

# GUID 5250

## Guidance on the Audit of Public Debt



INTOSAI

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INTOSAI, 2020

1) Approved in 2020

2) Replaces ISSAIs 5410, 5411, 5420, 5421, 5422, 5430 and 5440



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### A. INTRODUCTION

- 1) Guidance pronouncements or GUIDs are non-mandatory guidelines for the use of the auditor to apply the International Standards of Supreme Audit Institutions (ISSAIs) in all types of audit.
- 2) The principles of public-sector auditing are enumerated in ISSAI 100. In auditing Public Debt, the auditor should refer to the General Principles and Principles Related to the Audit Process in ISSAI 100.
- 3) Based on these considerations, an INTOSAI GUID on the audit of PD covering the three audit types, namely, Financial Audit, Performance Audit, and Compliance Audit is now available – labelled and numbered by the INTOSAI IFPP as GUID 5250.

### B. OBJECTIVE

- 4) This GUID aims to serve as guidance for Supreme Audit Institutions (SAIs) in the audit of PD, applying the fundamental auditing principles provided in ISSAI 100 in all phases of the Financial Audit, Performance Audit and Compliance Audit, in order to produce quality audit reports beneficial to sound public debt management (PDM) and good governance.

## C. SCOPE

- 5) This GUID highlights issues specific to PD that would need to be considered when conducting audits of PD.
- 6) This GUID provides further guidance on how such issues could be addressed by using Financial/Performance/Compliance auditing and does not contain any further requirements for the conducting of the audit.

## D. ROLE OF SAIS

- 7) The UN Guiding Principles on Foreign Debt and Human Rights urges States to conduct periodic public debt audits in view of transparency and accountability in the management of resources and in deciding future borrowings.
- 8) Specifically, the UNCTAD Principles on Promoting Responsible Sovereign Lending and Borrowing states, among others, “An audit institution should conduct independent, objective, professional, timely and periodic audits of their debt portfolios to assess quantitatively and qualitatively the recently incurred obligations. The findings of such audits should be publicised to ensure transparency and accountability in debt management. Audits should also be undertaken at sub-national levels”.<sup>1</sup>
- 9) SAIs have a major role to play in exercising independent external oversight on PD in a country and in publicly reporting on the results of their audits. Through their recommendations, SAIs may encourage improvements in aspects of debt management (DeM), including on the reporting of PD, DeM strategies, and risk management practices.
- 10) Generally, the role of SAIs is to promote sound principles and practices in PD management within their legal authority. SAIs may also encourage and support the establishment of effective internal control in the management of PD. Depending on the type of audit conducted, the roles of SAIs may include

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1 UNCTAD Principles on Promoting Responsible Sovereign Lending and Borrowing ([https://unctad.org/system/files/official-document/gdsddf2012misc1\\_en.pdf](https://unctad.org/system/files/official-document/gdsddf2012misc1_en.pdf))

the following:

*a. Financial Audit*

- Promote sound public debt strategies and risk management practices
- Encourage complete and improved reporting and data disclosure policies on PD

*b. Performance Audit*

- Comment on the fiscal and economic implications: SAIs may undertake independent analyses, based on the quantitative and qualitative debt and debt-related information<sup>2</sup> disclosed, to foster better management of the PD and to improve the understanding of the current and future implications of public commitments and of fiscal sustainability
- Reduce government's fiscal vulnerability by promoting best practices in public debt management (PDM) policies including appropriate information generation and using indicators needed in analysis
- Encourage governments to focus more on vulnerability monitoring and give high priority to risk management, and production and publication of quality financial information
- Play an active role in protecting the financial condition of governments by helping to ensure that sound and robust public debt practices are in place

*c. Compliance Audit*

- Promote sound debt management practices through the functioning of a legal framework for PD that establishes the necessary governance, audit, reporting and accountability processes

<sup>2</sup> The international financial crisis in past years, and the associated large fiscal deficits and debt levels in many countries, underscored the importance of reliable and timely statistics on general government and, more broadly, public sector debt as a critical element in countries' fiscal and possibly external sustainability. Guidance materials which aim to improve the quality and timeliness of key statistics on a country's public debt, which are a critical element for evaluating a country's fiscal sustainability, may be found in - <https://www.imf.org/en/Publications/Manuals-Guides/Issues/2016/12/31/Public-Sector-Debt-Statistics-Guide-for-Compilers-and-Users-Guide-for-Compilers-and-Users-24905>; <https://www.imf.org/external/Pubs/FT/GFS/Manual/2014/gfsfinal.pdf>; <http://ec.europa.eu/eurostat/documents/3859598/7203647/KS-GQ-16-001-EN-N.pdf/5cfae6dd-29d8-4487-80ac-37f76cd1f012>

## PUBLIC DEBT AND PUBLIC DEBT MANAGEMENT

### **What is Public Debt?**

- 11) A broad definition of debt answers the following questions: *Which entities in a country take on debt? What concepts or instruments constitute debt in a country?*
- 12) This GUID has not attempted to develop one or more definitions of PD. Rather, the GUID identified various elements of PD which could be considered as well as various types of public bodies whose debt are to be included in the reporting of PD. PD may include the following:
  - » Liabilities or other commitments incurred directly by public bodies such as:
    - A central government<sup>3</sup>, or a federal government, depending on the manner of political organisation in the country
    - State, provincial, municipal, regional and other local governments or authorities
    - Owned and controlled public corporations and enterprises and
    - Other entities that are considered to be of a public or quasi-public nature
    - Liabilities or other commitments incurred by public bodies on behalf of private corporations or other entities, such as debt assumed by a

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3 The WB/IMF Revised Guidelines for Public Debt Management scoped DeM as the main financial obligations over which the central government exercises control. These obligations typically include both marketable and non-marketable debt, such as concessional financing obtained from bilateral and multilateral official sources and retail debt in some cases. Whether the broader public sector debt is included or excluded from the central government's mandate over DeM will vary from country to country, depending on the nature of the political and institutional frameworks.

public body following bailouts, defaults or other failures of a private corporation.<sup>4</sup>

- 13) Generally, PD includes, among others, domestic and foreign liabilities, and other commitments incurred directly by public bodies. These include securities, bank loans, long-term leases, guarantees, issues of national currency, proceeds from public savings schemes, loans from foreign governments and international bodies, pension and health care liabilities, and accounts payable.<sup>5</sup>
- 14) Each country reports its public debt in the terms established in its mandate and legal transparency standards. The various elements of liabilities and other obligations may or may not be stated in the financial statements as their liabilities but are reported in documents necessary for budget approval, policy monitoring and formulation, and other purposes.

### ***What is Public Debt Management?***

- 15) PDM is the process of establishing and executing a strategy for managing the government's debt in order to raise the required amount of funding at the lowest possible cost over the medium to long run, consistent with a prudent degree of risk.
- 16) According to the definition of PDM, the goals and objectives of government DeM are to:
  - Meet the borrowing requirements of the government
  - Borrow at the lowest possible cost over the medium to long run
  - Keep a prudent degree of risk in the debt portfolio and
  - Meet any other goals the government may have set, such as developing and maintaining an efficient market for government debt securities.

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4 Chapter 4: Selected Issues in Public Sector Debt, pp. 47, IMF Public Sector Debt Statistics (PSDS): Guide for Compilers and Users, 2014 [<https://www.imf.org/en/Publications/Manuals-Guides/Issues/2016/12/31/Public-Sector-Debt-Statistics-Guide-for-Compilers-and-Users-Guide-for-Compilers-and-Users-24905>]; Chapter 7: The Balance Sheet, pp. 209 to 212, GFSM, 2014 [[https://unctad.org/system/files/official-document/gdsddf2012misc1\\_en.pdf](https://unctad.org/system/files/official-document/gdsddf2012misc1_en.pdf)] provides detailed discussion on Contingent Liabilities.

5 Chapter 7, IMF PSDS: Guide for Compilers and Users, 2014; Chapter 7, IMF GFSM 2014; and Appendix 6, IMF External Debt Statistics Guide for Compilers and Users provides detailed description and accounting treatment for these debt elements.

- 17) SAIs carry out Financial, Performance, and Compliance audits on the subject matter of PD. The audits carried out and the reporting procedures depend on the legal mandate and reporting procedures established in the country. The subsequent parts of this GUID discuss 'how' auditors can apply the fundamental auditing principles in ISSAI 100 in the audits of PD.



## AUDITING PUBLIC DEBT

- 18) This section of the GUID provides auditors with supplementary guidance on the matters to consider when performing Financial, Performance, and Compliance audits of PD. It is not intended to cover all items necessary to perform an audit of PD. For auditing standards relevant to each type of audit, refer to the following principles and related ISSAIs and GUIDs:

Financial audit	ISSAI 200
Performance audit	ISSAI 300
Compliance audit	ISSAI 400

- 19) The **Financial Audit** of PD focuses on determining whether the entity's financial information on PD is presented in accordance with the applicable financial reporting and regulatory framework. Financial audits of public debt can be conducted separately or as part of the audit of the government's financial statements.
- 20) The **Performance Audit** of PD focuses on whether borrowers and lenders, sovereign debt managers, and other related parties are performing in accordance with the principles of economy, efficiency, and effectiveness, and whether there is room for improvement.
- 21) The **Compliance Audit** of PD focuses on obtaining evidence to assess whether the activities, public credit financial transactions and information comply, in all significant aspects, with authorities.
- 22) Audit of PD provides legislative, supervisory, and governance bodies, and the general public with an independent and objective evaluation of the

administration of government debt.

- 23) The approach to selecting the topics or financial statements may vary. Some SAIs have a bottom-up approach, where the auditor participates in the selection process. Other SAIs have a top-down approach, where the management selects audit topics and the auditor does not take part in the selection process. Some SAIs have a mix of both approaches.
- 24) After conducting risks assessment or problem analysis, and considering materiality, auditors can now select the audit area/topic/subject matter.
- 25) It is important for SAIs to have a process in selecting audit topics. SAIs may consider, among others: (a) materiality, including the financial, social, and political aspects of the subject matter; (b) significance; (c) risk, (d) auditability, (e) SAI mandate, (f) impact, (g) public or legislative interests or expectations, (h) principles of good governance, (i) non-compliance with internal controls, or the absence of an adequate internal control system, and (j) findings identified in previous audits.
- 26) Given the technical complexity of sovereign debt issues, sufficient technical knowledge and audit experience within the SAI are important factors in the selection of audit topics.
- 27) Auditors may develop their own selection criteria and procedures, in line with the requirements of the auditing standards/ISSAIs. The relative importance of each criterion will depend on the unique circumstances in the auditee.
- 28) After selecting and prioritising the audit topic, it is important for auditors to have an assurance regarding its auditability prior to commencement of the audit. Assessing auditability is an important requirement in the design process. The auditor considers if conducting an audit is relevant and cost-effective. Auditors also ensure that they possess the competence to observe actual debt operations, communicate with the DeM staff, and have access to PD reports.

## A. PLANNING AN AUDIT

- 29) As required under ISSAI 100, the principles related to audit planning include:  
a) establish the terms of the audit b) obtain understanding c) conduct risk assessment or problem analysis d) identify risk of fraud and e) develop an audit plan.

