth review conducted by the supreme audit institution (SAI) according to internationally recognized audit audit principles, or by an independent, external audit company.
Publish	See the Glossary.

INSTITUTIONAL DESIGN

The aim of this dimension is to assess whether ex post audits of projects contribute to ensure transparency and accountability regarding the expenditure of public funds on capital projects. For the purpose of this dimension, an audit is one that is devoted exclusively to one major capital project or group of projects. An audit of the organization responsible for the project, which would include spending on the project, does not constitute an audit for this purpose. Audit should go beyond financial regularity and look explicitly at project implementation, final project costs compared with initial estimates, and whether planned outputs were achieved.

- A low score indicates that the legal mandate for the external auditor does not cover ex post, external project audits or allow publication of the audit results. The SAI legal mandate may restrict its ability to do this type of audit. Alternatively, ex post project audits may be allowed under the SAI mandate, but it is not allowed to publish the audit results.
- A medium score indicates that the legal mandate for the external auditor covers ex post, external project audits and allows publication of the results of these audits. The institutional design assessment focuses on whether there are any

legal impediments to ex post audits and publication of audit results. The questions of whether such audits actually are conducted and if the audit results are published are discussed under "Effectiveness."

- A high score indicates that the legal mandate for the external auditor covers ex post, external project audits and requires that the results be both regularly published and scrutinized by the legislature. Regular publication requires that the external auditor has a published policy describing what type of audit will be published and when. Audits are scrutinized if they are presented to a public accounts committee of the legislature or its equivalent. The scoring of design should not be based on what the legislature does with the audit information.

IMPORTANT DOCUMENTS

Documents	Uses
Legal framework for SAI	Assess institutional design
Annual or medium-term audit plans.	Assess criteria for selection of projects for ex post audit
Representative sample of ex post audit reports	Assess scope and comprehensiveness of ex post audits
Documentation of hearing by the legislature	Assess whether audits are scrutinized by the legislature

EFFECTIVENESS

A key indicator for the effectiveness of this dimension would be the number of audits that have been undertaken over the past three years and that have been published. This would be consistent with the criteria for institutional design:[1]

- *Low effectiveness* means that no or very few major projects completed during the past three years have been subject to ex post audit.
- *Medium effectiveness* means that a few major projects have been subject to ex post audits that are published.
- *High effectiveness* means that some major projects have been subject to ex post audits that are published and scrutinized by the legislature. Box 7.13 describes ex post audit of capital projects in Mongolia.

Clear evidence of government decisions based on the audit findings may influence the effectiveness assessment. If audits have critical findings that are published and scrutinized by the legislature, this would be expected to affect how the government implements future projects. If such critical findings never lead to any legislative or executive actions, effectiveness might be lower than what is indicated by the numerically based score. On the other hand, if there are several clear examples that audits influence government decisions, the effectiveness score could be higher than the pure numerically based score indicated previously.

USEFUL DATA SERIES

Data	Questions to Address
The number and percent of completed major projects that were audited, and the audits published	What is the share of completed and published audits?
Documentation of legislative or executive actions based on audit findings	How many audits have had documented effects on government decisions?

[1] The quantitative thresholds recommended for this dimension are lower than what usually follows from the terms "some" and "most" in the PIMA framework. The reason is that audit selection typically is risk based and the auditor would usually focus on a limited sample of major projects.

Box 7.13. Ex Post Audit of Capital Projects in Mongolia

In Mongolia, all capital projects are subject to ex post external audit. In addition to auditing annual capital expenditure execution for each budget entity, the National Audit Office (NAO) also undertakes ex post audits for all finished capital projects. NAO produces an annual audit report on capital budget execution, based on completed entity and project audits. NAO may comment on public investment policy, feasibility studies, and procurement policies affecting capital project execution. The NAO submits this report to the Parliament in June every year. This report is also published on the Auditor General Office's website. Table 7.13.1 provides a summary of capital project execution in 2018, indicating that financial execution is 84.9 percent, while physical execution is 72.6 percent.

Table 7.13.1. Mongolian National Audit Office's Report on Public Investment Execution

Portfolio Minister	No. of Projects	Total Budget (tugriks)	Annual Budget (tugriks)	Financial Performance		Prepayment, etc.		Performance of Actual Work	
				Amount (tugriks)	Percentage	Amount (tugriks)	Percentage	Amount (tugriks)	Percentage
Cabinet of the President	3	770.7	770.7	754.3	97.9	–	–	754.3	97.9
Speaker of the Parliament	1	1,913.3	1,913.3	1,701.4	88.9	–	–	1,701.4	88.9
Prime Minister	8	5,685.3	3,762.8	2,709.9	72.0	–	–	2,709.9	72.0
Deputy Prime Minister	12	12,695.2	6,006.4	5,843.3	97.3	125.0	2.1	5,718.3	95.2
Head of the Cabinet of Ministers	32	23,920.9	11,881.8	10,459.8	88.0	580.0	4.9	9,879.8	83.1
Minister of Environment and Tourism	13	12,789.5	10,389.5	10,178.7	98.0	4,286.4	41.3	5,892.3	56.7
Minister of Foreign Affairs	3	1,800.0	1,800.0	1,800.0	100.0	–	–	1,800.0	100.0
Minister of Finance	14	78,098.1	32,810.0	20,786.3	63.4	–	–	20,786.3	63.4
Minister of Justice	40	59,590.9	37,390.0	37,204.3	99.5	–	–	37,204.3	99.5
Minister of Labor and Social Protection	25	36,723.3	17,340.0	16,852.6	97.2	1,650.9	9.5	15,201.7	87.7
Minister of Defense	4	19,417.4	3,599.5	3,334.8	92.6	–	–	3,334.8	92.6
Minister of Construction and Urban Development	78	430,501.9	80,338.4	67,408.4	83.9	10,608.2	13.2	56,800.2	70.7

Box 7.13 continues on next page

Table 7.13.1. (*continued*)

Portfolio Minister	No. of Projects	Total Budget (tugriks)	Annual Budget (tugriks)	Financial Performance		Prepayment, etc.		Performance of Actual Work	
				Amount (tugriks)	Percentage	Amount (tugriks)	Percentage	Amount (tugriks)	Percentage
Minister of Education	325	739,860.0	262,817.6	222,404.6	84.6	40,658.6	15.5	181,746.0	69.1
Minister of Road and Transportation Development	64	342,951.3	80,796.9	68,408.6	84.7	7,057.0	8.7	61,351.6	76.0
Minister of Mining	5	3,980.0	3,980.0	3,623.1	91.0	526.9	13.2	3,096.2	77.8
Minister of Agriculture and Industry	32	41,521.3	27,818.5	22,154.1	79.6	2,018.8	7.3	20,135.3	72.3
Minister of Energy	20	151,489.7	37,661.9	36,905.0	98.0	1,809.0	4.8	35,096.0	93.2
Minister of Health	63	193,319.5	60,754.8	46,422.7	76.4	14,554.9	24.0	31,867.8	52.4
Head of the Independent Authority Against Corruption	1	195.6	195.6	195.6	100.0	–	–	195.6	100.0
Head of NDC	1	340.0	340.0	339.4	99.8	–	–	339.4	99.8
Prosecutor General	4	1,562.0	452.0	450.8	99.7	–	–	450.8	99.7
Auditor General	1	500.0	500.0	498.0	99.6	–	–	498.0	99.6
Total	749	2,159,625.8	683,319.8	580,435.7	84.9	83,875.7	12.3	496,560.0	72.6

Source: Government of Mongolia 2019.
Note: NDC = National Development Authority.

Institution 15: Monitoring of Public Assets

Is the value of assets properly accounted for and reported in financial statements?

This institution covers monitoring of public assets. The PIMA framework is based on a cycle. Monitoring of public assets is the last institution in the questionnaire, but it feeds information into many of the institutions listed earlier. Notably, financial statement information is useful when establishing sustainable fiscal policy (institution 1), knowledge of existing physical assets is essential input to national and sectoral plans (institution 2), and the condition of facilities is important when budgeting for maintenance (institution 9). Information about public assets is also important when selecting new capital projects for implementation (institution 10).

- The first dimension under this institution asks whether there are regularly updated asset registers. An asset register provides information on physical assets. Asset registers are often centralized and include a variety of information useful for the purposes noted previously. The focus is on fixed assets. Small and inexpensive durable goods will generally be standardized items with limited dependence on the public investment system.
- The second dimension covers recording of nonfinancial assets in government financial accounts. Physical asset registers provide the basis for recording financial asset values in financial statements. While valuation can be made using many methods, generally asset values are more accurate the more often they are updated.
- The third dimension covers how depreciation is calculated and recorded. Depreciation is a major factor in the valuation of fixed assets. Depreciation cannot be used to estimate concrete maintenance needs for specific assets or groups of assets, but it does give an indicator of necessary reinvestment over time to maintain asset values.

Dimension 15.a: Are asset registers updated by surveys of the stocks, values, and conditions of public assets regularly?

QUESTIONNAIRE

Low	Asset registers are neither comprehensive nor updated regularly.
Medium	Asset registers are either comprehensive or updated regularly at reasonable intervals.
High	Asset registers are comprehensive and updated regularly at reasonable intervals.

DEFINITIONS OF KEY TERMS

Term	Definition
Asset register	A documented list of fixed assets
Comprehensive	In this context, a comprehensive asset register includes most fixed assets purchased using money appropriated in the budgetary central government capital budget, and for each asset lists at least: • Name and description • Organization accountable for it • Location • Date of purchase, delivery, or installation • Historic cost • Disposal status • Asset class • Current value
Update	Implies that new assets are added to the register, assets disposed of are deleted, and significant changes in existing assets are recorded.
Updat regularly	asset registers are updated at fixed dates or on rolling dates on fixed intervals, defined in a regulation, manual, or written instruction.
Reasonable interval	Ideally, an asset register should be updated at least every two years.

INSTITUTIONAL DESIGN

The aim of this dimension is to determine whether information on existing assets is known. This is an important basis for the production of information that is needed for other institutions. Asset registers are often maintained by line ministries and include specialized information for management purposes. For example, a roads department frequently has a register of road and bridges that includes detailed design and condition information needed for planning maintenance. Individual assets must be identifiable in an asset register, meaning that non-financial assets reported in financial accounts do not constitute an asset register.

- A low score indicates that there is no legal or regulatory requirement for comprehensive, regularly updated fixed asset registers. In some countries, legal or regulatory mandates for asset registers are missing completely. In other countries there may be regulatory requirements for asset registers in some institutions or for some types of assets, but not systematically across government.
- A medium score indicates that there are fixed asset registers and that these are required to be either comprehensive or regularly updated. If most of the government entities have asset registers, then the system is comprehensive. This would qualify for a medium score even if the register only provides historic costs and there is no mechanism for updating. If only a ministry of transport enters information in the asset register with no other ministry, then the asset register is not comprehensive. However, if this ministry of transport each year enters information on new roads and bridges, then it is updated regularly. For the regularity requirement to be meaningful, it must cover a reasonable share of government assets.
- A high score means that the registers are required by law or regulation to be both comprehensive and regularly updated. The legal framework should include provisions to ensure that the information in the asset registers is accessible, and that it is updated at least every second year.

IMPORTANT DOCUMENTS

Documents	Uses
Legal and regulatory framework for asset registration	Assess institutional design
Guidelines and templates for asset registration	Assess comprehensiveness and timeliness of asset register updates
Documentation of asset registry	Analyze actual contents

EFFECTIVENESS

The effectiveness assessment should gauge whether the information in fixed asset registers is in line with the formal requirements. Do the actual data match the requirements in terms of comprehensiveness? Are the data updated regularly, within the timeframes defined in regulations? Are there specific challenges that may undermine the comprehensiveness or the quality of the data?

In addition to being comprehensive and regularly updated, information on fixed assets must also be accessible. The asset register is used for the purposes of preparing financial statements, national and sectoral planning, and budgeting for maintenance (Institutions 1, 2, and 9). This dimension is concerned with accessibility of information across organizations and projects, not within a single organization. If information is not easily accessible to meet the needs of these three institutions, it is not effective. It is unlikely that a register that is not centralized is fully effective in this regard.

Unless there is a comprehensive government or public sector balance sheet (see dimension 15.b), the assessment of comprehensiveness could be based on comparing the contents of the fixed asset register with the PIMA estimate of capital stock.

- *Low effectiveness*: There is no centralized register of fixed assets, or fixed asset registers maintained by respective agencies have only partial coverage.
- *Medium effectiveness*: Either there is a centralized fixed asset register or fixed asset registers maintained by respective agencies are regularly

updated. The registers should cover most government fixed assets and be readily accessible.

- *High effectiveness*: Fixed asset registers are maintained or consolidated centrally and are verified and updated at least every two years to ensure their comprehensive coverage. The registers should cover all government fixed assets. Box 7.14 describes the asset registry in Indonesia.

USEFUL DATA SERIES

Data	Questions to Address
Overview of assets in centralized and/or decentralized asset registers	What is the volume of assets recorded in government asset registers? What is the level of detail contained in the asset register, such as asset classes, type of asset, volume physical location, control?
If asset registers are not centralized, a list of ministries/agencies that keep asset registers and with what type of data	Which ministries keep separate asset registers? Are these registers accessible to the MoF?
Dates when asset values and conditions were revised in last 10 years	How often are asset values updated?

Box 7.14. Fixed Asset Recording in Indonesia

Fixed assets are comprehensively recorded in Indonesia, and the data are used for reporting nonfinancial assets and depreciation in financial statements. The MoF Directorate General for State Asset Management (DGSAM) is responsible for tracking the purchase, use, transfer, and disposal of nonfinancial assets. To carry out this responsibility, it has created the State-owned Asset Financial Accounting Management System, SIMAK-BMN, which was introduced in 2006–07. SIMAK data include land, buildings, infrastructure, and equipment. All civilian line ministries enter data into the system continuously and submit formal reports semiannually to one of 71 operational offices of DGSAM located around the country. Data include the nature of the asset, age, historical cost, current value (if revalued), location, responsible agency, condition, asset class, and state of disposal. Assets are revalued when ordered by the president and revaluation was done in 2006 and 2018. DG Treasury includes fixed assets in the financial statements, using data from SIMAK. Depreciation is calculated on a straight line, based on rates for specific asset classes applied to asset-specific data in SIMAK.

SIMAK data are reliable and used for planning capital projects. Asset data from SIMAK are used by line ministry planning and budgeting staff to evaluate proposed capital projects. Existing facilities are identified using SIMAK, and judgments are made as to whether a new or expanded facility is required. The staff is also involved in evaluating asset disposal. Condition and value are verified in SIMAK before approval for disposal is given. The scope and quality of data in SIMAK are reasonably good overall. To verify data accuracy regarding newly purchased assets, spending units and DGSAM reconcile the data with capital spending recorded in SPAN for the comparable period. In addition, the Audit Board of Indonesia (BPK) audits SIMAK annually. For 2019, BPK issued an unqualified opinion at the central government level. Table 7.14.1 shows government fixed assets at the end of 2018 and 2019, illustrating a major revaluation in particular of government land during 2019.

Box 7.14 continues on next page

Box 7.14. (*continued*)

Table 7.14.1. Fixed Assets of the Indonesian Government, 2018 and 2019

(Billions of rupiah)

Asset	2019	2018
Land	4,565,754	1,018,648
Equipment and machinery	643,684	590,287
Buildings	365,443	287,028
Roads and other networks	852,163	593,241
Other fixed assets	50,631	55,538
Construction in progress	137,289	130,585
Total fixed assets (gross)	**6,614,964**	**2,675,327**
Accumulated depreciation	665,369	744,276
Total fixed assets	**5,949,595**	**1,931,051**

Sources: Government Financial statement years 2018 and 2019; Indonesia PIMA 2019; and IMF staff compilations.
Note: SPAN = State Treasury and Budget System.

Dimension 15.b: Are nonfinancial asset values recorded in the government financial accounts?

QUESTIONNAIRE

Low	Government financial accounts do not include the value of non- financial assets.
Medium	Government financial accounts include the value of some nonfinancial assets, which are revalued irregularly.
High	Government financial accounts include the value of most nonfinancial assets, which are revalued regularly.

DEFINITIONS OF KEY TERMS

Term	Definition
Government financial account	Financial statement of accounts as defined in national accounting standards.
Revalue	To value an asset after initial delivery to ascribe the current value of the asset.
Irregularly	Not regularly.
Regularly	See definition in Dimension 15.a.

INSTITUTIONAL DESIGN

The purpose of this dimension is to assess whether government financial statements provide information on nonfinancial fixed assets (for example, see Box 7.15). This information assists in the calculation of capital stock and net worth, and thus contributes to institution 1. There is some synergy between Dimension 15.a (asset register) and this dimension. Dimension 15.a addresses knowledge of the characteristics of nonfinancial assets. This dimension addresses the accounting value of nonfinancial assets.

- A low score implies that there is no legal or regulatory requirement that government financial statements provide systematic information about nonfinancial assets. There may be some ad hoc information available in government unit accounts, but this information is not included in the government financial statements in a systematic and comprehensive manner.
- A medium score implies that there is a legal or regulatory requirement for inclusion of some fixed assets in the government financial statements, but not for revaluation of these assets on a regular basis. A medium score also applies if most assets are required to be included but there is no provision for them to be revalued regularly, or if

few assets are required to be included but they should be revalued regularly.
- A high score implies that most fixed assets are required to be included in the government financial statements, and that these should be revalued regularly.

IMPORTANT DOCUMENTS

Documents	Uses
Legal basis for government accounts	Assess legal requirements for inclusion of nonfinancial assets in government financial statements
Accounting regulations, standards, and guidelines	Assess accounting standards and guidelines for accounting and revaluation of asset values
Government financial statements for the past 3–5 years.	Assess whether and how nonfinancial assets are disclosed in actual financial statements (effectiveness).

EFFECTIVENESS

The effectiveness of this dimension depends on the share of government assets that are included in the financial statements. The assessment of comprehensiveness could be based on comparing the stock of non-financial assets in the government accounts with the PIMA estimate of capital stock.

- *Low effectiveness* means that few government fixed assets are included in the accounts.
- *Medium effectiveness* means that some government fixed assets are included in the accounts.
- *High effectiveness* means that most are included in the accounts, and that these are revalued regularly. Box 7.15 describes accounting of government assets in Estonia.

USEFUL DATA SERIES

Data	Questions to Address
Value of nonfinancial assets in government financial statements	How comprehensive is the coverage of nonfinancial assets in the financial statements?
Volume of assets in asset registry	Are the financial statements consistent with the asset registry?
Estimated public capital stock from PIMA database	Is the value of nonfinancial assets in the financial statements comparable to estimated public capital stock?
External audit reports	Does the external audit report have observations regarding recording or valuation of government non-financial assets?

Box 7.15. Accounting for Fixed Assets in Estonia

Estonia introduced accrual accounting for government in 2000, and all government assets are appropriately recorded and accounted for in the financial statements. National accounting standards are based on International Public Sector Accounting Standards and cover all material parts of these standards. According to law, all government assets are identified by unique serial numbers and included in government asset registries. Asset values are reviewed and updated annually. Depreciation schedules are adjusted when capital maintenance projects are undertaken. All central government entities (approximately 150) do their accounting through a common accounting application, managed by the Shared Service Center under the MoF. For these entities, depreciation of assets is computed monthly, on the basis of depreciation rates determined by each entity but following central guidelines. All other general government and public sector entities (approximately 850) use separate accounting applications but submit monthly accounting reports in a predefined format for consolidation with central government reports.

Box 7.15 continues on next page

Box 7.15. (*continued*)

State Audit Office reports confirm that government accounting and financial statements are comprehensive and of high quality. Financial statements are consolidated and reported at three different levels: Central government, local government, and consolidated public sector, including corporations controlled by central or local government entities. There are detailed statements of public assets, including depreciation, acquisition, revaluations and disposal during the year. The consolidated statements are based on the central government accounting system and the reports provided by the other public sector entities. These reports do not include transaction-level data but provide the necessary detail to allow for reconciliation and elimination of internal transactions, including aggregate transactions with other government entities. For the 2016 accounts, the State Audit Office found that the accounts generally gave a fair and true value of financial transactions and values. However, the audit report observed that the auditor could not confirm the recorded value of assets in the Railway Infrastructure Company, given negative developments in the railway freight market. This was the only main observation regarding public assets.

Table 7.15.1. Nonfinancial Assets in Estonia, 2017

(Millions of euro)

	Land	Buildings	Defense	Equipment	Other	Work in Progress	Total
Balance	1,277.0	8,430.1	213.3	2,495.3	159.8	1,038.8	13,614.3
Acquisition cost	1,277.0	13,302.4	597.5	4,881.7	297.0	1,038.8	21,394.4
Accumulated depreciation	0.0	4,872.3	384.2	2,386.4	137.2	0.0	7,780.1
Average depreciation rate (%)	NA	3.7	7.5	5.4	5.1	NA	NA

Source: Estonia PIMA 2019.
Note: NA = not applicable.

Dimension 15.c: Is the depreciation of fixed assets captured in the government's operating statements?

QUESTIONNAIRE

Low	The depreciation of fixed assets is not recorded in operating statements.
Medium	The depreciation of fixed assets is recorded in operating statements, based on statistical estimates.
High	The depreciation of fixed assets is recorded in operating expenditures, based on asset-specific assumptions.

DEFINITIONS OF KEY TERMS

Term	Definition
Depreciation	The systematic allocation of the depreciable value of an asset over its useful life. Depreciation rates established in national accounting policies and standards should be used.
Fixed asset	Produced asset that is used repeatedly or continuously in production processes for more than one year (see GFSM 2014).
Operating statement	Statement of financial performance, as defined in GFSM 2014. "Income Statement," "Statement of Revenues and Expenses," "Operating Statement," and "Profit and Loss Statement" are equivalents under International Public Sector Accounting Standards (IPSAS).

Term	Definition
Statistical estimate	Use of statistical techniques, such as sampling, to draw conclusions without asset-specific information.
Asset-specific assumption	A detailed class of assets, and the ability to assign individual assets to that detailed class.

INSTITUTIONAL DESIGN

The aim of this dimension is to estimate how the annual decline in the value of nonfinancial assets is recorded in government financial statements. This will contribute to institution 1 as discussed previously. Annual depreciation is also a useful reference when assessing the overall maintenance budget.

- *A low score* indicates that there is no legal or regulatory requirement for recording of depreciation in government financial statements. This could be because nonfinancial assets are not included in the financial statements, as measured by Dimension 15.b. But there are also many countries that include at least some nonfinancial assets in their financial statements, but do not record depreciation of these assets. This is particularly common in countries with cash-based accounting frameworks.
- *A medium score* indicates that there is a legal or regulatory requirement that depreciation be recorded, based on statistical estimates. This can be done even if there is no comprehensive asset register. The financial statements must include nonfinancial assets, so that the overall value of these assets is known. But the depreciation can be based on statistically based rules of thumb, for instance a flat depreciation rate applied to all assets or major asset classes.
- *A high score* indicates that there is a legal or regulatory requirement that depreciation is recorded, based on asset-specific assumptions. This requires that there is a comprehensive asset register. There will usually be specific depreciation rates for each major asset class. Bridges may depreciate by 1–2 percent each year, while motor vehicles may depreciate by 10–15 percent.

IMPORTANT DOCUMENTS

Documents	Use
Legal basis for government financial statements	Assess legal requirements for inclusion of depreciation in government financial statements
Accounting regulations, standards, and guidelines	Assess accounting standards for assessing depreciation for different asset classes
Government financial statements for the last 3 years.	Assess how depreciation is disclosed in actual financial statements

EFFECTIVENESS

The effectiveness assessment should include analysis of whether the recorded depreciation seems adequate in light of international practices. The assessment should indicate whether relevant accounting standards and guidelines are complied with. If depreciation rates are particularly low or high, the reasons for this could be explored. In most cases, the problem is that depreciation rates are too low, often zero. This means that the government financial accounts will exaggerate the value of existing assets. Box 7.16 describes recording and depreciation of fixed assets in Georgia.

When calculating capital stock for a PIMA, the IMF uses different depreciation rates for public and private assets, for different country groups, and for different periods. The rates illustrate that different types of assets are built at different stages of development. Basic infrastructure (roads, bridges, and railroads) have long lifetimes and low depreciation, whereas more advanced infrastructure (telecommunication networks) have shorter lifetimes and depreciate faster. Table 7.1 describes the depreciation rates that have been used in the IMF estimates for capital stock.

Table 7.1. Depreciation Rates for IMF Capital Stock Estimates

	1860	1960	2013
Public capital			
Low income	2.50	2.50	2.50
Middle income	2.50	2.50	3.51
High income	2.50	2.50	4.59
Private capital			
Low income	4.25	4.25	4.25
Middle income	4.25	4.25	8.10
High income	4.25	4.25	10.41

Source: IMF 2015.

Data	Questions to Address
Total value of depreciation using a country's published depreciation rate(s)	What is the total level of depreciation in government accounts?
Difference in total value of depreciation using the depreciation rate used by a country and the rate used by the IMF when calculating capital stock	How does depreciation based on national practices compare to international practices?

Box 7.16. Recording and Depreciation of Fixed Assets in Georgia

In Georgia, the responsibility for asset record keeping is decentralized in line ministries, which follow guidelines issued by the MoF. Assets currently are defined as any single object costing more than 500 Georgian lari and having a life greater than one year (short term) or three years (long term). Assets are recorded at their historical cost and are not revalued. Ministries submit a list of major assets to the MoF, which is published on July 1 annually on the Treasury Department website since 2013. The list includes historical cost and accumulated depreciation.

Ministry-level financial statements are submitted in Excel spreadsheets to the MoF Treasury Department, which consolidates them (unofficially, at present). Oversight by the Treasury Department of spending unit–prepared financial statements indirectly assures a degree of quality control over asset records. The State Audit Office audits spending units annually, and in doing so conducts spot checks on the accuracy of asset records.

MoF reflects nonfinancial assets in the balance sheet and depreciation expense in the operating statement. This has been done since 2010 for budgetary central government. Depreciation is calculated using straight-line methods consistent with the Government Finance Statistics Manual 2001 (IMF 2001) and IPSAS.

Source: Georgia PIMA 2018.

8

Cross-Cutting Issues

Legal Framework

While legal aspects of Public Investment Management Assessment (PIMA) institutions are discussed under each institution, it is also important to consolidate and summarize common legal themes under the cross-cutting issues section of the report. This section should comment on any critical gaps, inconsistencies, and overlapping competencies that have been identified in this area.

Countries vary widely in how they document and give force to public investment management (PIM) frameworks. The types of legal instruments used depend on each legal system. Civil law countries tend to put greater weight on enacting the PIM framework in a primary law and spelling it out in detailed rules and regulations with legal force.[1] Common law countries to a greater extent may rely on policy documents and administrative guidelines. In many common law countries, such guidelines and policy documents will not constitute a law or be part of the law, but they are often considered to be binding on the public officials and practitioners. Nevertheless, such a distinction is not always clear-cut. Many common law countries have also introduced specific legislation (for example, dedicated public-private partnership laws) or a component of broader public financial management law for a more binding form of PIM framework. PIMA teams must be aware of these differences between the legal systems. The assessments must consider the overall legal and regulatory framework for PIM, not just high-level legislation.

[1] Civil law is based on Roman legal principles and was developed in continental Europe. Common law was developed in England during the Middle Ages; both forms of law spread to other parts of the world through colonialization and political influence. Common law countries include the United Kingdom, the United States, India, Australia, Canada, South Africa, New Zealand, and other former British colonies. Most of the other countries follow civil law.