### » ESTABLISHING THE TERMS OF THE AUDIT

- 30) Auditors agree or establish a common understanding of the terms of the audit engagement with management and, when appropriate, those charged with governance.
- 31) In the audit of PD, auditors consider the legal mandate, previous audit work done, and what resources are available to perform the audit. Some SAIs have a restricted legal mandate to audit sovereign debt.
- 32) An important element for carrying out an audit of PD is the existence of a conceptual framework and a broad agreement/understanding of what constitutes PD as this is crucial for determining the scope and objectives for audits of PD.
- 33) In **Financial Audit**, auditors examine PD accounts and schedules supporting the financial statements for the purpose of determining the accuracy and completeness of reported and disclosed debt information.
- 34) In **Performance Audit**, auditors undertake assessment of the management, vulnerability, and sustainability of PD, as well as evaluation of the institutions and personnel responsible for PDM.
- 35) In **Compliance Audit**, auditors assess whether the activities of entities or offices involved in DeM or the Debt Management Office (DMO) are in accordance with the authorities governing these entities or offices.
- 36) It is also important to have clarity on the scope and coverage of the audit of PD.

- 37) The terms of the audit are usually discussed during initial or entrance conference wherein the audit scope, objective, and criteria, among others, are communicated or discussed to and agreed with the auditee.

» **UNDERSTANDING THE ENTITY AND ITS ENVIRONMENT**

- 38) Understanding the entities involved in PD, its context, the programs, activities, and functions related to PD, and the circumstances surrounding the audit, enables the auditor to have a frame of reference for applying professional judgment throughout the audit process, particularly in determining materiality and analysing the risks.
- 39) Auditors obtain sufficient understanding of the DMO and its environment, including internal control procedures that are relevant to the audit, to be able to develop an effective audit approach.
- 40) Therefore, auditors identify important aspects of the environment in which the audited entity (Ministry of Finance, DeM agency, or other public entities responsible for managing the PD being audited) operates, sufficient to enable them to understand the events, transactions, and practices that may have an effect on the way PDM activities are conducted and reported.
- 41) The activities that may be considered under this process are: (a) understanding the legal framework for PD and PDM arrangement (institutional and organisational) (b) understanding the general economic factors including PD markets and financial instruments (c) understanding the internal control over PD and (d) conducting risk assessment at the entity level.
- 42) The extent of understanding the legal framework for PD and PDM arrangements depends on the type of audit. In the case of **Financial Audit**, matters involving non-compliance with laws and regulations that come to the auditor's attention during the course of the audit should be communicated to those charged with governance, save where the matters are clearly inconsequential. However, the audit mandate, or obligations for public-sector entities arising from legislation, regulation, ministerial directives, government policy requirements or resolutions by the legislature, may result in additional objectives, such as

the responsibility to report all instances of non-compliance with authorities, even where clearly inconsequential.

- 43) In the case of **Performance Audit** and **Compliance Audit**, legal framework and PDM arrangements can be potential audit topics or subject matters for audit. Thus, understanding the legal framework and PDM arrangements<sup>6</sup> by performance and compliance auditors may be more extensive than financial auditors.
- 44) Legal framework may also impose audit limitations. For instance, some SAIs may not be authorised by law to perform a complete PD audit, or at least, to examine debt data of major government-controlled enterprises that contract loans guaranteed by the government.
- 45) Assessing the PDM arrangement against the criteria set out in the WB/IMF Revised Guidelines for Public Debt Management can provide the auditor with a structured view of the:
- Objectives and coordination of PDM
  - Transparency of and accountability for PDM activities
  - Institutional framework for PDM
  - PDM strategy
  - Risk management framework for PDM activities and
  - Role of PD managers in promoting efficient markets in PD instruments.
- 46) The organisational models of the DMO are defined by the authorities, which may differ from country to country. This could influence the audit scope, objective, and strategy. The most common models are those wherein the DMO is independent of centralised entities (such as the Ministry of Finance); others include it within the scope of the Central Bank or split it over more than one institution. A more detailed discussion of the structure and functions of the DMO can be found in the WB/IMF Revised Guidelines for Public Debt Management.

<sup>6</sup> The legal framework and managerial structure for PDM in the context of DeM performance indicators are discussed in the Debt Management Performance Assessment (DeMPA) Methodology of the WB, at <http://documents.worldbank.org/curated/en/305821468190742099/pdf/96671-WP-DEMPA-2015-Box391446B-PUBLIC.pdf>

- 47) General economic factors are likely to have an influence on the nature and extent of PDM activities. For example, when interest rates appear likely to rise, a debtor may try to fix the effective level of interest rates on its floating rate borrowings through the use of interest rate swaps, forward rate agreements, or caps to cushion the effect of possible increase in government expenditures. The decision to manage the effect of rising interest rates is contained in a PDM strategy.
- 48) The auditor obtains sufficient understanding of the markets used in borrowing and the types of financial instruments to plan and perform Financial Audit, Performance Audit, or Compliance Audit of PD. This may include:
- The operating characteristics and risk profile of the financial markets in which the PD managers operate (i.e. condition, reliability, and effectiveness of the primary and secondary markets for PD instruments)
  - The financial instruments used by PD managers and their characteristics;
  - Established policies for debt instruments and
  - The methods of valuation of the financial instruments. This can be particularly important where the audited entity is using derivatives, which may have complex features.
- 49) The auditor obtains and documents an understanding of the accounting system and the key management systems and controls sufficient for them to plan the audit. For an audit of PD, where there are likely to be complex processes, transactions, and accounting issues, the auditor considers key aspects of the internal control system, including all five components of internal control — control environment, entity risk assessment, control activities, information and communication, and monitoring.
- 50) The control environment is the foundation for an internal control system. Senior debt managers establish and maintain an environment throughout the entity that sets a positive attitude toward internal control.
- 51) The control environment includes:
- **Integrity and ethical values.** The effectiveness of internal control cannot rise above the integrity and ethical values of the individuals who create,

administer, and monitor them. Because senior management can override internal controls, integrity and ethical values of senior PD officials are essential to maintaining effective internal control given their ability to override internal control.

- **Human resource policies and practices.** The increasingly complex nature of PD operations — which may involve multiple currencies, variable interest rates, debt restructuring, and swaps of currency and interest payments — demands increasingly skilled staff to manage PD instruments. The senior debt manager is responsible for obtaining the competence levels necessary to achieve PDM goals and objectives and assigning employees with the appropriate skills to each task.
- **Organisational structure.** Most PD organisations have several operational units with different management functions and reporting responsibilities. Debt managers have two basic functions — a high-level function that involves coordinating debt operations with the government’s fiscal and monetary operations, and an operational function that involves managing specific debt transactions.

- 52) Auditors evaluate how senior DeM officials demonstrate a commitment to integrity and ethical values, establish human resource policies and practices that support PDM goals and objectives, and establish an organisational structure to achieve PDM objectives.
- 53) Debt managers assess the risks facing the country as it seeks to achieve its objectives. Risks encountered in PDM generally include market risks and operational risks. The definitions and detailed descriptions of these risks in the context of analysing vulnerability, sustainability, and financial indicators for assessing risks related to public debt are shown in Appendix 1. In addition, there is also a long-term consideration. Projected public debt (based on a country’s projected budget receipts and outlays), as well as other fiscal exposures, are important in analyzing a country’s long-term fiscal vulnerability/sustainability.
- 54) Operational risks arise in the normal course of managing debt transactions, which must be independently processed, confirmed, valued, and reviewed, and monitored by an independent administrative office. The responsibility for identifying risks and developing plans lies with management. A risk plan

would describe procedures to minimise damages caused by the risks.

- 55) In the course of an evaluation of internal controls on debt, auditors would examine the risk plan and compare the actual performance of debt managers against the risk plan.
- 56) The financial auditor considers whether there are events or conditions that may cast significant doubt on whether the audited entity's future resources will be sufficient to sustain public services and to meet obligations as they become due.
- 57) Establishing an effective link between DeM objectives and control activities is a critical component of internal control over DeM. Thus, debt managers are required to clearly establish the DeM objectives in specific areas, such as stability of the debt service, sufficient liquidity to pay current obligations, target average maturity of debt, desired mix of foreign currency debt, and active domestic capital market.
- 58) Auditors evaluate the adequacy of segregation of duties designed and implemented by debt managers to separate control activities related to authority, custody, and accounting of operations.
- 59) In order to achieve DeM objectives, policymakers and debt managers rely on an information system that captures and disseminates relevant and reliable PD information. Management needs access to relevant and reliable communication related to internal as well as external events affecting PD. Relevant and reliable PD information is easier to produce under the following conditions:
  - a uniform system of government accounts is used consistently in budget, cash, and PD operations
  - an integrated database provides consistent cash, budget, and PD data and facilitates the flow of information between and within operating units
  - an accounting standards-setting body establishes a uniform accounting framework and form and content reporting requirements and

- inter-agency coordinating groups manage the evolution of information systems in an integrated and responsive manner.
- 60) Timely PD reports help prevent irregularities and safeguard assets. Because PD operations are associated with large sums of cash, timely information on cash proceeds and payments associated with PD transactions can discourage fraud perpetrators.
- 61) A computer-based PDM system is necessary for a large number of PD transactions, which are complex and would require swift and accurate processing and retrieval<sup>7</sup>.
- 62) Auditors review and evaluate the audited entity's information systems, including the accounting system. To achieve this understanding, auditors obtain knowledge of the design of the accounting system, changes to that system, and its operation. The relative complexities of the instruments are important determinants of the necessary level of sophistication of both the audited entity's information systems (including the accounting system) and control procedures.
- 63) The review and evaluation of computer systems is likely to be most effective if performed by audit staff with relevant experience and expertise in this type of work. Before starting the review, the SAI may consider whether appropriately trained staff is available to undertake this work.
- 64) Debt managers monitor developments in the external environment, as well as the internal controls over PD, to respond promptly and effectively to change. From time to time, senior debt managers may require an independent and detailed assessment of internal controls. This external review ensures the relevance, regularity, and effectiveness of control activities.
- 65) Debt managers normally depend on periodic reports and communications from inside and outside stakeholders, including institutional creditors, sovereign credit rating agencies, and international organisations, to detect

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<sup>7</sup> Currently, there are two primary information systems available to manage PD: (1) the Debt Management and Financial Analysis System (DMFAS), a computer system designed by the UNCTAD, and (2) the Commonwealth Secretariat Debt Recording and Management System (CS-DRMS). DMFAS is a Microsoft Windows-based application that uses Oracle's Relational Database Management System. CS-DRMS has electronic links with the WB's debtor reporting system as well as with the Debt Sustainability Model of the WB.

unexpected trends or changes.

- 66) Internal control monitoring assesses the quality of performance over time and promptly resolves the findings of audits and other reviews. The auditor obtains an understanding of the major activities that the entity uses to monitor internal control over financial reporting, including control activities relevant to PD, and how the entity initiates remedial actions to deficiencies in its controls.