The legal and regulatory framework for PIM will often comprise three levels:

- The highest level will often be law-governing public investment activities, particularly, in civil law countries. Some countries have separate public investment laws, but often this area is incorporated in a broader budget system law, public financial management law, or fiscal responsibility law. The law will generally establish the legal authority for the PIM system, allocate the key roles and responsibilities, and define the most important functions and procedures related to public investment, including how it is integrated with the budget process. Some aspects of public investment may be governed by specialized laws, for instance, on public-private partnerships, procurement, debt management, and fiscal decentralization. In common law countries, this overarching law may be missing or public investment may only be partially regulated through legislation.
- In all countries, there will usually be one or more regulations covering the public investment functions. These will define procedures for project identification, preparation, appraisal, and selection, as well as for project management, monitoring, and evaluation. Budget process regulations will also be important for public investments, for instance, regulations on budget planning and implementation, commitment controls, and cash management.
- There will also often be technical guidelines and methodological documents. These may cover a range of different issues, including detailed advice on how to analyze project proposals, how to structure PPP contracts, or how to ensure efficient procurement of major investment projects. Technical standards for different types of assets may also be important. The guidelines will usually not be legally binding and in

most cases will not be considered under the institutional design assessment. However, the guidelines will often impact on the effectiveness of different institutions.

The key issue in the assessment of the legal and regulatory framework is whether this supports a robust institutional design for PIM:

- Are all the main features of the system covered by legal and regulatory instruments?
- Does the legal and regulatory framework support institutional arrangements, mandates, coverage, procedures, disclosure, and accountability for effective PIM?
- Are the legal provisions sufficiently clear and unambiguous? Have they been updated to reflect recent institutional and policy developments?
- Is the legal framework transparent and accessible, and can it be understood by stakeholders from different professional backgrounds?
- Do guidelines and methodological documents provide sufficient support to implement the specific legal provisions?

IMPORTANT DOCUMENTS

Documents	Uses
Laws governing public investment	Assess overall completeness and comprehensiveness of the legal framework
Regulations governing specific aspects of public investment	Assess the adequacy and specificity of the regulation of key functions
Guidelines and methodological documents for public investment functions	Assess whether the guidelines provide sufficient technical guidance for project development, analysis, and implementation

The legal and regulatory framework will also impact the assessment of PIM effectiveness. The formal requirements in laws and regulations, and the guidance provided in guidelines and similar documents, will contribute to defining the potential impact of PIM. However, the effectiveness will depend on compliance with legal requirements and the attention given to technical guidelines, and several other factors.

However, in some cases the effectiveness of PIM may be negatively impacted by the design of a law or regulation. The legal framework may include significant exemptions from standard process and criteria, for example, too-permissive exceptions to mandatory public tender or significant exemptions from the standard process and criteria for priority projects or emergency projects. This will undermine the effectiveness of the relevant institutions.

Where PIM legal frameworks, rules, and procedures exist but are not followed, the effectiveness of PIM may require some legal adjustments. For instance, effectiveness can be improved by addressing weaknesses in the design of the legal frameworks for sanctions and internal and external audit. In other cases, the legal and regulatory framework may be too demanding, given the capacity of the country. In these cases, calibration of legal requirements to a more realistic level can improve the quality of PIM. This may include limiting the most extensive procedures to large and complex projects, with simplified procedures for small and routine projects.

The assessment of and recommendations related to specific legal and regulatory frameworks will usually be included under the relevant institutions. The cross-cutting discussion should summarize the relevant assessments and recommendations. In some cases, there could also be specific recommendations in the cross-cutting issues section, for example, related to the consistency between or integration of different pieces of legislation and regulations.

A useful part of the cross-cutting issue section could be a table listing for each PIMA institution the existing legal documents and guidelines, A second column could indicate year in which it came into effect. A third column may register institutional coverage (central government, public corporations, subnational governments) The last column could be used for comments by the PIMA team. The table could be part of this section or could be presented in an appendix.

Capacity

The cross-cutting analysis of staff capacity should build on and summarize the assessments of different PIMA institutions and dimensions for which there are identified capacity and skills gaps. Staff capacity is a critical factor in the implementation of public investment policies and has significant impact on the effectiveness of public investment institutions. As indicated in the generic theory of change for the PIMA framework (Figure 4.1), staff capacity will determine whether public investment activities are carried out as envisaged in the institutional design and whether the planned outputs are produced.

The organizations responsible for PIM will need staff with different expertise and skills in the different phases:

- In the planning phase, there is a need for planners, economists, engineers, social scientists, and project development specialists to help develop investment strategies and plans, coordinate these plans across levels of government, and appraise potential investment projects.
- During the budget allocation phase, budget and finance specialists are essential to ensuring adequate and transparent budgeting for investments, but there is also a need for engineers and other technical staff to determine maintenance needs, and for economists and social scientists to contribute to project selection.
- During project implementation, procurement specialists and contract lawyers play key roles in the procurement phase; control engineers, project managers, and monitoring and evaluation specialists contribute to project management and monitoring; and internal and external auditors and accountants will be critical to ensure accountability.

Many countries have emphasized the need to build and retain staff capacity for PIM. In the absence of competent staff, even the best designed institutions are unlikely to produce the intended results. Box 8.1 summarizes the project delivery capability framework in the United Kingdom and Box 8.2 provides a summary assessment of staff capacity for public investment in Estonia.

Some countries establish project implementation units (PIUs) to manage major projects, often as part of agreements with international financial institutions. These PIUs will follow the institution's procedures and exhibit good practices, including rigorous project appraisal, independent review of project appraisal, transparent project selection criteria, systematic project monitoring, differentiated requirements across the project cycle by size of project, and dedicated funding for capacity building in key functions. The good practices developed in these PIUs can usefully be mainstreamed in the regular government organizations and applied also to projects financed from the national budget. PIMA evaluators could analyze (and possibly recommend) how a transfer of skills from externally financed investment projects to regular civil service structures could be beneficial. In many countries, the dual-track nature of the national PIM framework exacerbates the skills gap as scarce skills are often dedicated to externally financed projects. This discrepancy can be reduced by forming joint staffing teams, allowing skills transfer across externally financed projects and other government projects.

IMPORTANT DOCUMENTS

Documents	Use
Organizational charts for key ministries and institutions	Assess if overall capacity is consistent with institutional framework and workload
Overview of staff capacity and skills	Identify potential gaps in the performance of specific functions
Training programs and capacity development plans	Assess plans for reducing and eliminating skills gaps
Strategies to promote and reward performance	Assess existence and adequacy of performance incentives

Box 8.1. Project Delivery Capability Framework in the United Kingdom

The Project Delivery Capability Framework describes the job roles, capabilities, and learning for all government project delivery professionals across government. These professionals are responsible for delivery of major public investments in the United Kingdom. The PDCF contains three elements: a career pathway/common set of job roles, a set of competencies, and a signpost for development opportunities specific to job roles. It provides a common language to describe job roles, and the knowledge, skills and abilities needed to perform project work across all areas of government. It is a useful resource for both current project delivery professionals and anyone interested in moving into the profession. Figure 8.1.1 lists the different job roles covered by the Project Delivery Capability Framework.

Figure 8.1.1. UK Government Project Delivery Career Pathways

Project Delivery Career Pathways		Civil Service Grades							
		B1	B2		A		SCS		
		EO	HEO	SEO	G7	G6	SCS 1	SCS 2	SCS 3
Leadership	Head of Profession						●	●	●
	SRO/Sponsor				●	●	●	●	●
	Portfolio Manager / Director				●	●	●	●	
	Programme Manager / Director			●	●	●	●	●	●
	Project Manager / Director		●	●	●	●	●	●	●
	PMO Manager / Director				●	●	●		
Project Delivery Specialists	Portfolio Analyst		●	●					
	Project Planner	●	●	●	●	●			
	Resource Manager		●	●	●	●			
	Business Case Manager	●	●	●	●	●			
	Assurance Manager	●	●	●	●	●			
	Configuration Manager	●	●						
	Project Support Officer	●	●	●	●				
	Governance & Reporting Manager	●	●	●	●	●			
	Risks & Issues Manager	●	●	●	●				
Business Analysis & Change Specialst	Advisor						●	●	
	Stakeholder Manager	●	●	●	●	●			
	Benefits Manager	●	●	●	●	●			
	Business Change Manager	●	●	●	●	●			
	Business Analyst	●	●	●	●				

Source: UK Infrastructure and Projects Authority 2018.

Any recommendations in this area should be based on a comprehensive assessment of capacity and skills compared with the key functions to be performed. Recommendations based on incomplete information should be avoided. In some cases, government staff may suggest that lack of staffing is a constraint, although overall staff numbers may be high by international comparison. One common challenge is that staff resources may be spent on low-value routine reporting activities instead of being reassigned to more important analytical tasks. Skills gaps may also be important. This implies that staff training and streamlining of processes often is a more appropriate response than increased staff numbers.

USEFUL DATA SERIES

Data	Questions to Address
Staffing levels for key functions	Are approved resources adequate to perform key functions?
Vacancy rates for key functions	Are actual resources adequate to perform key functions?
Functional reviews	Is the organizational design, including incentives, adequate to support staff performance?

Box 8.2. Staff Capacity for Public Investment Management in Estonia

The Estonian Ministry of Finance consists of about 450 staff, of which 90 percent have higher education, and staff turnover is modest. There are currently 71 staff in the three departments of the fiscal sector that are involved in PIM, with 48 in the State Budget Department, 4 in the Local Governments Financial Management Department, and 19 in the Fiscal Policy Department. For recruitment to professional-level positions, a master's degree is generally required, and 64 percent of staff meet this requirement and a further 24 percent have bachelor's degrees. Staff turnover is less than 10 percent each year, and average time of service in the Ministry of Finance is more than 10 years. Salary levels are competitive: the policy is to offer salaries equivalent to the median of similar positions in the private sector.

Staff capacity in the Ministry of Finance is high, in terms of numbers, skills, and experience; the same appears to be the case in other agencies involved in PIM. The Estonian Ministry of Finance has a higher staff complement than many finance ministries in the Nordic countries, and the fiscal policy and budget functions have staff numbers similar to these countries. Staff are highly educated, and many have long experience from the ministry and other relevant organizations. Estonia's highly developed and well-managed public financial management system is also a clear indication of the high level of staff competencies.

There are no apparent capacity gaps in the Ministry of Finance that hamper efficient PIM, and the ministry and the government's shared service center are also providing training to other ministries and agencies. There is a potential for improvements in public investment practices, and this will require learning and development among the staff. Staff have in the past demonstrated a strong interest in and ability to continuously improve practices and strengthen their capacities, and it is expected that this also will be the case in future reform processes. The Ministry of Finance has also contributed to training staff in other ministries and organizations in their areas of responsibility, including in procurement and performance budgeting.

Source: Estonia PIMA 2019.

Information Systems

Many public investment functions are based on computerized systems, and the quality of these systems is essential for the public investment process. Robust information systems support efficient PIM and enhance the transparency of the process. PIM information systems may be independent and separate, but often they will be partially integrated with other government financial management information systems. The extent and quality of this integration will often be a key feature in this cross-cutting assessment.

The following IT functions will be particularly important for efficient PIM:

- Project pipeline development (identification, preparation, design, and presentation)
- Project development and appraisal
- Interface with budgeting system
- Interface with procurement system
- Interface with budget execution and accounting system
- Project management
- Portfolio monitoring
- Interface with asset management system

The assessment should provide a consolidated overview of the main information systems used for PIM and the interfaces between them and with other information systems. The analysis should build on the description of relevant information systems under different PIMA institutions and dimensions. The cross-cutting assessment should include a brief description of the overall program architecture and the key functions performed by the systems. Organizational responsibilities, including for data entry, verification, and consolidation, should be described. Key interfaces with other systems, including the mechanisms for data transfer and reconciliation, should be outlined. Tables and figures describing key aspects of the information system structure will be useful. Box 8.3 describes Ireland's investment projects and programs tracker, and Box 8.4 gives an overview of Chile's integrated project database.

IMPORTANT DOCUMENTS

Documents	Uses
• Information system architecture • Specifications for individual IT systems	• Assess comprehensiveness and integration • Assess whether systems meet functional requirements of different PIMA institutions

USEFUL DATA SERIES

Data	Questions to Address
• IT system performance data • Public investment reports	• Is the IT system effective and available to users who need it? • Do the reports meet the needs for effective management and coordination?

The quality of the information system may be a key determinant in the assessment of different PIMA institutions. Information systems design and comprehensiveness affect the institutional design of PIMA institutions, and information system effectiveness has direct results for the overall effectiveness of PIM.

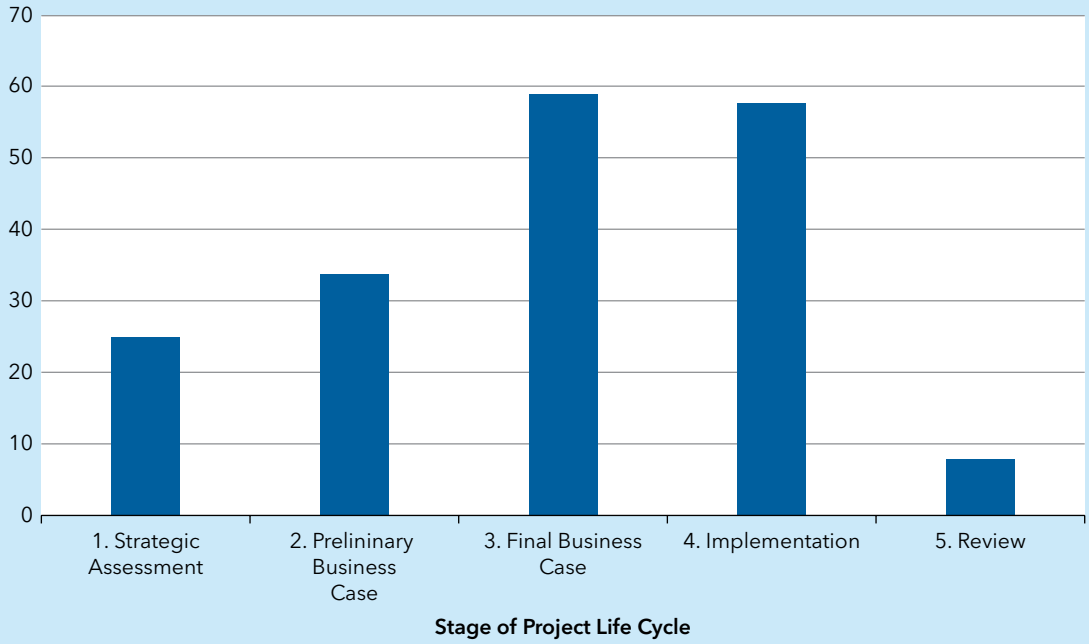
- Recommendations related to how the information system can improve the design or effectiveness of specific institutions should be discussed under that institution, with a summary under the cross-cutting issues section.
- Recommendations related to better integration or coordination between systems may be presented in the cross-cutting issues section.