» **CONDUCTING RISK ASSESSMENT OR PROBLEM ANALYSIS**

- 67) “The auditor should consider and assess the risk of different types of deficiencies, deviations or misstatements that may occur in relation to the subject matter” (ISSAI 100.46), and apply the audit procedures as necessary, throughout the process, in order to keep at an acceptably low level the audit risk of forming incorrect conclusions/opinion.
- 68) PDM is complex and debt managers may not take proper account of all risks and exposures. Thus, auditors conduct risk assessment to properly identify the high risks areas as potential topics or subject matter for audit.
- 69) Auditors assess the risk environment of PDM. In their assessment, they consider a variety of factors including:
- The legal framework governing PDM activities and any remit laid down by the government for those responsible for PDM operations
  - The institutional framework for establishing operational plans and ensuring effective oversight of PDM activities
  - The experience and knowledge of PD managers and those charged with oversight
  - Any unusual pressures faced by PD managers including market pressures, which might lead to a breach of borrowing remit
  - The complexity of the PDM portfolio or a decision to employ new types of PD instrument
  - The assessment of internal control, which include specific assessment of

information systems.

- 70) In **Financial Audit**, auditors identify risks throughout the process of obtaining an understanding of the audited entity and its environment, by examining relevant controls that relate to the risks and considering the classes of transactions, account balances and disclosures in the financial statements.
- 71) In **Performance Audit**, auditors test risk management practices that debt managers perform in order to supervise PD operations. Auditors corroborate that techniques or models in use are effective to detect and monitor contracted debt risks.
- 72) In **Compliance Audit**, the auditor's risk assessment starts by identifying significant risks of non-compliance with the regulatory framework governing the entity (laws and regulations).
- 73) For a practical example of SAI Indonesia's undertaking of the PD business process and risk assessment, see Appendix 2.
- 74) After conducting risk assessment or problem analysis of the entity/area proposed to be audited, the auditor shall actively manage audit risk to avoid the development of incorrect or incomplete findings, conclusions, and recommendations, providing unbalanced information, or failing to add value. Actively managing audit risk includes anticipating the possible or known risks of the work envisaged, developing audit approaches to address those audit risks during audit planning, and the selection of methods and documenting how those risks will be handled.
- 75) Actively managing audit risk also includes considering whether the audit team has sufficient experience and competence to do the audit, has access to accurate, reliable, and relevant good quality information, has considered any new information that is available, and has considered alternative perspectives.

» **IDENTIFYING THE RISK OF FRAUD**

- 76) Auditors identify and assess the risks of fraud relevant to the audit objectives and obtain adequate and appropriate audit evidence regarding detected risk,

maintaining an attitude of professional skepticism, and being alert to the possibility of fraud throughout the audit process.

- 77) In a **Financial Audit**, auditors consider fraudulent financial reporting and misappropriation of assets. In their assessment of the risk of fraud, financial auditors look for “red flags” that have been found in past fraud cases. Examples of risk factors relating to misstatements arising from fraudulent financial reporting and misappropriation of assets can be found in Appendix 1 of ISSAI 2240.
- 78) In a **Performance Audit**, auditors, in their assessment of the risk of fraud, obtain an understanding of the relevant internal control systems and examine whether there are signs of irregularities that hamper performance.
- 79) Fraud in **Compliance Audit** relates mainly to the abuse of public authority, but also to fraudulent reporting on compliance issues. Instances of non-compliance with regulations may constitute deliberate misuse of public authority for improper benefit. The execution of public authority includes decisions, non-decisions, preparatory work, advice, information handling and other acts in the public service. Improper benefits are advantages of a non-economic or economic nature gained by an intentional act by one or more individuals among management, those charged with governance, employees or third parties.

## » DEVELOPING THE AUDIT PLAN

- 80) In **Financial Audit**, the auditor proceeds to designing the audit based on the results of the assessment of risks of material misstatement due to error and fraud.
- 81) In general, SAIs would identify and rank potential audit topics for **Performance Audit** based on two criteria:
- Those audits expected to add maximum value in terms of improved accountability, economy, efficiency, and effectiveness and
  - Audits that ensure an appropriate coverage of sovereign debt operations

within the limitations of audit resources available.

- 82) Even if the selected topic is consistent with the SAI's strategy, in **Performance Audit**, the auditor might observe during the design phase that the expected problem is already being handled by the audited entity. Similar studies covering similar objectives may already have been conducted by other institutions, or there are no relevant criteria available and no reasonable basis exists for developing audit criteria. Another reason could be that the information or evidence required is unlikely to be available and cannot be obtained efficiently. In such circumstances, it is important that the auditor informs the management of the SAI of these concerns so that it can decide whether to proceed or not.
- 83) Where the SAI has discretion to select the coverage of **Compliance Audit**, it performs the procedures necessary to identify significant areas and/or areas with potential risk of non-compliance. In selecting and prioritising topics for compliance audit, SAIs consider: (a) significance of certain provisions of the law and (b) potential breaches of applicable laws and other regulations, which govern the public entity's activity, or the PD, public deficit and external obligations.
- 84) Auditors consider materiality throughout the audit process. The assessment of materiality requires professional judgment by the auditor, and is related to the scope of the audit. Materiality judgments are made in light of surrounding circumstances and involve both quantitative and qualitative considerations, such as the various legal and regulatory requirements for the PD, and the visibility and sensitivity of the government's PD. Although the auditor may use a mechanical means to compute materiality, the auditor uses judgment in evaluating whether the computed level is appropriate.
- 85) Other issues may be considered material or significant in the audit of PD, as follows:
- Fraud
  - Breach or commission of unlawful acts of an unintentional nature
  - Presentation by debt managers of incorrect or incomplete information to management, the auditor or the legislature (concealment)

- Refusal by debt managers to provide information requested by management, competent bodies or auditors and
- Operations or acts carried out despite the lack of legal basis to do so.

» **DESIGNING THE AUDIT**

- 86) After the SAI has chosen an audit area/topic/subject matter, the auditor designs the specific audit. The purpose of the design phase is to prepare an audit proposal with a work plan and an audit design/plan. A well thought-out design is indispensable in auditing PD.
- 87) To define the scope, the auditor identifies which entities/offices are to be included in the audit or which particular programme/subject matter, or aspect of a programme, are to be audited. The auditor also identifies the period of time to be reviewed and, if relevant, the locations to be included. Thus, the scope defines the boundary of the audit. It addresses such things as specific questions to be asked, the type of study to be conducted and the character of the investigation.
- 88) It is important to define the scope of the audit of PD as shown in the examples given below.

**Example of audit scope in Financial Audit:**

GAO annually audits the consolidated financial statements of the U.S. government. Because of the significance of the federal debt, which is the amount of the federal government's outstanding debt securities, to the government-wide financial statements, GAO audits the Bureau of the Fiscal Service's Schedules of Federal Debt annually to determine whether, in all material respects, (1) the schedules are fairly presented and (2) Fiscal Service management maintained effective internal control over financial reporting relevant to the Schedule of Federal Debt. Further, GAO tests compliance with selected provisions of applicable laws, regulations, contracts, and grant agreements related to the Schedule of Federal Debt.

**Example of audit scope in Performance Audit:**

The Performance Audit on public debt management was conducted in order to assess whether Government of India had a clear and explicit legal as well as organisational framework for managing public debt and also to assess whether it had a management strategy to enable minimisation of risk and cost involved.

The Performance Audit covered internal and external debt of the Government. The period of audit coverage was for five years from 2013-14 to 2017-18. Audit was conducted in the offices of Department of Economic Affairs, Ministry of Finance and Central Bank of India during January to March 2018.

**Example of audit scope in Compliance Audit:**

The Compliance Audit on public debt was conducted to assess the public debt process carried on by the International Finance Unit of the Finance Ministry and the General Treasury of the Republic of Chile for debt incurred by the Central Government during the calendar year 2017 to determine if transactions comply with authorities.

- 89) The audit objective(s) can be thought of as the overall audit question concerning the subject matter to which the auditor seeks an answer. The audit objective therefore needs to be framed in a way that allows a clear and unambiguous conclusion or opinion.
- 90) In **Financial Audit**, the audit objective is to determine whether, in all material respects, the financial statements, schedules, or accounts are fairly presented.
- 91) In **Performance Audit**, the audit objectives may focus on the economy, efficiency and/or effectiveness (three Es) of a PDM system, lending and borrowing activities, fiscal policy and other issues which relate to PD. For example, the three Es are defined in the specific context of PD activities, as follows:

- *In an audit of effectiveness*, SAIs assess whether DeM achieved its objectives and obtained the intended results
  - *In an audit of efficiency*, SAIs take one step beyond effectiveness to examine the link between resources or inputs used and specific objectives achieved in DeM activities. The main question in an efficiency audit is: are PDM objectives obtained in a cost-effective manner?
  - *In an audit of economy*, SAIs examine whether PD activities are carried out in accordance with sound principles of public administration and follow best DeM practices.
- 92) In **Compliance Audit**, the audit objective is to enable the SAI to assess whether the activities of public-sector entities are in accordance with the authorities governing those entities. Compliance Audit may be concerned with regularity (adherence to formal criteria such as relevant laws, regulations and agreements) or with propriety (observance of the general principles governing sound financial management and the conduct of public officials).
- 93) It is good practice for the performance and compliance auditors to create audit questions that address the audit objective(s). It is important for the audit questions to be thematically related, complementary, not overlapping, and collectively exhaustive in addressing the audit objective(s). The aim is to cover all aspects of the audit objective by specific audit questions.
- 94) Audit criteria may depend on a number of factors, including the objectives and type of audit and may be specific or more general. The auditor needs to establish suitable audit criteria, which correspond to the audit objective(s) and questions.
- 95) In **Financial Audit**, the audit criteria is the financial reporting framework adopted by the country or as required by the development partners or lending institutions.
- 96) An important hurdle that SAIs need to overcome in the planning phase for **Performance Audit** is the development of criteria that can be used to determine whether the performance of sovereign DeM meets, exceeds, or falls short of expectations. A suitable criterion is relevant, understandable, complete, reliable, and objective.

- 97) Most of the authorities are established in the national legislation, but they can be issued at a lower level in the organisational structure of the public sector. The criteria in a **Compliance Audit** for PD can refer to and include laws, rules, regulations, budgetary resolutions, policies, established codes, agreed terms and the general principles that govern the sound financial management of the public sector and the conduct of public officials.
- 98) An important part of planning the audit is to determine the methods to be used to gather and analyse data. The audit objective(s), audit questions/procedures, audit scope, and the audit criteria are the factors guiding what evidence is needed and the methods most appropriate to obtain that evidence.

## B. CONDUCTING AN AUDIT

- 99) “Auditors should perform audit procedures that provide sufficient appropriate audit evidence to support the audit report” (ISSAI 100.49).
- 100) In an audit of PDM activities, auditors obtain sufficient appropriate audit evidence on which to base their conclusions. Greater evidence is ordinarily provided by consistent evidence obtained from different sources, or of a different nature, than by items of evidence considered individually.
- 101) In order to obtain sufficient and appropriate evidence in the audit of PD, the auditors would perform procedures that may be applicable in all types of audits. Specifically, auditors may carry out the following, among others:
- Make inquiries with the DeM staff. The auditors may ask debt supervisors and staff to explain their DeM duties. Interviewing personnel will help the auditors evaluate whether the staff understand their duties, and perform procedures as described in the debt procedures manuals
  - Examine key debt documents and records in each of the debt activity cycles – planning, negotiating, contracting, issuance, servicing, analysis, and accounting. The required information will be available in previous audit reports, debt reports produced for internal and external monitors, interviews of DeM officials and market experts, laws and regulations on PD, and debt information systems. By examining the documents and

records, computer files and debt reports, the auditors can evaluate whether the descriptions presented in the procedures manual and flow charts have been implemented

- Compare debt statistics presented in reports issued for different users – external monitoring organisations, debt information in government financial reports, debt data presented in Parliamentary hearings
- Observe control-related activities that do not leave a written audit trail. The auditors performs a walk-through of the main activities in the cycles of PD operations – planning, negotiating, contracting, issuance, servicing, analysis and accounting
- Re-compute debt calculations to determine whether debt information systems calculations are correct
- Count the debt documents and records on hand at a given time and
- Conduct surveys and statistical analysis.