Box 8.3. Investment Projects and Programs Tracker in Ireland

The Irish Investment Projects and Programs Tracker is an information system for monitoring of major investments through their different stages. The system is maintained by the Department of Public Expenditure and Reform, and data are provided by relevant government departments and agencies. The system is publicly available on the department's website.

The tracker reflects the portfolio of projects with estimated costs above €20 million in the pipeline. This includes projects at all stages in the project life cycle from strategic assessment through preliminary business case, final business case, implementation, and review. Figure 8.3.1 summarizes the number of projects at each stage.

Figure 8.3.1. Number of Projects in Ireland's Investment Projects and Programs Tracker, by Life Cycle Stage, 2020



Source: Government of Ireland 2020.

Box 8.4. Chile Integrated Projects Database

The Integrated Project Bank (BIP) is an information system for the registration of projects, programs, and basic studies that request annual financing through a report called the Investment Initiative File. The conceptual unit of the system is the investment initiative based on its life cycle, and it monitors the different phases of the process during the budget year: entry of initiatives, registration of their entry in the National Investment System (SNI), admissibility, technical-economic analysis and recommendation, creation of assignments, and their physical-financial execution.

The main objective of the BIP is to deliver, in a permanent and dynamic way, information on the management process of public investment as a whole, as well as each of the public institutions involved; link the institutions that participate in the public investment process and improve, through institutional coordination, decision-making, administration tasks, and planning tasks; and provide information to improve the formulation of investment initiatives. It also provides information of a diverse nature for operational control or management analysis activities.

The BIP comprises the following modules:

- *Consultation BIP* presents in a summarized and easily accessible way, available to all users of the web, the most relevant data of the current processes of public investment.
- *Work BIP* alllows public sector users, previously registered, to enter or modify information on their investment initiatives. It also allows investment analysts from the Ministry of Social Development to issue the Result of the Technical Economic Analysis (RATE).
- *Management BIP* is a set of tools to which Work BIP users have access, and its objective is to extract information from current processes or previous processes directly from the database, in order to support the analysis and control tasks of the process of public investment.
- *Central Administrator BIP* allows maintenance of the BIP system, preventive corrections, and updates to the system information.
- *BIP Regional Administration* allows preventive corrections to system information, particularly to initiatives in the region of the country to which the administrator belongs.

Source: Government of Chile 2017.

Appendix I

PIMA Questionnaire

Planning Sustainable Levels of Public Investment

1.	**FISCAL TARGETS AND RULES:** Does the government have fiscal institutions to support fiscal sustainability and to facilitate medium-term planning for public investment?
1.a.	Is there a target or limit for government to ensure debt sustainability?
1.b.	Is fiscal policy guided by one or more permanent fiscal rules?
1.c.	Is there a medium-term fiscal framework to align budget preparation with fiscal policy?
2.	**NATIONAL AND SECTORAL PLANNING:** Are investment allocation decisions based on sectoral and inter-sectoral strategies?
2.a.	Does the government prepare national and sectoral strategies for public investment?
2.b.	Are the government's national and sectoral strategies or plans for public investment costed?
2.c.	Do sector strategies include measurable targets for the outputs and outcomes of investment projects?
3.	**COORDINATION BETWEEN ENTITIES:** Is there effective coordination of the investment plans of central and other government entities?
3.a.	Is capital spending by subnational governments (SNGs) coordinated with the central government?
3.b.	Does the central government have a transparent, rules-based system for making capital transfers to SNGs and for providing timely information on such transfers?
3.c	Are contingent liabilities arising from capital projects of SNGs, public corporations (PCs), and public-private partnerships reported to the central government?
4.	**PROJECT APPRAISAL:** Are project proposals subject to systematic project appraisal?
4.a.	Are major capital projects subject to rigorous technical, economic, and financial analysis?
4.b.	Is there a standard methodology and central support for the appraisal of projects?
4.c.	Are risks taken into account in conducting project appraisals?
5.	**ALTERNATIVE INFRASTRUCTURE FINANCING:** Is there a favorable climate for the private sector, public-private partnerships, and PCs to finance infrastructure?
5.a.	Does the regulatory framework support competition in contestable markets for economic infrastructure (for example, power, water, telecoms, and transport)?
5.b.	Has the government published a strategy/policy for public-private partnerships and a legal/regulatory framework that guides the preparation, selection, and management of public-private partnership projects?
5.c.	Does the government oversee the investment plans of PCs and monitor their financial performance?

Ensuring That Public Investment Is Allocated to the Right Sectors and Projects

6.	**MULTIYEAR BUDGETING:** Does the government prepare medium-term projections of capital spending on a full cost basis?
6.a.	Is capital spending by ministry or sector forecasted over a multiyear horizon?
6.b.	Are there multiyear ceilings on capital expenditure by ministry, sector, or program?
6.c.	Are projections of the total construction cost of major capital projects published?
7.	**BUDGET COMPREHENSIVENESS AND UNITY:** To what extent are capital spending and related recurrent spending undertaken through the budget process?
7.a.	Is capital spending mostly undertaken through the budget?
7.b.	Are all capital projects, regardless of financing source, shown in the budget documentation?
7.c.	Are capital and recurrent budgets prepared and presented together in the budget?
8.	**BUDGETING FOR INVESTMENT:** Are investment projects protected during budget implementation?
8.a.	Are total project outlays appropriated by the legislature at the time of a project's commencement?
8.b.	Are in-year transfers of appropriations (virement) from capital to current spending prevented?
8.c.	Is the completion of ongoing projects given priority over starting new projects?
9.	**MAINTENANCE FUNDING:** Is maintenance receiving adequate funding?
9.a.	Is there a standard methodology for estimating routine maintenance needs and budget funding?
9.b.	Is there a standard methodology for determining major improvements, and are they included in national and sectoral investment plans?
9.c.	Can expenditures relating to routine maintenance and major improvements be identified in the budget?
10.	**PROJECT SELECTION:** Are there institutions and procedures in place to guide project selection?
10.a.	Does the government undertake a central review of major project appraisals before deciding to include projects in the budget?
10.b.	Does the government publish and adhere to standard criteria, and stipulate a required process for project selection?
10.c.	Does the government maintain a pipeline of appraised investment projects for inclusion in the annual budget?

Delivering Productive and Durable Public Assets

11.	**PROCUREMENT:** Is procurement based on effective competition and subject to adequate oversight?
11.a.	Is the procurement process for major capital projects open and transparent?
11.b.	Is there a system in place to ensure that procurement is monitored adequately?
11.c.	Is the procurement complaints review process conducted in a fair and timely manner?
12.	**AVAILABILITY OF FUNDING:** Is financing for capital spending made available in a timely manner?
12.a.	Are ministries/agencies able to plan and commit expenditure on capital projects in advance on the basis of reliable cash flow forecasts?
12.b.	Is cash for project outlays released in a timely manner?
12.c.	Is external (donor) funding of capital projects fully integrated into the main government bank account structure?
13.	**PORTFOLIO MANAGEMENT AND OVERSIGHT:** Is adequate oversight exercised over implementation of the entire public investment portfolio?
13.a.	Are major capital projects subject to monitoring during project implementation?
13.b.	Can funds be reallocated between investment projects during implementation?
13.c.	Does the government adjust project implementation policies and procedures by systematically conducting ex post reviews of projects that have completed their construction phase?
14.	**MANAGEMENT OF PROJECT IMPLEMENTATION:** Are capital projects well managed and controlled during the execution stage?
14.a.	Do ministries/agencies have effective project management arrangements in place?
14.b.	Has the government issued rules, procedures, and guidelines for project adjustments that are applied systematically across all major projects?
14.c.	Are ex post audits of capital projects routinely undertaken?
15.	**MONITORING OF PUBLIC ASSETS:** Is the value of assets properly accounted for and reported in financial statements?
15.a.	Are asset registers updated by surveys of the stocks, values, and conditions of public assets regularly?
15.b.	Are nonfinancial asset values recorded in the government financial accounts?
15.c.	Is the depreciation of fixed assets captured in the government's operating statements?

Appendix II

Indicative Scoring Thresholds

The scoring thresholds in Table II.1 are indicative, and PIMA assessment teams can deviate from these if data are unavailable, inconsistent, or incomplete, or if application of the thresholds would give a misleading assessment of the dimension in question. The effectiveness thresholds provide examples of possible quantitative criteria. These are not binding.

Table II.1. Indicative Scoring Thresholds

		Effectiveness Score	Institutional Design		
1	1.a	Low	There is no target or limit to ensure debt sustainability.	Low	No target or limit, or the debt level exceeds the established target or limit and there is no significant improvement over the past 3 years.
		Medium	There is at least one target or limit to ensure central government debt sustainability.	Medium	The debt level exceeds the established debt target or limit, but at least half the gap has been closed over the past 3 years. If the debt level fluctuates around the target, the target should have been met at least once in the past 3 years.
		High	There is at least one target or limit to ensure general government debt sustainability.	High	The debt level is within the target or limit.
	1.b	Low	There are no permanent fiscal rules.	Low	No fiscal rule or budget balance outturn deviates significantly (more than 1.0 percent of GDP) from fiscal rule.
		Medium	There is at least one permanent fiscal rule applicable to central government.	Medium	Budget balance outturn deviates somewhat (0.5–1.0 percent of GDP) from fiscal rule.
		High	There is at least 1 permanent fiscal rule applicable to central government and a comparable fiscal rule for most of general government.	High	Budget balance outturn is consistent with the fiscal rule.

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		Effectiveness Score	Institutional Design		
	1.c	Low	No medium-term fiscal framework (MTFF) is prepared before budget preparation.	Low	No capital allocation in MTFF, or approved capital budget deviates significantly (more than 20 percent) higher or lower than the capital allocation in the MTFF.
		Medium	An MTFF is prepared before budget preparation but it is limited to fiscal aggregates.	Medium	Approved capital budget deviates somewhat from (10–20 percent higher or lower than) the capital allocation in the MTFF.
		High	An MTFF is prepared before budget preparation, which distinguishes between current and capital spending and ongoing and new projects.	High	Approved capital budget is consistent with (less than 10 percent higher or lower than) the capital allocation in the MTFF.
2	2.a	Low	National or sectoral public investment plans are not published, or major investment projects are not described in national and sectoral plans.	Low	No description of investment projects in plans, budgets for relevant years include few (less than 25 percent) of the investment projects described in national or sectoral plans, or few (less than 25 percent) of the projects described in budgets have been described in national or sectoral plans.
		Medium	Some major investment projects funded by the budget are described in published national and sectoral plans.	Medium	Budgets for relevant years include some (25–75 percent) of the projects that appeared in national or sectoral strategies, or some (25–75 percent) of the projects described in budgets have been described in national or sectoral plans.
		High	All major investment projects, regardless of financing source, are comprehensively described in published national and sectoral plans.	High	Budgets for relevant years include most (more than 75 percent) of the projects that appear in national and sectoral plans and strategies, or most (more than 75 percent) of the projects described in budgets have been described in national or sectoral plans.

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		Effectiveness Score	Institutional Design		
	2.b	Low	There is no costing of investment projects in national and sectoral strategies or plans.	Low	No cost estimates in strategies, or estimates are significantly (more than 50 percent) higher than planned capital expenditure for the same period as the strategy.
		Medium	There are broad cost estimates for investment projects in national and sectoral plans but	Medium	Cost estimates in strategies are somewhat (10–50 percent) higher than planned capital expenditure for the same period as the strategy.
		High	There are broad cost estimates for investment as well as specific cost estimates for major investment projects in national and sectoral plans, and cost estimates are reconciled with available resources.	High	Cost estimates in strategies are consistent with (less than 10 percent higher than) planned capital expenditure for the same period as the strategy.
	2.c	Low	There are no measurable targets for public investment in sectoral strategies.	Low	Performance data are used for management in few (less than 25 percent of) major projects.
		Medium	There are measurable output targets for public investment projects in sectoral strategies.	Medium	Performance data are used for management in some (25–75 percent of) major projects.
		High	There are measurable output and outcome targets for public investment projects in sectoral strategies or plans.	High	Performance data, including output and outcome information, are used for management in most (more than 75 percent of) major projects.
	3.a	Low	There is no legal requirement for systematically sharing SNG investment plans with central government.	Low	SNG investment plans submitted to the central government account for few (less than 25 percent of the total value of) SNG public investments.
		Medium	There is a legal requirement for sharing subnational government (SNG) investment plans with central government and for publishing these alongside central government investments.	Medium	SNG investment plans submitted to the central government account for some (25–75 percent of the total value of) SNG public investment.

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		Effectiveness Score	Institutional Design		
3		High	There are legal requirements for sharing SNG investment plans with central government and for systematic coordination of these between central government and SNGs.	High	SNG investment plans submitted to the central government account for most (more than 75 percent of the total value of) SNG public investment.
	3.b	Low	There is no legal or regulatory framework that establishes a transparent, rules-based mechanism for capital transfers to SNGs.	Low	No mechanism for predictable transfers, or actual capital transfers deviate significantly from amounts notified to SNGs (by more than 15 percent).
		Medium	There is a legal or regulatory framework that establishes a transparent, rules-based mechanism for capital transfers to SNGs, with transfer amounts announced less than 6 months before the fiscal year.	Medium	Actual capital transfers deviate somewhat from amounts notified to SNGs (by 5–15 percent) or actual notification is done less than 6 months before the fiscal year.
		High	There is a legal or regulatory framework that establishes a transparent, rules-based mechanism for capital transfers to SNGs, with transfer amounts announced at least 6 months before the fiscal year.	High	Actual capital transfers are consistent with amounts notified to SNGs (deviate by less than 5 percent) and actual notification is done at least 6 months before the fiscal year.
	3.c	Low	Legal framework does not require reporting of contingent liabilities from SNG, public corporation (PC), and public-private partnership projects.	Low	Few contingent liabilities (less than 25 percent of value) are reported to central government, or contingent liabilities are reported for none or 1 of 3 categories.
		Medium	Legal framework requires reporting to central government of contingent liabilities from SNG, PC, and public-private partnership projects.	Medium	Some (25–75 percent of) contingent liabilities are reported to central government, or contingent liabilities are reported for 2 of 3 categories.
		High	Legal framework requires reporting and public disclosure of contingent liabilities from SNG, PC, and public-private partnership projects in budget documents.	High	Most (more than 75 percent of) contingent liabilities are reported to central government and disclosed in budget documents, or contingent liabilities are reported and disclosed for 3 of 3 categories.