102) The auditor’s approach to obtaining the required audit evidence will reflect the specialised and complex nature of certain aspects of PDM activities. For example, the auditor may need to review the adequacy of complex accounting estimates used by the entities or offices involved in DeM. Accounting estimates are used for valuation purposes in certain PDM areas, for example, loan loss provisions and derivatives:

- In reviewing the adequacy of loan loss provisions, auditors ascertain that management have properly exercised their judgment following a consistently applied policy in determining the level of provisions and
- For various derivative instruments, an independent fair market valuation may not be readily available.

103) Substantive procedures help the auditors to obtain sufficient appropriate evidence in order to support their opinion, or judgment and conclusions. Examples of Substantive Procedures in Financial Audit are shown in *Appendix 2*.

104) SAI has to ensure that the assigned auditors have the necessary skills to undertake all aspects of the work. However, given the complexity and technical

nature of DeM activities, expert advice on several areas can be sought, which may include:

- The accounting treatment and disclosure of information regarding complex PD instruments, such as derivative products
- The valuation and pricing models used by PD managers, e.g. to derive yield curves
- The use of IT systems by agencies involved in DeM, e.g. trading and settlement systems
- The use of benchmarking techniques and models
- The use of risk assessment tools, e.g. the expression of market risk through the use of Value at Risk models and
- Legal and compliance issues, including the quality and effectiveness of ISAD<sup>8</sup> contracts used in derivative transactions and other contracts used in trading activities, as well as loan agreements the agencies involved in DeM has entered into.

105) The findings and information obtained during the conduct of **Performance Audit** and **Compliance Audit**, as well as the audit conclusions and recommendations are recorded in the Audit Findings Matrix (AFM) or its equivalent. The AFM is a useful tool to support and guide the preparation of the audit report, because it allows gathering the main contents of the report in a structured way. The matrix enables members of the audit team and other stakeholders to have a homogeneous understanding of the findings and their components. A sample AFM for cash management is presented in Appendix 2.

## C. REPORTING AND FOLLOW-UP

106) Reporting on the results of the audit of PD varies according to the type of audit performed. Sample Audit Reports on **Financial Audit**, **Performance Audit**, and **Compliance Audit** of PD are shown in *Appendix 2*.

<sup>8</sup> General International Standard Archival Description, published by the International Archives Council (IAC) in 1994.

- 107) In the case of **Financial Audit**, the form of opinion to be expressed by the auditor depends on the applicable financial reporting framework and any applicable laws or regulations.
- 108) In **Performance Audit**, “auditors are not normally expected to provide an overall opinion, comparable to the opinion on financial statements, on the audited entity’s achievement of economy, efficiency, and effectiveness.” (ISSAI 300.21)
- 109) “Performance auditors should specifically describe how their findings have led to a set of conclusions and – if applicable – a single overall conclusion. This means explaining which criteria were developed and used and why, and stating that all relevant viewpoints have been taken into account so that a balanced report can be presented.” (ISSAI 300.23)
- 110) In **Compliance Audit**, “the forms of reporting may be defined in law or by the mandate of the SAI. Nonetheless, the audit report normally contains a conclusion based on the audit work performed.” (ISSAI 400.59)
- 111) “SAIs should implement an appropriate system of quality assurance over their audit activities and reporting and subject such system to periodic independent assessment.” (Principle 3, ISSAI 20)
- 112) The attributes of a good audit report can be found in ISSAI 100.51.
- 113) The auditor needs to report on the results of his follow-up actions appropriately in order to provide feedback to the legislature, executive, stakeholders and the public. Timely and reliable information on the implementation status of recommendations, the impacts of audit and the relevant corrective actions taken, can help demonstrate the value and benefits of the SAIs.

## APPENDIX 1: DEBT INDICATORS

*This appendix aims to analyze and describe the most acknowledged vulnerability, sustainability and financial indicators, as well as their implementation's scope and benefits in public debt management.*

### I. INTRODUCTION

- 1) Three kinds of indicators are used for assessing risks related to public debt.
  - Vulnerability Indicators -- measure the risk that current economic conditions generate over public debt
  - Sustainability Indicators -- evaluate the government's ability to face upcoming contingencies considering certain expected circumstances
  - Financial Debt Indicators -- show the public debt's market performance.
- 2) Each group of indicators has a distinct feature. First, vulnerability analysis entails the need to create indicators that measure and prevent any situation hindering debt's payment, under the current circumstances. These indicators are usually static, which show pictures of the prevailing situation but do not allow outlining medium-term and long-term perspectives. Likewise, it is essential to continuously monitor debt's solvency and sustainability, and simulate debt's dynamic performance in adverse scenarios. In order to attain such objective, sustainability measures are used to analyze whether it is possible for the government to maintain the same fiscal position, or if it will need adjustments to keep any vulnerability indicator under control.

## II. VULNERABILITY INDICATORS

- 3) Recognizing the importance of controlling variables that might threaten debt's sustainability, the International Monetary Fund (IMF) and the World Bank (WB) implemented a wide-scope program to define whether a country is vulnerable to monetary crisis afflicting several emerging market economies and, if so, to what extent. The program consists of guidelines, frameworks, and working papers on public debt which were built on earlier assessments of debt trends and vulnerabilities.
- 4) Most of the work on vulnerability carried out by international institutions involved improvements on data quality and transparency. The availability of appropriate and thorough data on international reserves, external debt, and capital flows, increase the ability to identify vulnerabilities, conferring policy makers enough time to carry out corrective measures. IMF, for instance, analyze macroeconomic data by carrying out stress tests or using early warning system models.
- 5) Given the potential limitations of traditional economic indicators, other indicators could prove to be more useful predictors of weakening macroeconomic fundamentals and fiscal vulnerability. These indicators are categorized into either public debt indicators or external debt indicators. They should not be seen as predictors of actual vulnerability but of potential vulnerability.
- 6) The most acknowledged indicators useful in vulnerabilities' management are as follows:

### *a) Profile of maturing debts*

- 7) This assessment requires a record of all of the instruments in circulation, both internal and external indicating their average maturity and duration. The profile should show debt characteristics regarding terms and time in which there will be a need for currency for its payment.

*b) Portfolio diversification*

- 8) In guaranteeing efficiency, governments must make sure that there exist enough negotiable titles with a range of expiring terms in the internal and external markets. Besides terms, portfolio diversification will offer choices regarding currency and payment conditions. The broader the diversification degree, the lesser the risk of increase in value of the lending country's currency value that might make the acquired debt more expensive.

*c) Public debt / Gross domestic product (GDP)*

- 9) The most generally used and common indicator is the debt-to-GDP ratio. It is calculated by dividing the total public debt outstanding at a point in time by the country's GDP. It measures the indebtedness level relative to the country's economic activity and assumes that all GDP resources are available to finance the debt burden, which may not be necessarily true. However, this indicator is recognized as the most relevant in measuring degree of indebtedness, stressing the government's solvency capability.

*d) Fixed debt to floating debt*

- 10) Fixed debt matures or re-financed in a period over 12 months while floating debt matures before a year. Analysis of ratio of debt placed at a term of less than one year and the one placed at a longer term shows the time government has to face its obligations in the maturity calendar. The longer the term, the longer the project maturation would be thus allowing making resources available for their payment.

*e) Public debt / domestic government revenue*

- 11) This measures indebtedness level relative to the government's payment capacity. It shows the number of required years to pay the total debt balance. This ratio shows the Government's possibilities to collect revenues compared to the debt burden.

***Indicators regarding public debt service***

*a) Debt service / domestic government revenue*

- 12) This indicator measures the government's ability to service the debt using domestic sources of revenue. It highlights the extent to which debt service hampers debtor countries in the use of their financial resources.

*b) Debt service / exports*

- 13) The public debt service to export revenues ratio is a useful measure of the external repayment ability of a government and of its economy. Where public debt is predominant in an economy (as in heavily indebted countries) the public debt service (including government guaranteed debt obligations) measured against export revenues could also be used as a predictor of potential public sector vulnerability.

*c) Interest / domestic government revenue*

- 14) This indicator measures the financial cost of the public debt as a proportion of the tax revenue. It is generally used as a measure of the public income tolerance to an increase in unproductive expenditure (country's possibilities to face other expenditures).

*d) Interest / GDP*

- 15) This indicator shows the burden of the interest on the public debt to the country. It can be interpreted as the country's possibilities to face unproductive expenditures.

*e) Average residual maturity*

- 16) A bond's maturity is the length of time until the principal must be paid back. Average residual maturity is indicator to track the maturity of public debt in an effort to monitor refinancing risk.
- 17) The aforementioned indicators are mostly static, since they are related to a certain period, and usually it is more useful to observe their evolution

dynamically. This entails the existence of a correlation between interest rates and macroeconomic variables. The study of the indicators' dynamics allows us to analyze which relationships occur among these variables in time. The basic indicators have been complemented with macroeconomic variables in order to visualize vulnerabilities from other perspectives.

- 18) There is no consensus among international organizations with respect to setting minimal acceptable levels for debt indicators. The following table portrays the minimal suggested levels for emerging countries, provided by different international institutions:

Vulnerability indicator	Thresholds, %	
	International Monetary Fund*	International Debt Relief**
Debt service/ domestic government revenue	25 – 35	28 - 63
Interest/ domestic government revenue	7 – 10	4.6 – 6.8
Public debt/GDP	25 - 30	20 - 25
Public debt/ domestic government revenue	90 - 150	92 - 167
*IMF, Foreign Affairs Department: Technical Note "Vulnerability Indicators", 2003		
**International Debt Relief: "Key aspects of Debt Sustainability Analysis", 2007		

### **External Debt Indicators**

- 19) The prevailing approach to the definition of external debt assumes that debt liabilities owed by residents to nonresidents are external debt. External public debt includes external debt owed by the public sector and external debt guaranteed by the public sector. IMF and WB defines publicly guaranteed debt as debt liabilities of public and private sector units, the servicing of which is contractually guaranteed by public sector units.

*a) External debt / GDP*

- 20) Indicator relating debt to the country's resource base, reflecting the potential of shifting production to exports or import substitutes so as to enhance repayment capacity.

*b) External debt / exports*

- 21) Indicator of trend in debt that is closely related to the external repayment capacity of the country. The ratio shows the debt burden level over exports or the capability of acquiring currencies. It must be used in conjunction with ratio of debt service obligations as a percentage of exports.

*c) Short-term external debt / reserves*

- 22) Indicator of vulnerability to economic and financial shocks, stemming from the amount of short-term external debt outstanding.

*d) External debt service / revenue*

- 23) This indicator may be split into two segments for analysis. One, it may be used as an external macroeconomic solvency indicator by combining external public debt and external private debt services divided by total revenue. Second, it may be used as external public sector vulnerability to foreign currency position by the ratio of external public debt service over the total revenue.