Table *continues on next page*

		Effectiveness Score	Institutional Design		
4	4.a	Low	There is no legal or regulatory requirement for formal, systematic appraisal of major investment projects.	Low	Few major investment projects (less than 25 percent regardless of funding source) are subject to stringent appraisal.
		Medium	There is a legal or regulatory requirement for formal, systematic appraisal of major investment projects.	Medium	Some major investment projects (25–75 percent regardless of funding source) are subject to stringent appraisal.
		High	There is a legal or regulatory requirement for formal, systematic appraisal of major investment projects, including for publication of appraisal results and/or independent review.	High	Most major investment projects (more than 75 percent regardless of funding source) are subject to stringent appraisal, and many (more than 50 percent) have published summary appraisal results and/or undergone independent review.
	4.b	Low	There is no standard methodology or central support for appraisal of investment projects.	Low	There is no standard methodology for analysis of investment projects, or the methodology is fully applied for few (less than 25 percent of) major projects.
		Medium	There is either a standard methodology or central support for appraisal of investment projects.	Medium	The standard methodology for analysis of investment projects is fully applied for some (25–75 percent of) major projects.
		High	There is both a standard methodology and central support for appraisal of investment projects.	High	The standard methodology for analysis of investment projects is fully applied for most (more than 75 percent of) major projects.
	4.c	Low	There is no regulatory requirement for analysis of risks related to investment projects.	Low	Few major investment projects (less than 25 percent) include stringent analysis of project risks.
		Medium	There is a regulatory requirement for analysis of risks related to investment projects.	Medium	Some major investment projects (25–75 percent) include stringent analysis of project risks.
		High	There is a regulatory requirement for analysis of risks related to investment projects and for development of risk mitigation plans.	High	Most major investment projects (more than 75 percent) include stringent analysis of project risks and risk mitigation plans.

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		Effectiveness Score	Institutional Design		
5	5.a	Low	The legal and regulatory framework restricts the provision of economic infrastructure to domestic monopolies or establishes few economic regulators.	Low	Private companies have small market shares (less than 25 percent in 2 major markets).
		Medium	The legal and regulatory framework supports competition in some major infrastructure markets and establishes some economic regulators.	Medium	Private companies have medium market shares (25–75 percent) in at least 2 major markets.
		High	The legal and regulatory framework supports competition in most major infrastructure markets, and economic regulators are well established.	High	Private companies have high market shares (at least 75 percent) in at least 2 major markets.
	5.b	Low	There is no published strategy/policy framework for public-private partnerships, and the legal and regulatory framework is weak.	Low	Few (less than 5 percent of) public investments the past 3 years have been implemented as public-private partnerships and are consistent with the public-private partnership policy and legal/regulatory framework.
		Medium	A public-private partnership strategy/policy has been published, but the legal and regulatory framework is weak.	Medium	Some (5–10 percent of) public investments the past 3 years have been implemented as public-private partnerships and are consistent with the public-private partnership policy and legal/regulatory framework.
		High	A public-private partnership strategy/policy has been published, and a strong legal and regulatory framework guides the preparation, selection, and management of public-private partnership projects.	High	Many (more than 10 percent of) public investments the past 3 years have been implemented as public-private partnerships and are consistent with the public-private partnership policy and legal/regulatory framework.
	5.c	Low	There is no legal requirement that the government systematically review the investment plans of PCs.	Low	The review process covers few PC infrastructure investments (less than 25 percent of total value) over the past 3 years.

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		Effectiveness Score	Institutional Design		
		Medium	There is a legal requirement that the government reviews the investment plans of PCs but not for publication of a consolidated report on these plans or the financial performance of PCs.	Medium	The review process covers at least the 5 largest PCs measured by assets or some (25–75 percent of) PC infrastructure investments over the past 3 years.
		High	There is a legal requirement that the government reviews the investment plans of PCs and publishes a consolidated report on these plans and the financial performance of PCs.	High	The review process covers at least the 10 largest PCs measured by assets or most (75 percent or more of) PC infrastructure investments over the past 3 years.
6	6.a	Low	There are no published multiyear estimates for capital spending in budget documentation.	Low	Medium-term capital projections are missing, or approved capital budget allocations deviate significantly (by more than 20 percent) from capital spending projections for the same years.
		Medium	Medium-term projections of aggregate capital spending are published in budget documentation.	Medium	Approved capital budget allocations deviate somewhat (by 10–20 percent) from capital spending projections for the same years.
		High	Medium-term projections for capital spending by ministry or sector are published in budget documentation.	High	Approved capital budget allocations are consistent (deviation less than 10 percent) with capital spending projections for the same years.
	6.b	Low	There are no multiyear ceilings on capital expenditure by ministry, sector, or program.	Low	No multiyear ceilings, or approved budget amounts for capital spending are significantly (more than 15 percent) higher than the aggregate multiyear ceilings for the same years.
		Medium	There are indicative multiyear ceilings on capital expenditure by ministry, sector, or program.	Medium	Approved budget amounts for capital spending are somewhat (5–15 percent) higher than the aggregate multiyear ceilings for the same years.

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		Effectiveness Score	Institutional Design		
		High	There are binding multiyear ceilings on capital expenditure by ministry, sector, or program.	High	Approved budget amounts for capital spending are consistent (less than 5 percent higher) with the multiyear ceilings for the same years.
	6.c	Low	There are no published estimates of total construction costs for all major projects in.	Low	Total construction costs for major projects are not included in budget documentation, or total costs are presented but changes in estimates are not identified.
		Medium	Total construction costs for all major projects are published, but without indication of the distribution of these costs over time.	Medium	Total construction costs for major projects are published in budget documentation, and changes in estimates are recorded and explained.
		High	Total construction costs for all major projects are published with indications of the distribution of these costs over a 3–5 year horizon.	High	Total construction costs and the annual breakdown of costs are published, and changes from one budget to the next are identified and explained in a published document.
7	7.a	Low	The legal and regulatory framework allows significant capital spending by extrabudgetary entities (EBEs), and there is no legal requirement for authorization or disclosure in budget documents.	Low	Capital spending by EBEs is significant (more than 10 percent of the capital spending in the central government budget), and little extrabudgetary capital spending (less than 75 percent) is authorized or disclosed in the budget.
		Medium	The legal and regulatory framework allows significant capital spending by EBEs, but there is a legal requirement for authorization or disclosure in budget documents.	Medium	Capital spending by EBEs is significant (more than 10 percent of the capital spending in the central government budget), but most (more than 75 percent of) EBE capital spending is disclosed in the budget.

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		Effectiveness Score	Institutional Design		
		High	The legal and regulatory framework allows little or no capital spending by EBEs, and any such spending should be authorized or disclosed in the budget.	High	Capital spending by EBEs is insignificant (less than 10 percent of the capital spending in the central government budget), and most of this (more than 75 percent) is authorized or disclosed in the budget.
	7.b	Low	The legal and regulatory framework requires none or only 1 of the 3 major financing sources (external, public-private partnerships, PCs) to be disclosed in the budget.	Low	None of the 3 sources are disclosed in the budget, or few projects in the listed categories are included in the budget (less than 50 percent of the total investment in these categories is included).
		Medium	The legal and regulatory framework requires that 2 of the 3 major financing sources are disclosed in the budget.	Medium	At least 2 categories are included in the budget, containing many of the projects in the listed categories (more than 75 percent of the total investment in these categories is included).
		High	The legal and regulatory framework requires that all 3 of the major financing sources listed are disclosed in the budget.	High	All 3 categories and most projects in these categories are included in the budget (the value of projects in the budget is more than 75 percent of the total investment in the 3 categories).
	7.c	Low	Capital and current budgets are prepared by separate ministries and presented separately.	Low	The current cost impacts of few (less than 25 percent of) capital projects are reviewed by the central budget department during budget preparation.
		Medium	Budget preparation and presentation are consolidated, but capital and current spending are not combined under a program or functional classification.	Medium	The current cost impacts of some (25–75 percent of) major capital projects are reviewed by the central budget department during budget preparation.
		High	Budget preparation and presentation are fully integrated. Current and capital spending are presented according to a program or functional classification.	High	The current cost impacts of most (more than 75 percent of) major capital projects are reviewed by the central budget department during budget preparation.

Table *continues on next page*

		Effectiveness Score	Institutional Design		
8	8.a	Low	The legal and regulatory framework does not require information on total project costs to be included in the budget documentation.	Low	Budget documentation includes total project costs of few (less than 25 percent of) major projects that are appropriated.
		Medium	The legal and regulatory framework requires that the budget provides information about total project costs.	Medium	Total project costs for some (25–75 percent of) major projects that are appropriated are disclosed in budget documentation.
		High	The legal and regulatory framework requires that the budget also provides information about multiyear commitments related to the projects.	High	Total project costs and multiyear commitments for most (more than 75 percent of) major projects that are appropriated are disclosed in budget documentation.
	8.b	Low	There are no legal limitations on in-year transfers of appropriations (virement) from capital to current spending.	Low	Virement from capital to current spending is a significant share (more than 15 percent) of the initial capital budget.
		Medium	Virement from capital to current spending requires approval by the Ministry of Finance (MoF).	Medium	Virement from capital to current spending is a moderate share (between 5 and 15 percent) of the initial capital budget.
		High	Virement from capital to current spending requires the approval of the legislature.	High	Virement from capital to current spending has been done with legislative approval and is a low share (less than 5 percent) of the initial capital budget.
	8.c	Low	There is no legal or regulatory mechanism that protects funding of ongoing projects.	Low	Some (less than 75 percent of) ongoing projects receive funding as needed, or there are several examples of major projects not receiving sufficient funding.
		Medium	There is a legal or regulatory mechanism that protects funding of ongoing projects.	Medium	Most (75–90 percent of) ongoing projects receive funding as needed, or there are few examples of major projects not receiving sufficient funding.
		High	There is a legal or regulatory mechanism that protects funding for ongoing projects in the annual budget and over the medium term.	High	All (over 90 percent of) ongoing projects receive funding as needed, or there are no examples of major projects not receiving sufficient funding.

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		Effectiveness Score	Institutional Design		
9	9.a	Low	There are no standard methods for assessing the needs for routine (current) maintenance and its cost for main asset classes (for example, roads, buildings).	Low	Approved budget allocations for current maintenance funding for main asset classes are clearly inadequate (less than 50 percent of assessed maintenance needs). If there are no precise estimates for maintenance needs, maintenance funding is less than 2 percent of estimated asset replacement values.
		Medium	There are standard methodologies for assessing the needs for routine maintenance and its costs for main asset classes (for example, roads, buildings), but there is no formal requirement that the methodologies determine budget submissions for current maintenance.	Medium	Approved budgets for current maintenance funding for main asset classes are somewhat inadequate (50–90 percent of assessed maintenance needs). If there are no precise estimates for maintenance needs, maintenance funding is more than 2 percent of estimated asset replacement values.
		High	There are standard methodologies for assessing the needs for routine maintenance and its costs for main asset classes (for example, roads, buildings), and there is a formal requirement that the methodologies determine budget submissions for current maintenance.	High	Approved budgets for current maintenance funding for main asset classes are broadly in line with requirements (at least 90 percent of assessed maintenance needs).
	9.b	Low	There are no standard methodologies for determining the needs for major improvements (capital maintenance).	Low	Approved budgets for capital maintenance are clearly inadequate (lower than 50 percent of estimated needs). If there are no precise estimates for capital maintenance needs, funding is less than 2 percent of asset replacement values.
		Medium	There are standard methodologies for determining the needs for improvements (capital maintenance), but these assessments are not reflected in national or sectoral plans.	Medium	Approved budgets for capital maintenance are somewhat inadequate (between 50 and 90 percent of estimated needs). If there are no precise estimates for capital maintenance needs, funding is more than 2 percent of asset replacement values.

Table *continues on next page*

		Effectiveness Score	Institutional Design		
		High	There are standard methodologies for determining the needs for major improvements (capital maintenance), and these needs are fully reflected in national and sectoral plans.	High	Approved budgets for capital maintenance are broadly in line with requirements (at least 90 percent of estimated needs).
	9.c	Low	Routine and capital maintenance cannot be systematically identified in the budget.	Low	Some (less than 75 percent of) estimated maintenance funding is identified in the budget.
		Medium	Routine and capital maintenance can be systematically identified in the budget documentation using either the budget classification or analytical information regularly provided in budget documentation.	Medium	Most (more than 75 percent of) estimated maintenance funding is identified in the budget.
		High	Routine and capital maintenance can be systematically identified and regularly reported in budget documentation with approved budget amounts and actual spending by ministry.	High	Most (more than 75 percent of) estimated maintenance funding is identified in the budget and regularly reported with aggregate actual spending by ministry.
10	10.a	Low	There is no formally required central review process for major capital investment projects (including those funded by donors or public-private partnerships) before consideration of inclusion in the budget.	Low	The number of projects rejected or returned for further development is low (less than 5 percent of those submitted).
		Medium	There is a formally required central review process for major capital investment projects (including those funded by donors or public-private partnerships) before consideration of inclusion in the budget.	Medium	The number of projects rejected or returned is medium (from 5 to 10 percent of submitted proposals).

Table *continues on next page*

		Effectiveness Score	Institutional Design		
		High	There is a formally required central review process for major capital investment projects (including those funded by donors or public-private partnerships) before consideration of inclusion in the budget, and this review includes independent inputs.	High	The number of projects rejected or returned is high (more than 10 percent of submitted proposals), and some (at least 10 percent) of the reviews include independent inputs.
	10.b	Low	There are no published, specific criteria for project selection and the project selection process is not defined in law or regulation.	Low	Few (Less than 50 percent of) major projects are selected in accordance with a prescribed process and criteria.
		Medium	There are published, specific selection criteria, but the project selection process is not clearly defined in law or regulation.	Medium	Many (50–90 percent of) major projects are selected in accordance with the prescribed process and criteria.
		High	There are published, specific selection criteria, and the project selection process is clearly defined in law or regulation.	High	All (more than 90 percent of) major projects are selected in accordance with the prescribed process and criteria.
	10.c	Low	There is no formal requirement for a pipeline of appraised investment projects.	Low	Few (less than 50 percent of) major projects are selected from the pipeline.
		Medium	There is a pipeline of appraised projects, but no formal requirement that projects be selected only from this pipeline.	Medium	Many (50–90 percent of) major projects are selected from the pipeline.
		High	There is a pipeline in place (including those funded by donors or public-private partnerships) and a formal requirement that this pipeline be used to select projects in the annual budget and in the medium term.	High	All (more than 90 percent of) major projects are selected from the pipeline.

Table *continues on next page*

		Effectiveness Score	Institutional Design		
11	11.a	Low	The legal and regulatory framework does not require competitive procurement of major projects.	Low	Few (less than 50 percent of) major projects are based on effective competitive procurement.
		Medium	The legal and regulatory framework requires competitive procurement of major projects.	Medium	Many (between 50 and 90 percent of) major projects are based on effective competitive procurement.
		High	The legal and regulatory framework requires competitive procurement of major projects and publication of complete and timely procurement information.	High	All (more than 90 percent of) major projects are based on effective competitive procurement, and complete and timely procurement information is publicly available.
	11.b	Low	There is no procurement database or the information in the database is incomplete or not timely.	Low	There is no database with complete and timely information, or analytical reports are available after more than 6 months, or not at all.
		Medium	The database has reasonably complete information, but it is not required to produce regular analytical reports.	Medium	The database is reasonably comprehensive, but analytical reports are not available at all or after more than 6 months.
		High	The database has reasonably complete information and produces standard analytical reports to support a formal procurement monitoring system.	High	The database is used by a monitoring system that produces monthly or quarterly analytical reports drawing conclusions and making recommendations for improvement.
	11.c	Low	The legal and regulatory framework does not require that procurement complaints be reviewed by an independent body.	Low	No independent review body or the average time to decide complaints is long (more than 6 months).
		Medium	The legal and regulatory framework requires that procurement complaints be reviewed by an independent body, but the recommendations of this body are not required to be produced on a timely basis, nor published, nor rigorously enforced.	Medium	The average time to decide complaints is medium (2–6 months).

Table *continues on next page*

		Effectiveness Score	Institutional Design		
		High	The legal and regulatory framework requires that procurement complaints be reviewed by an independent body whose recommendations are required to be timely, published, and rigorously enforced.	High	Independent reviews are published and rigorously enforced, and the average time to resolve complaints is short (less than 2 months).
12	12.a	Low	There is no legal or regulatory framework for systematic cash flow forecasting.	Low	Cash flow forecasts are missing or not documented, or actual net cash flows on average deviate significantly (more than 10 percent) from forecasts.
		Medium	The legal or regulatory framework requires that cash flow forecasts are at least quarterly and that ministries be provided commitment ceilings at least a quarter in advance.	Medium	Actual net cash flows on average deviate somewhat (by 5–10 percent) from forecasts, and ministries are provided with commitment ceilings at least a quarter in advance. There may be examples of commitment ceilings not funded.
		High	The legal or regulatory framework requires that cash forecasts be monthly and that commitment ceilings for the whole fiscal year are provided at the beginning of the year.	High	Actual net cash flows on average deviate little (less than 5 percent) from forecasts, and commitment ceilings for the whole fiscal year are provided at the beginning of the year. There are no examples of commitment ceilings not funded.
	12.b	Low	There are no formal mechanisms to ensure timely release of project funds when payments become due.	Low	Not all (less than 75 percent of) invoices for major projects are paid on time.
		Medium	There are formal mechanisms to ensure timely release of project funds, but they are not sufficiently strong to ensure that funds always are released for payment in line with appropriations.	Medium	Most (75–90 percent of) invoices for major projects are paid on time.

Table *continues on next page*

		Effectiveness Score	Institutional Design		
		High	There are strong mechanisms to ensure timely release of funds for payment, in line with the annual appropriation.	High	All (more than 90 percent of) invoices for major projects are paid on time, and cash releases are in line with appropriations.
	12.c	Low	There is no legal or regulatory requirement that external financing is at the central bank.	Low	The MoF/treasury is informed of the cash payments (date, amount, and related project) for externally financed projects not later than one month from the date of payment.
		Medium	External financing is required to be held at the central bank but not as part of the main government bank account structure.	Medium	The MoF/treasury is informed of the cash payments (date, amount, and related project) for externally financed projects within a week from the date of payment.
		High	External financing is required to be fully integrated in the main government bank account structure.	High	The MoF/treasury is informed in advance of the cash payments (date, amount, and related project) for externally financed projects.
13	13.a	Low	There is no legal or regulatory framework for systematic monitoring of major capital projects.	Low	There are only partial data on portfolio delays and cost overruns (covering less than 50 percent of the portfolio), or many (more than 50 percent) of the monitored projects (by value) are behind schedule or over budget.
		Medium	There is a legal or regulatory framework for monitoring annual project costs and physical progress during implementation of major projects.	Medium	There are systematic data on portfolio delays and cost overruns for many projects (more than 50 percent of the portfolio), and some (25–50 percent of) major projects are behind schedule or over budget.
		High	There is a legal or regulatory framework for central monitoring of project costs and physical progress during implementation of major projects, including for in-year reports.	High	There are systematic data on portfolio delays and cost overruns for many projects (more than 50 percent of the portfolio), and few (less than 25 percent of) major projects are behind schedule or over budget.

Table *continues on next page*

		Effectiveness Score	Institutional Design		
	13.b	Low	The legal or regulatory framework does not allow reallocation of funds between projects under different appropriations.	Low	There is no evidence that reallocation has promoted accelerated implementation of projects, or capital budget execution is low (less than 75 percent).
		Medium	The legal or regulatory framework allows reallocation of funds between projects under different appropriations but does not require that this be based on systematic monitoring and transparent procedures.	Medium	There is some evidence that reallocation has promoted accelerated implementation of projects, and capital budget execution rate is medium (75–90 percent).
		High	The legal or regulatory framework allows reallocation of funds between projects under different appropriations and requires that this be based on systematic monitoring and transparent procedures.	High	There is significant evidence that reallocation has promoted accelerated implementation of projects, and capital budget execution rate is high (more than 90 percent).
	13.c	Low	There is no formal requirement for ex post reviews for major projects.	Low	Government ex post reviews cover few (less than 10 percent of) major projects.
		Medium	There is a formal requirement for ex post review of major projects focusing on project costs, deliverables, and outputs.	Medium	Government ex post reviews cover some (10–25 percent of) major projects.
		High	There is formal requirement for ex post review of major projects focusing on project costs, deliverables, and outputs conducted by independent parties and systematically used to adjust policies and procedures.	High	Government ex post reviews cover many (more than 25 percent of) major projects and the information has been systematically used to adjust policies and procedures.

Table *continues on next page*

		Effectiveness Score	Institutional Design		
14	14.a	Low	There are no legal or regulatory requirements for either appointment of senior responsible officers or implementation plans before approval of major projects.	Low	Not all (less than 75 percent of) major projects have identified senior responsible officers or project implementation plans before project approval.
		Medium	There are legal or regulatory requirements for appointment of senior responsible officers but not for implementation plans before approval of major projects.	Medium	Most (more than 75 percent of) major projects have identified senior responsible officers *or* project implementation plans before project approval.
		High	There are legal or regulatory requirements for appointment of senior responsible officers and for implementation plans before approval of major projects.	High	Most (more than 75 percent of) major projects have identified senior responsible officers *and* project implementation plans before project approval.
	14.b	Low	There are no standardized rules and procedures for project adjustments.	Low	Project adjustment proposals are not analyzed and documented, or few (less than 10 percent of) projects are subject to formal adjustment over the implementation period.
		Medium	There are standardized rules and procedures for project adjustments, but these do not require a fundamental review of the project's rationale, costs, and expected outputs when circumstances change significantly.	Medium	Project adjustment proposals are consistently analyzed and documented, and some (more than 10 percent of) projects are subject to formal adjustment over the implementation period.
		High	There are standardized rules and procedures for project adjustments, and these do require a fundamental review of the project's rationale, costs, and expected outputs when circumstances change significantly.	High	Some major projects are cancelled or substantially redesigned following fundamental review and some (more than 10 percent of) projects are subject to formal adjustment over the implementation period.

Table *continues on next page*

		Effectiveness Score	Institutional Design		
	14.c	Low	The legal mandate for the external auditor does not cover ex post, external project audits or allow publication of the audit result.	Low	Few (less than 10 percent of) major projects have been subjected to external ex post audit.
		Medium	The legal mandate for the external auditor covers ex post, external project audits and allows publication of the results of these audits.	Medium	Some (10–25 percent of) major projects have been subjected to external ex post audit.
		High	The legal mandate for the external auditor covers ex post, external project audits, and requires that the results be both regularly published and scrutinized by the legislature.	High	Many (more than 25 percent of) major projects have been subjected to external ex post audit.
15	15.a	Low	Fixed asset registers are not required by law or regula-tion to be comprehensive or regularly updated.	Low	There is no centralized register of fixed assets, or fixed asset registers maintained by respective agencies have only partial coverage.
		Medium	Fixed asset registers are required by law or regulation to be either comprehensive or regularly updated.	Medium	The centralized fixed asset register or registers maintained by agencies are regularly updated, cover most (at least 75 percent of) govern-ment fixed assets, and are readily accessible.
		High	Fixed asset registers are required by law or regulation to be both comprehensive and regularly updated.	High	Fixed asset registers are maintained or consolidated centrally, are verified and updated at least every 2 years, and cover all (at least 90 percent of) government fixed assets.
	15.b	Low	There is no legal or regulatory requirement that government financial statements provide systematic information about fixed assets.	Low	Few (less than 25 percent of) govern-ment fixed assets are included in the government accounts.

Table *continues on next page*

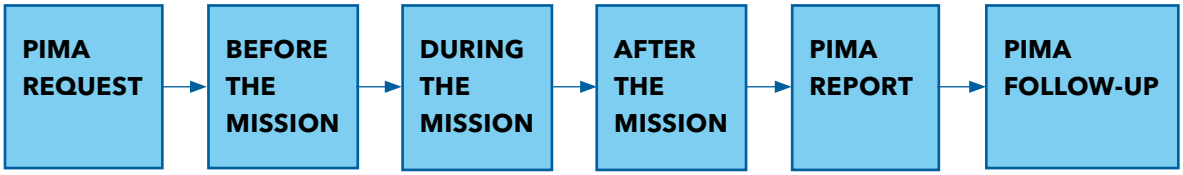
		Effectiveness Score	Institutional Design		
		Medium	There is a legal or regulatory requirement for inclusion of some fixed assets in the government financial statement, but not for revaluation of these assets on a regular basis.	Medium	Many (25–75 percent of) government fixed assets are included in the government accounts.
		High	There is a legal or regulatory requirement that most fixed assets be included in the government financial statements and revalued regularly.	High	Most (more than 75 percent of) government fixed assets are included in the government accounts and revalued regularly.
	15.c	Low	There is no legal or regulatory requirement for recording of depreciation of fixed assets in government accounts.	Low	Depreciation is less than 1 percent of fixed assets.
		Medium	There is a legal or regulatory requirement that depreciation of fixed assets be recorded in government accounts based on statistical estimates.	Medium	Depreciation is 1–2 percent of fixed assets.
		High	There is a legal or regulatory requirement that depreciation of fixed assets be recorded in government accounts based on asset-specific assumptions.	High	Depreciation is more than 2 percent of fixed assets.

Appendix III

Conducting a PIMA

Conducting a PIMA involves several steps, as outlined in Figure III.1.

Figure III.1. Steps in Conducting a PIMA



PIMA Request

Public Investment Management Assessments (PIMAs) are based on requests from IMF member countries. The requests may be a result of specific challenges that have emerged in the country's public investment management (PIM) system or a result of more general interest in continuous improvement of management frameworks. The requests will often emerge during the continuous dialog between the country and the IMF. Requests are assessed and approved by the IMF Fiscal Affairs Department (FAD) part of its annual work program, based on inputs from the relevant area department.

Before the Mission

The first step in planning a PIMA mission is to agree on the timing and scope of the mission. A PIMA mission will usually require two weeks in the country. The PIMA framework itself will define the broad parameters of the mission, but countries will often have specific issues or questions they want the assessment to cover, for instance:

- How to better include public investment in national planning
- How to incorporate PPPs in the overall management framework for public investments
- How to promote more effective and timelier project implementation

Mission preparation will usually include steps to familiarize the country with the PIMA framework and to have officials conduct an initial self-assessment. Familiarization may include a short preparatory mission to conduct a workshop. (Workshops may also be done remotely). The new infrastructure governance portal (https://infrastructuregovern.imf.org/) includes facilities to introduce and explain the PIMA framework to countries and to assist them in the self-assessment. The self-assessment is an effective way for countries to explore the PIMA framework and to help them prepare for the mission. The self-assessment will also help countries identify and engage the authorities' PIMA counterpart. This is important for the effectiveness of the mission.

Data requirements for the assessment are defined well ahead of the mission. There are substantial amounts of relevant data in IMF databases (see Box III.1). Data for the country itself and for relevant comparator countries are extracted from these databases for use during the PIMA. There will also be a need to collect additional data from the country:

- Data needed to fill gaps in data or to explain outliers in the Investment and Capital Stock Template. Additional data may be requested to develop a macro-fiscal analytical theme in the context section of the PIMA report.[1]

[1] Data may be severely lacking for some countries, in particular post-conflict countries. In such cases, the assessment team will need to populate the relevant databases.