*e) Average interest rate on external debt*

- 24) Indicator relating to borrowing terms. In conjunction with debt/GDP and debt/export ratios and growth outlook, this is a key indicator for assessing debt sustainability.

*f) Amortization / external debt payments*

- 25) This ratio measures the debt amortization level as a proportion of the external debt payment. This indicator, understood as a revolving ratio, shows when a country is refinancing its debt with new issuances or borrowings. If this ratio exceeds 100, debt is not refinanced with new debt.

*g) Net International Reserves/ External Debt*

- 26) This ratio shows the number of times the external liabilities exceed the reserves. It is usually used in view of the rhythm of reserve accumulation. In that case, it is interpreted as the number of years required for the current foreign debt to be repaid, assuming a constant accumulation rhythm.

***Debt indicators for low-income countries***

- 27) International institutions published several studies devoted to debt indicators for low-income countries.<sup>9</sup>
- 28) IMF and WB suggest debt burden solvency and liquidity indicators for public and publicly guaranteed (PPG) external debt or public debt in low-income countries.<sup>10</sup>
- 29) PPG external debt includes both external debt owed by the public sector and external debt guaranteed by the public sector. Public debt covers total debt of the public sector, both external and domestic.
- 30) IMF and WB classify low-income countries into three policy performance categories (strong, medium, and poor), using the World Bank's Country Policy and Institutional Assessment index, and use different indicative thresholds for external debt indicators depending on the performance category as presented in the table below.

9 International Development Association International Monetary Fund Review of the Debt Sustainability Framework For Low Income Countries: Proposed Reforms August 22, 2017. Prepared by the staffs of the World Bank Group\* and the International Monetary Fund Approved by Jan Walliser (WB) and Seán Nolan (IMF)

10 Staff Guidance Note on the Application of the Joint Bank-Fund Debt Sustainability Framework for Low-Income Countries, IMF, 2013.

**Policy-based thresholds for external debt indicators for low-income countries**

Indicator	Weak policy	Medium policy	Strong policy
	Thresholds, %		
External debt/GDP	30	40	55
External debt/exports	140	180	240
External debt service/ exports	10	15	21
External debt service/ revenue	14	18	23
International Monetary Fund review of the debt sustainability framework for low income countries: proposed reforms. August 22, 2017			

**III. SUSTAINABILITY INDICATORS**

- 31) Public debt indicators provide us with an approach regarding its sustainability. These ratios are ex-post indicators, that is, they provide historic facts. In contrast, ex-ante indicators provide us with information concerning the magnitude of the fiscal adjustment needed to achieve fiscal sustainability.
- 32) The inter-temporal relationship between fiscal balances, public debt and interest payment is thus expressed:  $D_{t+1} = D_t (1 + r_t) + B_{Pt}$ , where  $D_t$  corresponds to public debt during the  $t$  period,  $r_t$  is the debt's interest rate and  $B_{Pt}$  is the primary fiscal balance. Based on this ratio, the basic condition for sustainability emerges, establishing a consistency relationship between different policy variables, that is, between debt's growth, GDP's growth and the primary deficit, given a certain interest rate. The main indicators are listed below:

*a) Fiscal Consistency Indicator*

- 33) Blanchard (1990) proposed a sustainability indicator that takes into consideration the consistency of the current tax policy, while keeping the debt-to-GDP ratio constant. It is expressed as follows:

$$t_n^* - t = \frac{\sum^n g}{n} + (r - q)d^* - t$$

where  $t_n^*$  is the fiscal burden which is assumed to be constant over a period of (n) years, the debt-to-GDP ratio in a level  $d^*$ ,  $g$  being the expenditure,  $r$  being the interest rate and  $q$  being the GDP's growth rate. In this sense, this indicator shows the tax level required to stabilize the debt-to-GDP ratio, given an expense level, a GDP increase path and an initial debt balance. If the relation is negative, the indicator shows that the economy's taxation pressure is too low to stabilize the debt-to-GDP ratio.

#### b) Buiter's Indicator

- 34) Buiter (1985) proposes an indicator that calculates the gap between the sustainable primary balance and the primary effective balance, where the sustainability condition is defined starting from a wider net wealth concept than the one implicit in the debt / GDP ratio. Buiter's Indicator defines this gap as follows:

$$b^* - bt = (r - q)wt - bt$$

where  $b^*$  is the debt / sustainable GDP ratio,  $b$  is the debt / GDP ratio,  $wt$  is the net / real government wealth value as a GDP proportion,  $r$  is the interest rate and  $q$  is the product increase rate.

- 35) The use of Buiter's indicator is limited by the following: practical qualification is very difficult to come up with an accurate net government wealth measure; assets should include not only financial and real capital and lands and minerals but also the current value of future taxes; liabilities should include not only direct public debt but also current value of future expenses for social security and other benefits habilitated; and the adjusted value based on a risk of a series of contingent liabilities of difficult quantification.

#### c) Short term primary gap Indicator

- 36) The primary gap indicator provides the primary balance level needed to stabilize debt as a proportion of the GDP:

$$BP^* - BP = (rt - nt)b - BP$$

where  $BP^*$  is the primary balance needed to stabilize debt,  $BP$  corresponds to the prevailing primary balance,  $r$  is the real interest rate trend,  $n$  is the population growth's rate and  $b$  is the debt-to- GDP ratio.

- 37) If the permanent primary balance exceeds the current primary balance, the primary path is positive. This means that the fiscal policy is not sustainable; because it tends to increase the debt-to-GDP ratio. On the contrary, when the permanent primary balance is lower than the current primary balance, the fiscal policy tends to reduce the debt to GDP ratio.

*d) Macro-adjusted primary deficit*

- 38) Proposed by Talvi and Végh (2000), this indicator is motivated by the high volatility of macroeconomic variables which makes the deficit vary around the expected value under normal macroeconomic conditions. It is used to compare the macro-adjusted balance with the estimations of the current values. The challenge lies within the necessity to establish what a “normal economy condition” is.

$$I_t^M = \frac{(r - g)}{1 + g} b_{t-1} + d_t^M$$

where  $r$  is the real interest rate for the analysis,  $g$  represents the analyzed year's real growth, and  $d_t^M$  is the primary macroadjusted balance.

*e) Sustainable fiscal position Indicator*

- 39) Croce and Juan-Ramón (2003) describes this indicator as a complement to the analysis on traditional sustainability indicators using a methodology that explicitly evaluates the tax authority reaction when variables, linked to sustainability of debt, change over time.

- 40) The sustainable fiscal position indicator explicitly adds a reaction function of fiscal authority, and whose variation over time allows evaluating how the fiscal policy has reacted whenever the conditions have changed. The reaction function of the fiscal authority is defined as the ratio between the primary effective balance gap and the primary sustainable balance (or goal) as well as in the debt to GDP ratio. Statistically, it may be complementary to the indicators already discussed, and explains how income and expenditure policies (which define the primary balance) are pointed to create a convergence of the debt-to-GDP ratio, to an ex-ante sustainable (goal). On the other hand, dynamically, this ratio indicates how the tax authority has reacted from year to year (through innovations on its fiscal policies), while facing variations in the existing gap between the indebtedness level and sustainable level.

*f) Currency availability Indicators*

- 41) This indicator, proposed by Calvo, Izquierdo, and Talvi (2003), assumes that volatility of capital flows variables is higher than that of macroeconomic variables. It compares the external debt-to-internal debt ratio with the proportion of tradable goods related to the non-tradable goods in economy:

$$b = \frac{B + eB^*}{y + ey^*} \quad (a)$$

here  $b$  is the debt / GDP ratio ,  $B$  is the debt in terms of non- tradable goods,  $e$  is the type of real exchange,  $B^*$  is the debt in terms of tradable goods,  $y$  is the GDP of non-tradable goods and  $y^*$  is the GDP of tradable goods.

*g) Fiscal Sustainability Indicators with Long-Term Restrictions*

- 42) Bagnai (2003) presents two indicators in keeping debt sustainability in view of possible events such as the agreed contingent liabilities or future interest payments, among others. The first indicator considers that, in the mid- and long-run, a country's generation will act as a source of government funding: debt (financial markets) and tax payment (macroeconomic).The objective of these considerations is to keep the debt-to-GDP ratio ( $B/y$ ) stable in time. Dynamic fiscal stability will be reached only when the following two conditions are met:

$$\frac{B}{y} < \tilde{b} = k \left[ \frac{\varepsilon(1+n)\tau}{1-\tau} \right] - \{n - r(1-\tau)\}\Phi \quad (a)$$

$$\Phi \equiv 1 - \eta(1-s) + \left[ \frac{\varepsilon(1+n)}{r(1-\tau)} - \frac{s\delta(1+\varphi)}{\varphi} \right] < 0 \quad (b)$$

where  $n$  is the population growth rate,  $\tau$  is the income tax,  $s$  is the income proportion that is saved,  $r$  is the real tax rate,  $\delta$  is the elasticity of savings related to the interest rate,  $\varepsilon$  is the investment elasticity related to the interest rate,  $\eta$  is the elasticity of consumption as a proportion of income,  $k$  is the capital-to-GDP ratio and  $\phi$  is the elasticity of the product as a proportion of physical capital, which means the response of output to changes in the stock of the country's infrastructure. If debt exceeds the  $b$  level, economic system is dynamically non-sustainable and debt will respond to any external shock following an explosive trajectory.

#### IV. FINANCIAL DEBT INDICATORS

- 43) The main risks faced by public debt portfolios relate to market risk and operational risk. The risk exposures of a public debt portfolio are determined by the composition of the debt portfolio, including the share of short-term debt versus longer-term debt in the portfolio, the variable interest rate debt relative to fixed rate debt, and debt denominated in foreign currency.
- 44) *Market risk* refers to the risk of increases in the cost of the debt arising from changes in market variables. Market risk includes interest rate risk and exchange rate risk, refinancing risk, liquidity risk, and credit risk. The most common types of market risk are the interest rate risk and exchange rate risk.
- 45) *Interest Rate risk/Refixing risk* refers to the risk of increases in the cost of the debt arising from changes in interest rates. For both domestic and foreign currency debt, changes in interest rates affect debt servicing costs on new issues when fixed rate debt is refinanced, and on existing and new floating rate debt at the rate reset dates. Hence, short-term or floating rate debt is usually considered to be more risky than long-term, fixed rate debt. Traditional

measures of interest rate risk include duration, average time to refixing, and the share of floating rate debt to total debt.

- 46) The concept of interest rates is commonly used to describe the growth of an associated potential gain to an amount of money. These are the gain measures for those who decide to save. Capital markets provide an efficient mechanism to transfer capital between economic agents. The lender receives interest for the temporary use of his capital, for that reason, the efficient formation of interest rates for different terms depends on the efficiency of the money market. For the government, a more consolidated market represents the possibility of reaching better financing conditions at any term.
- 47) Therefore, it is necessary to know the interest rates for each type of financial instruments (securities, loans, etc.) and to determine a way to compare them on the same basis. This indicator is known as the yield curve, which can be increasing or decreasing and its slope can be explained in three different manners.