Box AIII.1. PIMA Tables Maintained by the IMF

Investment and Capital Stock Template—an Excel spreadsheet designed and maintained by the FAD Expenditure Policy Division. It is the source for data and figures for use in the context section of the PIMA report, information on comparator countries, the efficiency frontier analysis, and intermediate PIM indicators such as volatility of public investment spending. It may be necessary to collect additional information to explain any biases, outliers, or limitations in the data for the mission country and comparator countries. For example, data may only cover central government while the counterpart country or comparator country is a federal state, or there may be anomalies in the data. Gaps in data can be filled or unreliable data corrected, by collecting data from the country before or during the PIMA mission.

The *PIMA Scoring Template*—an Excel spreadsheet designed and maintained by the FAD Public Financial Management divisions. It contains scores of all countries that have had a PIMA. It is the source for the form to enter dimension data and calculate institution scores, the heat map, and the spider charts for design and effectiveness.

- Data needed to help in scoring dimensions and writing the explanatory text in the assessment section of the PIMA report. The indications of important documents and useful data under each dimension in this handbook could be a starting point for defining the needs for additional data for the PIMA.
- Public investment plans and programs will be particularly useful to help the mission identify major projects for further analysis.

A detailed meeting schedule will also be prepared before the mission. The PIMA covers many topics and institutions. The meetings must be planned to ensure sufficient time is allocated to discussing each topic.

During the Mission

The introductory meetings will provide an overview of the PIMA framework and the plans for the assessment, as well as the initial findings from country data in the IMF databases. The purpose is to ensure that key counterparts are fully aware of the PIMA framework and approach and that the mission team is familiar with the specific concerns and issues of importance to the country. The presentation of country-specific public investment trends and efficiency helps put the PIMA into perspective and retain the authorities' attention from the beginning.

The topical meetings will usually occupy the mission team full time for at least the first week. The PIMA framework includes 45 dimensions, many of which will require separate meetings. There will typically be some additional meetings, including follow-up meetings, during the second week.

A midpoint presentation or workshop to discuss the preliminary assessment and recommendations is useful. This will allow the mission team to verify that their preliminary assessment is based on correct information and understanding, and that tentative recommendations are seen as relevant and credible. It will allow the authorities to clarify any misconceptions and to begin thinking about the recommendations.

The PIMA mission will prepare the draft report in the field. The report will reflect the framework described in this handbook and will be handed to the authorities by the end of the mission.

After the Mission

The draft PIMA report will be reviewed by the authorities. They will have the opportunity to correct any factual errors or misconceptions. They will also be asked to provide their views on the findings and recommendations of the report, including the action plan. The authorities will be asked to provide their comments within three weeks after the mission.

The draft PIMA report will also be reviewed by IMF departments. This will include review by FAD as well as the relevant area department. One key purpose of FAD's review is to ensure that the PIMA framework is consistently applied across different

countries. The review by the area department helps ensure that the findings are based on a good understanding of the situation of the country and that recommendations support the country's fiscal and development priorities.

The final report will reflect the comments received from the authorities and from IMF departments. The target is to finalize the report within six weeks after the PIMA mission.

Final PIMA Report

The final PIMA report will be submitted to the country, and country authorities will be requested to agree to publication of the report. FAD believes that publication will enhance the effectiveness of the PIMA assessment and the report but will only publish the PIMA with permission from the authorities. Agreement to publish the PIMA report announces the willingness of the government to acknowledge issues uncovered in the PIMA. The report provides a structure for discussion within government, and with civil society and development partners, to address PIM improvements.

PIMA Follow-Up

The PIMA action plan will often include proposals for further technical assistance from FAD and from other institutions. This assistance will be important for necessary capacity building and institutional development. The authorities are encouraged to use the action plan to request and coordinate technical assistance from the full range of development partners. IMF regional centers and in-country advisors will often be asked to contribute.

Periodic assessment of progress in strengthening PIM will be useful. This will usually be a component of any TA from FAD. A broader assessment could involve updating the PIMA after a few years. The update would usually include a PIMA self-assessment by country authorities.

Appendix IV

Outline of a PIMA Report

Public Investment Management Assessment (PIMA) reports are structured in several ways. Box IV.1 describes a common organization of the PIMA report. However, there is considerable variation in how PIMA reports are structured in practice. This appendix assumes that the organization in Box IV.1 is used. The recommendations must be adjusted to variations in the chosen structure.

Box IV.1. Common Organization of the PIMA Mission Report

Executive Summary
Section 1. Public Investment Context
- Trends in Total Public Investment
- Composition
- Impact
- Efficiency

Section 2. Public Investment Management Institutions
- Overall Assessment
- PIMA Institutional Analyses

Section 3. Cross-Cutting Issues
- Overall Assessment
- Cross-Cross-Cutting Issues Analyses

Section 4. Reform Priorities and Recommendations
- Overall Assessment
- Recommendations

Appendix 1. Action Plan
Appendix 2. Detailed PIMA Scores

Executive Summary

The executive summary should include the spider chart, the heat map at the institution level, and a high-level table of recommendations. The spider chart provides a motivation for change by comparing the country with other countries, the heat map explains the scoring by institution, and the table of recommendations puts forward actions to address public investment management (PIM) weaknesses. Different variations of the spider chart are possible—design, effectiveness, comparing design with effectiveness for the country, or comparing either design or effectiveness with comparable country groups. The choice of spider chart should support the main message of the report.

Section 1. Public Investment Context

This section has two major purposes. First, it provides a macro-fiscal context within which PIM institutions operate and thus highlights how macro-fiscal conditions help to shape PIM institutions. For example, high debt levels in a country may limit its ability to smooth multiyear funding for public investment, which affects the need to strengthen the medium-term fiscal framework, multiyear budgeting, and cash management institutions.

Second, the section provides a motivation to change by making cross-country comparisons. Using comparable countries, with similar macro-fiscal or other conditions, the relative performance of PIM institutions is highlighted.

Certain content should be covered in this section, which is typically divided into four subsections. The mission has discretion in the organization of the section, while covering main elements of the content the following main elements of the content:

Trends in total public investment. This addresses the history of public investment spending and resulting capital stock. Standard figures are provided by the Expenditure Policy Division, based on their dataset in the Investment and Capital Stock Template. Mission chiefs can be selective in what figures they choose to include in the report and how to group them, based on issues or trends to be highlighted or any perceived weaknesses in the data. Reference to the macroeconomic impact of public investment, available through other sources such as Article IV reports, is encouraged. Sources of funding are relevant as a measure of the sustainability of public investment spending (for example,

government debt levels and external supplier of capital to governments, such as international financial institutions or China, and the private sector).

Association of public investment with other macro-fiscal variables. Chief among these are economic growth, debt, and fiscal risk (for example, contingent liabilities).

Certain technical issues. These include (1) definition of capital stock—the cumulative sum of prior-year spending on economic infrastructure[1]; (2) the source of the data in the expenditure policy dataset; (3) infusions of capital into public corporation by government, which is shown as public investment in the expenditure policy data; and (4) explanation of data outliers.

Composition of public investment. This relates to (1) the purpose of public investment (for example, function, and social versus economic infrastructure) and (2) public investment financing sources (i.e., central government, general government, public corporations, public-private partnerships, and private sector).

Impact of public investment. This refers to the outputs and outcomes of public investment, including performance measures (qualitative and quantitative). Mission chiefs may decide whether to focus on qualitative, quantitative, or hybrid measures of performance. For example, some quantitative measures may be misleading, such as kilometers of roads per population for a densely populated country.

Efficiency of public investment. Thisbrings together capital stock and impact data to measure efficiency. For example, outcome measures (that is, perceptions index) are related to input measures (per capita capital stock) in the efficiency frontier and whisker charts. Volatility and churn should also be addressed here, because they directly affect the ability to translate inputs into outputs and outcomes. Any distortion caused by megaprojects should be noted.

[1] For a review of the methodology used by the IMF Fiscal Affairs Department to calculate capital stock, see https://infrastructuregovern.imf.org/content/dam/PIMA/Knowledge-Hub/dataset/WhatsNewinIMFInvestmentandCapitalStockDatabase_May2021.pdf.

Figures. The efficiency frontier and whisker charts should be included in this section and typically require explanation in the text. Missions should be prepared to explain verbally (not necessary in the text) that (1) the efficiency frontier figure is three dimensional; (2) the scale of public perceptions stops at 7; (3) perceptions are provided by the World Economic Forum—some mission country staff contribute to the survey and may be familiar with its methodology and weaknesses; (4) the increase in efficiency, as shown in the whisker figure, is not based on a percentage increase in the mission country's performance but rather is based on moving up on a scale of 100. Special attention needs to be given if the comparator countries perform significantly better than the mission country.

The text should analyze rather than describe the data. The themes or issues should be identified, which should be supported by figures.

Section 2. Public Investment Management Institutions

An introduction to this section should be used to explain the questionnaire, summarize scoring, and highlight issues. It should include the following:

- The purpose and structure of the section, possibly including the style of text for each institution (see writing options below);
- The principal concepts and methodologies used, such as PIM phase, institution, and dimension levels of the PIMA questionnaire (include the three-phase circular figure here), and scoring for design, effectiveness, and reform priority; and
- The overall scoring results, including the spider diagram and heat map. The text could summarize institutions that are particularly weak and strong, important linkages between institutions, or institutions that have received attention by the authorities in recent years. Connections with themes laid out in Section 1 should be made.

The text for each institution must cover two main issues. That is, (1) the reason for scoring and (2) practices that may be the subject of a recommendation, including material cross-cutting issues. The length of text for each institution should be not more than 1–1.5 pages.

The PIMA should use one of the following styles of writing for each institution. Whatever style is chosen, it should be used consistently for all 15 institutions.

Option 1

Paragraph 1: addresses why the institution is important and introduces the three dimensions and how they capture the essence of the institution.

Paragraph 2: the topic sentence provides an overall assessment of the design of the institution, using criteria terms used in the questionnaire. Supporting sentences address the design of each of the three dimensions.

Paragraph 3: the topic sentence provides an overall assessment of the effectiveness of the institution, using criteria terms in the questionnaire. Supporting sentences address the effectiveness of each of the three dimensions.

Paragraph 4: presents major issues and their importance, providing a basis for the assessment of reform priorities in Section 4 of the report.

Option 2

Paragraph 1: the topic sentence provides an assessment of the design and effectiveness of the first dimension, using criteria terms used in the questionnaire. Supporting sentences add details.

Paragraph 2: the topic sentence provides an assessment of the design and effectiveness of the second dimension, using criteria terms used in the questionnaire. Supporting sentences add details.

Paragraph 3: the topic sentence provides an assessment of the design and effectiveness of the third dimension, using criteria terms used in the questionnaire. Supporting sentences add details.

Paragraph 4: selectively analyzes the major strengths and weaknesses reflected in dimensions (not necessarily in each dimension) as they relate to the aims of the institution, the weaknesses of which provide the basis for reform priorities in Section 4 of the report.

Section 3. Cross-Cutting Issues

The overall assessment should be used to explain the purpose and structure of the section. Cross-cutting issues are defined as enablers of the 15 institutions in Section 2. Weaknesses should be noted in the Section 2 text, in particular if cross-cutting weakness materially impedes higher scores for the design and effectiveness of specific dimensions.

If any cross-cutting issue is found to materially influence institution scores, it should be analyzed. It can be the subject of recommendations. The length of the analysis of each cross-cutting issue should be comparable to the text for a typical institution in Section 2. The text should generally adhere to the following structure.

Paragraph 1: why the issue is important and how it influences PIM practices.

Paragraph 2: overall description of the current situation in the country with regard to the issue. Tables summarizing key cross-cutting elements (laws, IT systems) related to different PIMA institutions can be useful.

Multiple paragraphs: topic sentence identifies the institution(s) and how the issue affects it (them).

Concluding paragraph: summary assessment of the problem and how remedies might improve the scores of institutions.

Section 4. Reform Priorities and Recommendations

The overall assessment should provide a rationale for why the recommendations were selected from among all possible recommendations. This would involve tying together the seriousness of the problem and the likelihood of successful implementation. This section may also be used to identify commitments the authorities have already made, such as a reform roadmap, and describe how the recommendations fit within those commitments. Recommendations are not required for all institutions. The recommendations must reflect a realistic assessment of the capacity in the country and give guidance on priority and sequencing.

This section should be short and avoid unnecessary repetition from other sections. An alternative to a separate section on recommendations is to include these under the relevant parts of Section 3. This will

link the recommendations directly to specific institutions. Recommendations should follow a common format. Recommendations should be made in or generally follow the format shown below.

Appendix 1. Action Plan

The PIMA report should include a detailed action plan outlining the necessary steps and the timetable to implement the recommendations. Table IV.1 provides an example of a PIMA action plan for Georgia.