#### Position and Slope of the Yield Curve

<b>Slope</b>	<b>Market Expectations Theory</b>	<b>Liquidity Preferences Theory</b>	<b>Market Segmentation Theory</b>
Positive	It is expected that short term rates rise	Positive premium to liquidity	Excess of supply over demand in long term
Negative	It is expected that short term rates decrease	Negative premium (punishment) to liquidity	Excess of supply over demand in short term
Horizontal	It is expected that short term rates remain the same	No liquidity premium	Equilibrium between supply and demand in all terms
Concave	It is expected that short term rates rise and subsequently decrease	Positive premium to liquidity followed by a negative premium to liquidity	Excess of supply over demand in mid term

- 48) *Weighted Average Maturity and Duration.* These statistics measure the average length of time between debt servicing payments. The weighted average maturity has a limited use because it only considers payment dates of the principal, while the duration also includes the interest payment dates. The duration is obtained by calculating the average maturity of the bond relative to payment terms (coupons and principal), weighing each one of the terms associated to the referred flows with its respective amounts in present value.
- 49) As a rule, the longer the duration of a bond, the lower the associated risk, on average. Lower proportions of government debt will be adjusted to the interest rates new level.
- 50) The standard deviation indicates the average detachment between a data set and its average value. Larger and more frequent movements of interest rates (growing or lowering) lead to greater volatility which implies greater uncertainty. For instance, if the interest rate of a bond is 1.72% and its standard deviation is 0.23%, the average yield could vary between 1.49% and 1.95%.
- 51) *Exchange Rate risk/Currency risk* refers to the risk of increases in the cost of the debt arising from changes in exchange rates. Debt denominated in or indexed to foreign currencies adds volatility to debt servicing costs as measured in domestic currency owing to exchange rate movements. Measures of exchange rate risk include the share of domestic currency debt in total debt, and the ratio of short term external debt to international reserves.
- 52) *Refinancing risk/Rollover risk* refers to the risk that debt will have to be refinanced at an unusually high cost or, in extreme cases, cannot be refinanced at all. To the extent that refinancing risk is limited to the risk that debt might have to be financed at higher interest rates, including changes in credit spreads, it may be considered a type of interest rate risk. However, it is often treated separately because the inability to refinance maturing debt and/or exceptionally large increases in government funding costs can lead to or exacerbate a debt crisis. Further, bonds with embedded put options can exacerbate refinancing risk. Relevant indicators include average time to maturity, percentage of debt outstanding in 12, 24, and 36 months, and the redemption profile.

- 53) *Liquidity risk* refers (in the context of debt management) to a situation where the volume of liquid assets diminishes quickly as a result of unanticipated cash flow obligations and/or a possible difficulty in raising cash through borrowing in a short period of time.
- 54) *Credit risk* refers to the risk of non-performance by borrowers on loans or other financial assets, or by counterparty on financial contracts. This risk is particularly relevant in cases where debt management includes the management of liquid assets. It may also be relevant in the acceptance of bids in auctions of securities issued by the government as well as in relation to credit guarantees, and in derivative contracts entered into by the debt manager.
- 55) *Settlement risk* refers to the risk that counterparty does not deliver a security as agreed in a contract, after the country (other counterparty) has already made the payment according to the agreement.
- 56) *Operational risk* refers to a range of different types of risks, including transaction errors in the various stages of executing and recording transactions; inadequacies or failures in internal controls, or in systems and services; reputation risk; legal risk; security breaches; fraud risk, or natural disasters that affect the debt manager's ability to pursue activities required to meet debt management objectives.
- 57) *Reputation risk* refers to losses resulting from untaken financing opportunities, due to the issuer's bad reputation for a default or deteriorating fiscal situation. A country's reputation can be analyzed through credit ratings and sovereign indicators. A country's reputation can be analyzed through the following indicators:

#### *Credit ratings*

- 58) This variable represents the perception that the private agents have about the country's debt situation. The credit quality can be analyzed from two perspectives. On the one hand, there are rating agencies that assign a qualification to the debt based on established criteria. A high rate results when the rating agent finds

few indications of future bankruptcy or liquidity problems that compromise the regular payments. On the other hand, a low rate represents a scenario that the commitments already contracted cannot be fulfilled.

*Sovereign Risk indicators*

- 59) *Sovereign Risk* is an index intended to measure the degree of risk operating within a country for foreign investments. It is a basic indicator of the economic situation of a country and is used by international investors as a supplementary element to make decisions. The sovereign index equals the over-rate that a country pays for its bonds as compared to those of the United States Treasury.
- 60) For barely developed countries within the global financial market, the sovereign risk index is used as an indicator of the country's economic situation and of the rating agencies' expectations regarding future economic evolution (debt payment capability, in particular); on the other hand, the sovereign risk is a reference of the indebtedness cost that the country can face. This indicator is therefore a crucial element with two major implications.
- 61) First, the more deteriorated the sovereign rating is, the larger the indebtedness cost will be; furthermore, the larger this cost is, the less economic policies can be handled and the larger the risk of default will be present, resulting again in increases of such sovereign index.
- 62) Second, high sovereign risk levels will have an impact on investment decisions, thus causing diminished fund flows and increasing interest rates within the country. In other words, not only the government's, but also the private sector's cost of debt is susceptible to increasing, with negative effects in the rates of investment, growth, and employment.
- 63) *Fraud risk* refers to the risk that an intentional act will be committed related to the fraudulent financial reporting or misappropriation of assets.

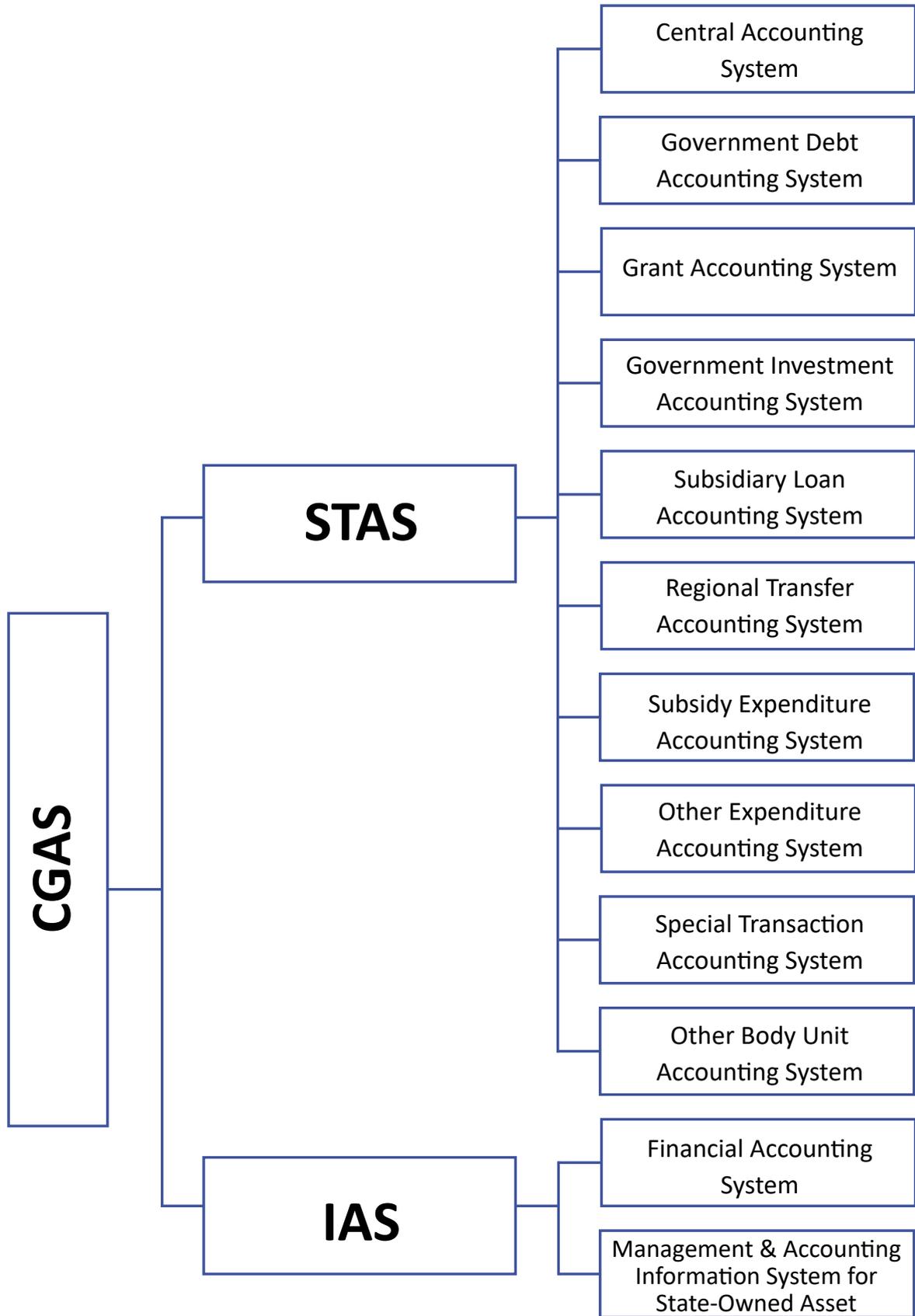
## V. FINAL CONSIDERATIONS

- 64) The three major groups of indicators (vulnerability, sustainability, and financial debt) give us an opportunity to understand the public debt from different perspectives, thus allowing governments to control and manage public debt on a sound credit-practice basis.
- 65) SAIs can play an active role in promoting the implementation of best lending practices and debt management, including the use of various types of indicators discussed in this document. They can also encourage governments to focus more on monitoring of vulnerabilities, and to give high priority to risk management, production and publication of quality financial information. The improvement of regulation and supervision in the financial services sector in line with international standards should not be set aside. This will reduce the vulnerability of public debt to events affecting the private sector.

## APPENDIX 2: PRACTICAL EXAMPLES AND SAI EXPERIENCES

### UNDERSTANDING THE PUBLIC DEBT BUSINESS PROCESS AND RISK ASSESSMENT: THE CASE OF INDONESIA (PARA.73 OF THE GUID)

The preparation of the Indonesian Government Financial Statements is supported by two Accounting Systems: Central Government Accounting System (CGAS) established by the Ministry of Finance, and Local Government Accounting System (LGAS) established by the Ministry of Home Affairs. CGAS consists of two Accounting Systems: The State Treasurer Accounting System (STAS) and Institution Accounting System (IAS). The general picture is as follows:



SAI Indonesia provides an opinion on the Central Government Financial Statements and does not provide an opinion on the financial statements for each unit (management function).

### ***The Objectives of State Debt Management***

By looking at the increasingly dominant source of debt financing and the increasing balance of state debt, the government feels the need to manage debt better. In general, the long-term goal of state debt management is to minimize the cost of debt at a controlled level of risk. Specifically, the objectives of state debt management are:

1. ensuring the fulfillment of financing gaps and fiscal sustainability in accordance with the macroeconomic conditions and the lowest cost
2. to increase prudential principles in debt management, especially to minimize risk, both market risk and refinancing risk and
3. to develop efforts so that planned loans can be implemented as scheduled and cost estimates.

Achieving those objectives will directly support the implementation of policies to improve fiscal sustainability and fiscal capacity to meet debt sustainability obligations. The scope of debt management involves the procurement, maintenance, and repayment of state debts that directly burden the State Budget, which is currently foreign loan and government bond, managed by the Directorate General of Financing and Risk Management of the Ministry of Finance.