Box IV.2. Format for Recommendations

1. Issue or problem to be solved: short paragraph
2. Recommended solution: short paragraph, indicating intended change rather than actions to be taken
3. Actions to be taken: short paragraph(s) with bullets, and how they achieve the recommended solution (linked to action plan)
4. Responsible agencies: short list (if known)
5. Implementation risks: short paragraph with bullets

Table IV.1. Georgia: Proposed Action Plan

Action	2018	2019	2020	2021	Responsible Agency
Recommendation 1: Improve national and sectoral planning					
Update the public investment component of the national development strategy, including all sources of financing, all levels of government, and all procurement options	Obtain government approval for modification to the planning framework	Design new framework Conduct training in new framework	Implement new framework in (1) new national development strategy; (2) new government platform;		Government administration and Ministry of Finance (MoF)
Ensure that sectoral strategies distinguish public investment; are comprehensive in coverage; include existing projects and new initiatives; include a clear resource envelope and clear definition of economic efficiency objectives; and are updated for new investment plans	Obtain government approval for modification to the planning framework	Design new framework Conduct training in new framework	Implement new framework in sector strategies		Government administration and MoF
Ensure that the ministry action plans are aligned with the sectoral strategies and are fully coordinated to avoid fragmentation of PIM	Obtain government approval for modification to the planning framework	Design new framework. Conduct training in new framework	Implement new framework in the basic data and directions (BDD) and ministry action plans		MoF

Table continues on next page

Table IV.1 (*continued*)

Action	2018	2019	2020	2021	Responsible Agency
Recommendation 2: Improve project appraisal processes					
Implement the new PIM methodology	Review PIM methodology on basis of pilots and need to harmonize with public-private partnership framework	Approve timeline of extending mandatory coverage of PIM methodology	Review implementation	Review implementation	MoF and line ministries
Ensure that the MoF will be responsible, in all projects, for providing central support for line ministry project appraisal and for developing and maintaining the project appraisal methodology	Approve MoF order to allocate PIM responsibilities to different units of the MoF	Provide workshops for line ministries			MoF
Ensure that key economic assumptions in donor-funded public investment projects are consistent with the assumptions used for projects not funded by donors and by the MoF and the Ministry of Economy and Sustainable Development in their economic forecasting and risk assessments	Include in PIM methodology approved by the order of MoF	Establish regular communication channels with line ministries			MoF
Approve a discount rate methodology and specific discount rates, reflecting the economy's opportunity cost of capital, to be applied to all public investment	Undertake research (technical assistance support needed)	Include new discount rate methodology and new discount rates in draft amended decree on PIM methodology			MoF

Action	2018	2019	2020	2021	Responsible Agency
Recommendation 5: Strengthen multiyear budgeting					
Introduce a rolling baseline in the budget process		Develop methodology and simple model for ministries to prepare their baselines for each program	Train MoF and spending ministry staff in the methodology and model	Incorporate preparation of the baseline projections into the budget process	MoF
Strengthen the credibility of outer-year capital projections	Design reconciliation tables to be used in the BDD/budget documents for capital spending projections over the medium term	Use e-budget system functionality to fill in ministries' medium-term capital projections as base for their preparation of BDD/ budget submissions Include in budget instructions that ministries should provide reconciliations of their medium-term capital spending projections on a rolling basis and explanations of significant changes	As part of the training on the rolling baseline, discuss its role in strengthening the credibility of medium-term capital projections		MoF
Improve the clarity and linkage between different parts of the budget documentation	Include in Chapter VIII of the budget document the agreed definitions of capital/ investment and capital/ investment projects	Include in the budget document additions to existing and new tables for consistency and enable linkages to be made between Chapters III, VI, and the capital projects annex			MoF

Table continues on next page

Table IV.1 (*continued*)

Action	2018	2019	2020	2021	Responsible Agency
Recommendation 6: Implement mechanisms to prioritize the completion of ongoing projects in the budget process					
Facilitate and improve transparency for the prioritization of ongoing projects in the budget process	Specify in BDD/budget instructions that spending ministries should prioritize the completion of ongoing projects over new projects in their budget submissions	Use the e-budget system to pre-fill ministries' existing project commitments for the coming budget year and medium-term period Focus on status of ongoing projects during budget negotiations with ministries; require them to provide clear justification for beginning new projects alongside their ongoing project portfolio	E-budget system to include realistic total project costs, disaggregated by main category of costs		MoF
Recommendation 7: Develop standardized methodology for estimating maintenance needs					
Develop a standardized methodology for estimating current and capital maintenance needs Incorporate a review of the adequacy of planned maintenance expenditures in budget negotiations		Approve timeline for developing the methodology for particular asset classes, on the basis of relevant international experience	Develop a methodology for particular asset classes, on the basis of relevant international experience Maintenance	Include a review of planned maintenance expenditures in MoF's templates for its review of ministry submissions Enable IT systems to link data on asset conditions from asset registers into planning and budgeting systems	MoF

Action	2018	2019	2020	2021	Responsible Agency
Ensure future maintenance spending is captured in the full life-cycle costing and analysis of new projects			In line with the new PIM procedures, ensure that the documentation required for the analyses of the project includes the preparation of full life-cycle costs	Training for MoF and spending ministry staff on preparing life-cycle project costs	MoF
Ensure maintenance spending is explicitly budgeted and reported for all relevant assets			Provide in the budget documentation for an annex on annual and medium-term allocations and projections for maintenance spending	Ensure budget execution reports include comparisons by ministry of planned and actual maintenance expenditures	MoF
Recommendation 8:	**Operationalize the project selection procedures in the PIM Guidelines/Manual and incorporate in the budget process**				
Apply project selection procedures to all public investment, regardless of the funding source Formalize and incorporate new PIM procedures in annual budget calendar/process	Devise an implementation plan for the new procedures, including overall timetable and setting out specific activities and timing for operation of the new procedures for each type of stakeholder	Adopt a timeline for procedures to be covering all projects regardless the funding source	Implementation of the plan	Implementation of the plan	MoF, new PIM coordinating body

Table continues on next page

Table IV.1 (*continued*)

Action	2018	2019	2020	2021	Responsible Agency
Decide on key outstanding PIM procedures			Decide on thresholds of project to determine extent of project appraisal to be undertaken; criteria for independent review of appraisals by MoF; and criteria (checklist) for government to approve projects for inclusion in the list of approved projects		MoF, new PIM coordinating body
Enforce gatekeeping role by MoF	Work with the PIM coordinating body to ensure the effectiveness of the gatekeeping role	Prevent projects from bypassing the procedures and being parachuted into the selection process			MoF, PIM coordinating body
Set out a clear documentation trail for selection decisions at two key stages: for entry into the approved list of projects (pipeline); and for final inclusion in the budget (accountability)	Incorporate in the new procedures the documented steps which will be required for recording selection decisions and how they will be documented	Implement the documentation/ recording procedures			MoF, new PIM coordinating body
Recommendation 9: Strengthens procurement practices					
Introduce live machine-readable data		Improve current systems to introduce live machine- readable data			SPA

Action	2018	2019	2020	2021	Responsible Agency
Develop an application programming interface for "receiving from/ sending data to" the SPA's new Open Contracting Data Standard portal to allow and facilitate different types of users to access and analyze procurement data			Develop the application	Test and improve the application	SPA
Recommendation 10: Strengthen project implementation monitoring					
Issue guidelines for preparation of capital project monitoring reports		Design monitoring and reporting system. Align with standard project profile and implementation plan. Align with new FMC system	Pilot in two ministries with significant capital project implementation responsibility, for example, the Ministry of Regional Development and Infrastructure	Revise design on basis of pilot, if needed, and expand to other implementing agencies	MoF Ministry of Regional Development and Infrastructure
Recommendation 11: Strengthen project management					
Issues guidelines for preparation of project implementation plans		Design project management data and forms. Standardize to enable consolidation and reporting; more detail can be added for specific project/agency requirements. Align with monitoring system	Pilot in same ministries as project monitoring/ reporting system	Expand to other implementing agencies in coordination with new monitoring/ reporting system	MoF Ministry of Regional Development and Infrastructure

Appendix V

Glossary

Term	Definition
Assets	Any economic resource controlled by an entity as a result of past transactions or events and from which the economic owner may obtain future economic benefits over a period of time. Assets may be financial or nonfinancial, and the latter include infrastructure assets (see definition of infrastructure below).
Budget documents	The documents that are published with the executive's annual budget submission to the legislature or that are related to the process of preparing the budget. In addition to the draft appropriation bill, these documents could include a fiscal strategy statement, a medium-term budget framework, a fiscal risk statement, and a report on the execution of the budget for the previous year.
Budgetary central government	The ministries, departments, agencies, and other entities belonging to the central government whose spending, revenues, and borrowing activities are included in the central government's annual budget.
Cabinet	For the purpose of the field guide, this term (sometimes called the Council of Ministers) is used to represent the highest executive decision-making body in a country, whose decisions are applicable, and can be enforced, across the executive. The Cabinet (or Council of Ministers as it is sometimes called) is usually chaired by a prime minister or a country's president. The extent of the Cabinet's mandate and powers varies widely from country to country.
Capital budget	As defined variously in different countries. The approved capital budget includes appropriations that authorize spending on infrastructure assets and equipment for specified purposes and up to a specified amount. The capital budget is assumed to be annual, unless otherwise specified.
Capital projects	Projects funded through the capital budget. Such projects normally comprise investment in infrastructure (see definition below) and equipment.
Capital spending	Spending to acquire a physical asset or to extend the usable life of a physical asset.
Capital stock	Accumulated capital spending in a country. Since in many countries there are no direct estimates of the capital stock, it is usually measured in PIMA reports as the cumulative sum of public investment over time, adjusted for depreciation.
Central government	All government entities that are included in the budgetary central government, plus any units funded by extrabudgetary funds and nonmarket nonprofit institutions that are controlled by the central government. Depending on legal arrangements, social security funds are often considered part of central government.
Current budget	Most countries distinguish between capital and current (or recurrent) budgets. The latter includes spending on wages and salaries, and goods and services. Sometimes referred to as the "operating budget."
Development budget	Some countries have a current (or recurrent) and development budget, rather than a current and a capital budget. In such cases, the development budget may include elements of spending that are both recurrent and capital in nature. For the purpose of the field guide, use of the term "capital budget" in a country with a development budget should be interpreted as meaning all spending in the development budget that is capital in nature.

Term	Definition
Dimension	The lowest level in the PIMA questionnaire. There are 45 dimensions in the PIMA questionnaire.
External financing	Financing provided by international financial institutions or bilateral development partners, by means of grants and concessional or non-concessional loans. Sometimes it includes project-related loans provided, in the context of a bilateral agreement, by a foreign commercial bank to the government or a public corporation—often under the assumption that the project will generate enough funds to repay the loan. This term does not include funds supplied by externally-based investors in domestic securities or by the issuance of securities in foreign capital markets.
Financing source	Term used in the budget to describe a type of financing; it is not an accounting or banking term. The term is used to describe types of financing with broadly similar conditions, such as external financing or public-private partnerships. The term "budget funds" is commonly used to refer to the pool of funds from tax, non-tax, and domestic borrowing over which the government has full discretion over its use. "Financing source" should not be confused with "financing," or "below the line" transactions, used in the GFSM 2014 framework.
Fiscal transparency	Fiscal transparency refers to the clarity, reliability, frequency, timeliness, and relevance of public fiscal reporting and the openness of such information.
General government	Comprises all entities of the central, state, regional, provincial, municipal, or local government; all extrabudgetary entities, including social security funds, at each level of government; and all nonmarket nonprofit institutions that are controlled and financed mainly by government units. It does not include public corporations, even when these companies are owned and controlled by the government
Independent	Used in the PIMA questionnaire to describe external review, regulator, agency, expert, body, and entity. Generally, it describes a party who has no direction, connection to, or involvement in a decision-making process (for example, the selection of infrastructure projects) or is hired to provide impartial advice on that process, and is thus more likely to objectively apply a standard set of rules or criteria.
Infrastructure	Nonfinancial fixed assets, including economic and social infrastructure. Social infrastructure supports the provision of public services such as schools, hospitals, and public housing. Economic infrastructure supports economic activity with telecommunication networks, transportation assets ((for example, roads, railways, canals, ports, and airports), water and wastewater pipes and treatment plants, and electricity production and transmission (see https://www.imf.org/external/np/fad/publicinvestment/).
Medium-term	A period usually covering the current year plus 2–3 additional years which may be applied both to budgets and planning documents.
Ministry of Finance (MoF)	For this field guide, the MoF is assumed to act as the central fiscal authority and will usually include the central budget office. In many countries, a separate ministry or agency acts as the principal body responsible for national development planning.
Ongoing project	A project that has received at least one appropriation for its construction, regardless of expenditures. Appropriations for project preparation (including appraisals and feasibility studies), do not contribute to the definition of a project as ongoing, because it is not yet decided that the project will go forward.
Operating budget	See current budget.
Outlay	Cash outflows relating to expenditures, transfers, and subsidies.
PIMA framework	The range of issues addressed in the PIMA report, and the PIMA questionnaire.
PIMA questionnaire	Comprising 15 institutions and 45 dimensions. The basis for the scoring portion of the PIMA report. Part of the PIMA framework.

Term	Definition
Public corporation (PC)	A legal entity that is owned or controlled by the government and that produces goods or services for sale in the market at economically significant prices.
Public-private partnership (PPP)	Long-term contracts between a public and a private entity, whereby the private entity acquires or builds an asset or set of assets, operates it for a period, and then usually hands the asset over to the public entity. PIMAs treat as PPP any long-term concession for the construction, improvement/extension, or operation of public infrastructure. (see GFSM 2014).
Published information, or publications	Information that is made readily accessible by the general public in a proactive and inexpensive way. Modes of communication that constitute publication include printed documents prepared by the government, open-access government websites, social media, radio, television, newspapers and magazines.
Template: Investment and Capital Stock	An Excel spreadsheet designed and maintained by the FAD Expenditure Policy Division. It is the source of data and figures for use in Section 1 of the PIMA report. It is the source of information for comparator countries, and for the efficiency frontier figure.
Template: PIMA Scoring	An Excel spreadsheet designed and maintained by the IMF's Fiscal Affairs Department Public Financial Management divisions. Contains scores of all countries that have had a PIMA. It is the source of the form to enter data on the various dimensions of the PIMA framework and calculate the respective scores, the heat map, and the design and effectiveness spider charts.
Total project lifecycle costs	Total costs of designing, constructing, operating, and maintaining an asset over its lifetime. In some OECD countries, the term is used as synonymous with *total project costs* (see definition below).
Total project costs	Includes (1) the cost of feasibility studies and other preparatory work on the design of a project that may have been funded by budget appropriations that are separate from spending on the construction of the project itself; and (2) the sum of all the expenditures incurred on a project from the initiation and design phases in previous years, planned spending in the current year, and estimated spending required to complete the construction in future years. Total project costs usually exclude the cost of operating and maintaining the asset created by the project, but in some OECD countries it is used as synonymous with *total project lifecycle costs* (see definition above).

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Index

The Public Investment Management Assessment (PIMA) Handbook gives a concise overview of the framework used to identify key bottlenecks in public investment management and develop an action plan for reform.

This handbook is aimed at all stakeholders who are involved in PIMA or have a practical interest in public investment management. The PIMA is a comprehensive and standardized framework to assess public investment management for countries at all levels of economic development. PIMAs evaluate 15 institutions, or practices, involved in the three key stages of the public investment cycle: planning, allocation and implementation; it also assesses three cross-cutting institutions: the legal framework, IT systems, and staff capacity. The PIMA assesses both institutional design ("what is on paper") and effectiveness ("what is in practice").

This handbook provides a detailed practitioner's guide to applying the PIMA framework, including by describing the key issues and challenges identified in PIMAs, providing ample examples from country practices, as well as discussing the main recommendations to improve public investment management.

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