### ***State Debt Management Policy***

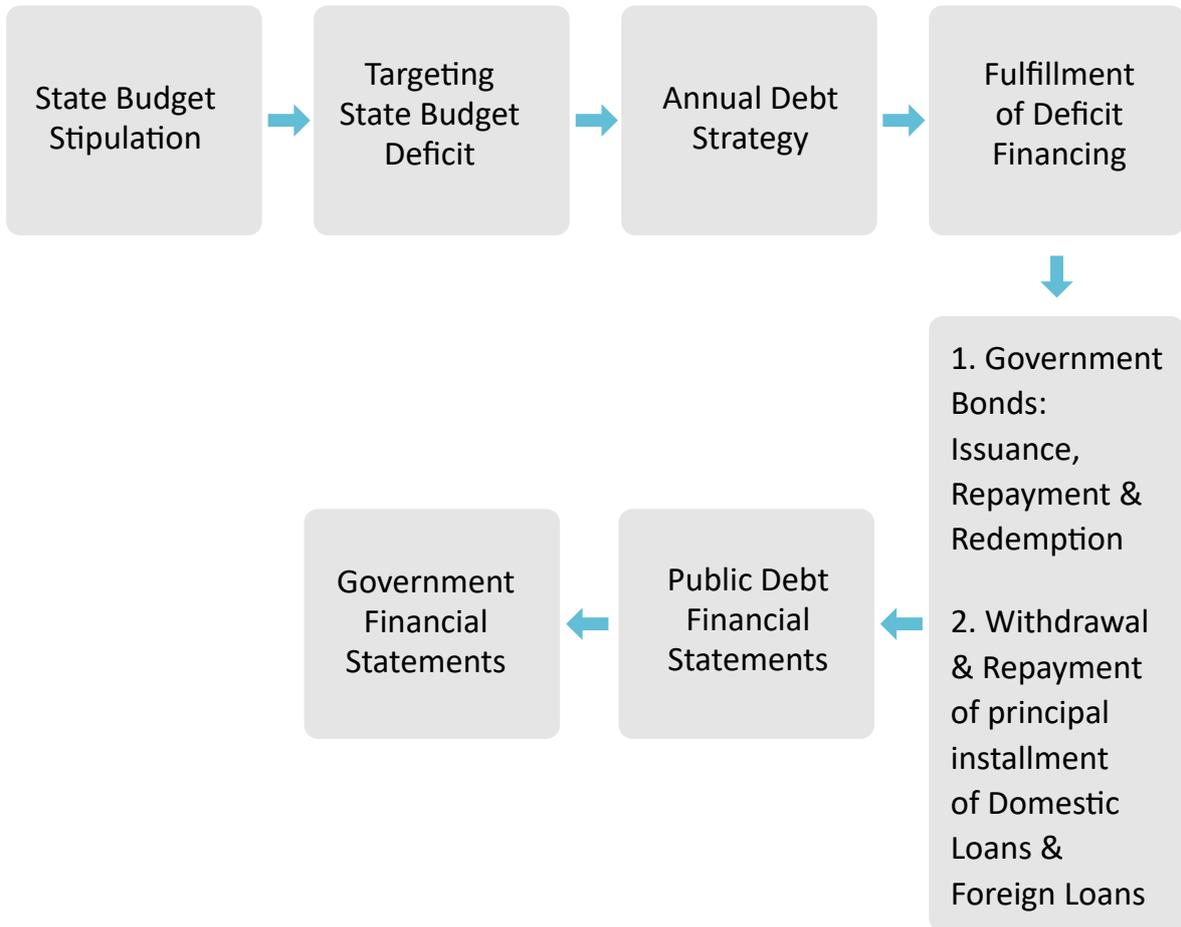
General policy of state debt management is stipulated in various laws and regulations. Regulations related to the state debt management include:

1. Act Number 24 Year 2004 regarding Government Bond and
2. Act Number 17 Year 2003 regarding State Finances.

**Public Debt Accounting System**

Number	Component	Description
1.	Public Debt Financing Sources	<p>A. Cash Debt Financing:</p> <ul style="list-style-type: none"> <li>• Bonds (Domestic &amp; Foreign)</li> <li>• Standby loans / Program Loans (International Financial Institutions)</li> </ul> <p>B. Activity/Project Loans</p> <ul style="list-style-type: none"> <li>• Loans (Domestic &amp; Foreign)</li> <li>• Subsidiary Loans</li> <li>• Government Securities, series: Project Based Sukuk (PBS)</li> </ul>
2.	Public Debt Instrument	<ul style="list-style-type: none"> <li>• Bonds</li> <li>• Loans (Domestic &amp; Foreign)</li> </ul>
3.	Parties of Debt Management	<p>General of Financing and Risk Management of the Ministry of Finance, responsible in managing Public Debt, consists of:</p> <ul style="list-style-type: none"> <li>• Front Office: responsible for designing policy, standard and procedure of Bonds &amp; Loans;</li> <li>• Middle Office: responsible for designing policy, standard and procedure of public debt's strategies and portfolios, managing risks, and other liabilities as government supports;</li> <li>• Back Office: responsible for designing policy, standard and procedure of evaluation, accounting and settlements of public debt.</li> </ul>
4.	Documentation Sources of Public Debt	<p>A. Bonds:</p> <ul style="list-style-type: none"> <li>• Bonds Settlements from Stock Exchange Authorities;</li> <li>• Bonds Transaction Review from Book Runners and Lead Managers;</li> <li>• Tender Documents of Government Securities;</li> <li>• Determination of the Winning Bidder;</li> <li>• Notice of Payment;</li> </ul> <p>B. Loans:</p> <ul style="list-style-type: none"> <li>• Withdrawal Application;</li> <li>• Notice of Disbursement from Lenders;</li> <li>• Notice of Payment;</li> <li>• Notice from Fiscal Agency.</li> </ul>
5.	System and Information Technology	<ul style="list-style-type: none"> <li>• Debt Management Financial Analysis System (DMFAS)</li> <li>• Application System: STBS (State Treasury and Budget System) which is system that facilitate the needs of service processes from upstream (budgeting) to downstream (preparation of central government financial reports)</li> </ul>

**Public Debt Financial Reporting Cycle;**



**Risks of Public Debt Management System at Each Stage**

<b>Number</b>	<b>Activity</b>	<b>Risks</b>
1.	Deficit Financing of State Budget	<ul style="list-style-type: none"> <li>• Debt financing to cover the state budget deficit exceeds the needs</li> <li>• The addition of Deficit / Debt of the Republic of Indonesia exceeds 3% of GDP</li> </ul>
2.	Incoming Budget Fund – Loan Financing	<ul style="list-style-type: none"> <li>• Differences in the value of financing receipt of loan drawdown between Directorate General of Financing and Risk Management listing and lender drawdown data</li> <li>• Withdrawal of foreign loans is not on schedule so as to incur other costs at the time of withdrawal of foreign loan</li> <li>• Notice of Disbursement cannot be authorized because of the availability of the ceiling in the Budget Execution Document for the Ministry Expenditure and for Outgoing Budget Fund: Subsidiary Loan</li> </ul>
3.	Outgoing Budget Fund - Loan Financing	<ul style="list-style-type: none"> <li>• Interest payments &amp; principal installments do not fit the schedule set by the lender</li> </ul>
4.	Incoming Budget Fund – Government Securities	<ul style="list-style-type: none"> <li>• High yield of Government Bond due to private placement and direct transaction</li> <li>• Material other costs of Government Bond's issuance, but they are not capitalized</li> <li>• Potential yield of Government Bond in the market corner</li> <li>• Unknown underlying assets of Sukuk</li> </ul>
5.	Outgoing Budget Fund – Government Securities	<ul style="list-style-type: none"> <li>• Buyback and debt switch transactions do not account for unamortized discount / premium on the series of Government Securities redeemed</li> <li>• Interest payment &amp; redemption of matured</li> <li>• Government Securities are not on schedule</li> </ul>
6.	Preparation of Financial Statements	<ul style="list-style-type: none"> <li>• Misstatements in debt classification</li> <li>• Foreign loans due next year are not adjusted as the Current Liabilities</li> <li>• The debts presented in the Current Liabilities matures more than one year</li> <li>• Miscalculation in accrued interest (for loans and securities)</li> <li>• Errors in calculation, recognition, and presentation of foreign exchange debt</li> <li>• Foreign loan presented in the State Treasurer's Statement of Financial Position cannot be specified per Loan ID</li> <li>• The increasing deficit of State Budget through the addition of debt is not adequately disclosed</li> <li>• Inadequate disclosure of hedging and underwriting obligations</li> </ul>

The overall risks of public debt, which may become key audit matters, are as follows:

- Debt financing that exceeds the need to cover the deficit
- Yield of Government Bonds which is much higher than the neighboring countries having equal country risk
- Borrowing costs that are not immediately availed (utilized) due to the pending project realization
- The cumulative value of debt that exceeds the maximum debt limit to GDP and
- Government obligations and contingent government obligations that are not disclosed in the notes to the financial statements.

SAI Indonesia does not give an opinion on the Financial Statement on Debt Management because it becomes one of the functions of the Central Government Financial Statements. Furthermore, the problems that do not affect the fairness of the Central Government Financial Statements but are significant for the improvement of management are disclosed in audit findings of internal control or noncompliance as part of the audit report of SAI Indonesia.

## SUBSTANTIVE PROCEDURES IN FINANCIAL AUDIT (PARA. 103 OF THE GUID)

In Financial Audit, the objective of substantive tests of detail is to help auditors determine whether the monetary values of PD transactions or balances are stated correctly in the financial statements, reports, schedules, or its equivalent. A sample is shown in Table 1.

**Table 1:** Substantive Tests of Detail Used in Financial Audit

<b>Assertion</b>	<b>Audit Test</b>
Existence and Occurrence	Confirmation with the holder of the public debt instruments, fiscal agent, or custodian/trustee of public debt records
	Inspection of underlying public debt agreements and other supporting documents, confirmations received from creditors, in paper or electronic form, for amounts reported
Existence and Occurrence	Inspection of supporting documents for subsequent realization or settlement after the end of the reporting time period
	Observation of auctions and underwritings
Rights and Obligations	Confirmation with the holder of the public debt instruments, fiscal agent, or custodian/trustee of public debt records
	Inspection of underlying public debt agreements and other supporting documents, confirmations received from creditors, in paper or electronic form, for amounts reported

Assertion	Audit Test
Completeness	Review of all counterparty transactions. When requesting details from the counterparty, consider which part of the organization is responding, and whether this represents all relevant aspects of its dealing with the audited entity
	Review a listing of debt instruments to determine if all types of public debt liabilities included in the accounting records
	Send zero-balance confirmations to potential public debt holders or counterparties
	Review primary dealers' statements for the existence of transactions and holdings of public debt instruments
	Use computer-aided techniques to extract aggregate trading data for agreement with general ledger and financial statement report
	Perform sampling tests of individual trades for counterparty confirmations and after-date receipts
Completeness	Review accounting records before and after the year end for unusual transactions
	Review counterparty confirmations received but not matched to transaction records
	Review unresolved reconciliation items in reports
	Inspect public debt agreements for embedded derivatives
	Review minutes of public debt committee and related papers
	Perform calculation for proper accrual and recognition of public debt expense

Assertion	Audit Test
Valuation and Measurement	Inspection of documents to verify cash receipts from borrowing
	Confirmation of the nominal value of public debt amounts with fiscal agent or trustee
	Re-calculation of mark-to-market calculations for a sample of high value public debt instruments
	Review the basis of valuation as defined by the accounting policies (i.e., market, face, or nominal value) to determine if reasonable and consistently applied
	Check the accuracy of translation of book and market value of public debt instruments denominated in foreign currencies
	Use quoted market prices to verify values disclosed of public debt instruments, money market instruments, and derivatives
	Inspection of documents to verify cash disbursements from repayments
	Inspection of documents to verify cash disbursements from interest payments

Assertion	Audit Test
Presentation and Disclosure	Verify that accounting principles selected and applied are in accordance with legislation, regulations, and applicable accounting standards, and are appropriate for the public debt management agency
	Verify that the financial statements and related notes provide sufficient disclosures, including the public debt reporting entity, basis of accounting for public debt, types of debt instruments, and types of issuers, and are neither too detailed nor too condensed
	Verify that the financial statements and related notes provide sufficient disclosure that is neither too detailed nor too condensed
	Verify that the financial statements provide information on matters that may affect their use, understanding, and interpretation
	Verify that the financial statements reflect transactions in a manner that present the public debt levels; results of borrowings, repayments, and interest payments; and cash flows within a range of acceptable limits
	Review the classification of public debt instruments to ensure it is in agreement with legislation, regulations, and practices
	Verify that inter-agency debt transactions have been eliminated in consolidation.
	Review the disclosures for related-party transactions, such as debt transactions between the government and the central bank

### ***Substantive Analytical Procedures***

In addition to substantive tests of detail in **Financial Audit**, auditors perform substantive analytical procedures to compare actual and expected values of key financial amounts, such as account balances. The objective of this comparison is to identify and investigate the reason for any unusual or unexpected relationships between the actual and expected values. For example, the relationship between the expected interest expenditures calculated using the interest rates in legal documents and the actual interest expenditures. The auditor develops an expectation or estimate of what the recorded amount should be, based on an analysis and understanding of relationships between the recorded amounts and other data. This estimate is then used to form a conclusion on the recorded amount. A basic premise underlying analytical procedures is that plausible relationships among data may reasonably be expected to prevail unless conditions are known that would change the relationship.

Analytical procedures generally rely on aggregate data rather than unit values, which makes them more effective and efficient than tests of individual transactions. Common analytical procedures involve the use of ratios, trends, and variance analysis. More sophisticated analytical procedures use econometric analysis, including regression, simulations, stress-testing and large-scale economic models. Steps in the application of substantive analytical procedures are shown in Table 2.

**Table 2:** Steps in the Application of Substantive Analytical Procedures

- |  |
|--|
| a. Determine the amount of the materiality limit. This limit is the amount of difference between the auditor's expectation and the recorded amount that the auditor will accept without investigation. The determination of the limit is a matter of the auditor's judgment. |
| b. Identify a plausible, predictable relationship and develop a model to calculate an expectation of the recorded amount. Consider the type of misstatements that could occur and how those misstatements would be detected by the model.                                    |
| c. Gather data for developing the expectation, and perform appropriate procedures to establish the reliability of the data. This reliability is subject to the auditor's judgment.   |

d. Develop the expectation of the recorded amount using the information obtained during the previous steps. The preciseness of the expectation is subject to the auditor's judgment.

e. Compare the expectation with the recorded amount, and note the difference.

f. Obtain explanations for differences that exceed the materiality limit, since they are considered significant.

g. Corroborate explanations for significant differences.

h. Determine whether the explanations and corroborating evidence provide sufficient evidence for the desired level of substantive assurance. If unable to obtain a sufficient level of substantive assurance from analytical procedures, perform additional procedures and consider whether the difference represents a misstatement.

#### **Explaining the Difference between Expected and Actual Interest Expense**

Suppose the auditor estimates that the interest expense for the current period is \$80 million. The auditor obtains this estimate based on a \$1 billion public debt average balance times 8 percent, the average annual interest rate. The materiality limit for the substantive analytical procedure is \$5 million. The auditor finds that the actual amount of interest expense is \$94.5 million. The difference - \$14.5 million - exceeds the test materiality by \$9.5 million. The auditor asks the public debt managers about the difference and their explanation is that "we borrowed more money and interest rates are higher than last year." The auditor needs to corroborate this explanation. For example, the auditor can find that interest rates first increased during the year and then fell, and were computed to average 9 percent based on a monthly average instead of 8 percent. Additionally, loan statements from lenders indicate that \$100 million was borrowed and repaid during the year, and the additional borrowings were outstanding for 6 months. Thus, the average loan balance was actually \$50 million higher and the average interest rate was 1 percent higher than the figures used in the auditor's original estimate. Using this new information, the auditor refines its model and recalculates the estimate as \$94.5 million (\$1,050 million public debt average balance times 9 percent), which equals the actual interest expense.

**Substantive Tests of Detail for Derivative Instruments**

Debt managers are increasingly using financial derivatives to manage their exposures to risks inherent to some PD instruments, such as interest and foreign currency risks.

Debt managers change the term to maturity and other features of PD by using financial derivatives, known as currency or interest swap agreements to exchange payments with a financial institution according to a pre-arranged formula. In a common swap transaction, a public entity would issue long-term securities and simultaneously agree to swap its fixed-rate, long-term interest payments in exchange for floating (short-term) interest payments. Substantive tests of detail for derivative instruments are shown in Table 3.

**Table 3:** Substantive Tests of Detail for Derivative Instruments

Assertion	Audit Test
Completeness and Existence	Confirmation of significant terms with the holder of, or counterparty to, the derivative
	Inspection of underlying agreements and other forms of supporting documentation, in paper or electronic form
	Ask holder of or counterparty to the derivative to provide details of all derivatives and transactions with the public debt management agency
	Send zero-balance confirmations to potential holders or counterparties to derivatives
	Review brokers' statements for existence of derivative transactions and positions held
	Review counterparty confirmations received but not matched to transactions records
	Review unresolved reconciliation items
	Inspect agreements, such as loan or equity agreements, for embedded derivatives

Assertion	Audit Test
Valuation and Measurement	Assess the reasonableness of models, variables, and assumptions used to value derivatives
	Gather market prices to assess valuation that are firm and valid
	Assess the sensitivity of valuation to changes in variables and assumptions
	Inspect supporting documents for settlement of the derivative transactions after end of the reporting period
	Use proprietary models or the public debt management agency’s internally developed models to assess valuation when no market prices exist
Presentation and Disclosure	Use analytical procedures to evaluate risk management policies, including compliance with credit limits
	Assess the extent of disclosures of derivatives used as hedges, and extent of compliance with laws and regulations that require disclosure of derivative transactions, including notional and fair value, number and credit quality of counterparties, value at risk, stress test results, etc.

## DEVELOPMENT OF AUDIT FINDINGS MATRIX (PARA. 105 OF THE GUID)

**Table 4:** AFM for Cash Management

<p><b>Audit Objective:</b> Whether cash management (which entails cash flow forecasting, arranging temporary liquidity, maintaining target balance in the Government account, investment of surplus balance over and above the target balance) is done efficiently and effectively. (Report No 16 of 2016 “<i>Performance Audit of Management of Public Debt</i>”, SAI India, <a href="https://cag.gov.in/content/report-no-16-2016-union-ministry-finance-public-debt-management-performance-audit">https://cag.gov.in/content/report-no-16-2016-union-ministry-finance-public-debt-management-performance-audit</a>.)</p>	
<p><b>Researchable question:</b> Whether there was an accurate system of cash forecasts?</p>	
<b>Situation</b>	In at least 40 weeks in each year there were variations between the weekly projected cash balance and the actual cash balance
<b>Criterion</b>	Projected figures of the Central Bank and the actual cash balance figures of the Government as provided by the Central Bank of the Government
<b>Evidence and Analysis</b>	Examination of the relevant documents, records of the Central Bank and the weekly data on cash balance as prepared and made available by the Central Bank
<b>Causes</b>	Cash balance projections were made at least 6 months in advance and were impacted by multiple factors including spending by Government departments and units across the country
<b>Effects</b>	The mismatches between inflows and outflows in Government account were rough tuned through issuance of cash management instruments, viz., treasury bills and further fine-tuned through Ways and Means advances/ Overdraft by the Central Bank to the Government
<b>Good practices</b>	Developing better methodology using sophisticated tools for making cash forecasts
<b>Recommendations</b>	May enable Government to better manage its cash balances and enable prudent investment decisions to be made

## SAMPLE AUDIT REPORTS ON FINANCIAL AUDIT, PERFORMANCE AUDIT, AND COMPLIANCE AUDIT (PARA. 106 OF THE GUID)

### *The case of the audit of the U.S. Federal Debt*

GAO audits the consolidated financial statements of the U.S. government. Because of the significance of the federal debt to the government-wide financial statements, GAO audits Fiscal Service's Schedules of Federal Debt annually to determine whether, in all material respects, (1) the schedules are fairly presented and (2) Fiscal Service management maintained effective internal control over financial reporting relevant to the Schedule of Federal Debt. Further, GAO tests compliance with selected provisions of applicable laws, regulations, contracts, and grant agreements related to the Schedule of Federal Debt." (Financial Audit: Bureau of the Fiscal Service's Fiscal Years 2018 and 2018 Schedules of Federal Debt, GAO-19-113)

Source: <https://www.gao.gov/products/gao-19-113>

### *The case of the audit of the Maldives Public Debt and Government Guarantees*

The SAI Maldives conducts an annual audit on the Statement of Public Debt and on the Statement of Government Guarantees. In addition to the financial audit opinion that is provided on truth and fairness of these two statements, a compliance opinion is provided with respect to level of compliance with relevant provisions of the Public Finance Law & Regulations. Other matters addressed in the audit include a financial review of the on-lending of government loans to state-owned enterprises, implementation of debt management strategy, maintenance of debts within the provision of the fiscal responsibility law, and financial review of the debt sustainability ratios.

*Reporting Other Matters (Borrowing Limits) – SAI Maldives (Public Debt Financial Audit Report FY 2013)*

Ministry of Finance and Treasury (MOFT) and the Central Bank entered into an agency agreement wherein MOFT was granted an Over-Draft Facility (ODF) from the Public Bank Account (PBA). Section 11 of the agency agreement provided that outstanding overdraft amount shall not exceed Maldivian Rufiyaa (MVR) 100,000,000 at the end of any given month, and Section 13 stipulated that any outstanding balance shall be repaid at the end of the financial year and that the Government shall not resort to the ODF as a means for financing the budget deficit. However at financial year end 2013, the PBA was overdrawn by MVR 2,475,000,000. MOFT has represented that during the year the PBA ODF limits were extended with approval from the Central Bank. Furthermore the PBA ODF as of 5 May 2014 amounting to MVR 3,328,000,000 was converted to a short term loan.

*Reporting Other Matters (On-lent loans to SOEs) – SAI Maldives (Public Debt Financial Audit Report FY 2013)*

MOFT has undertaken to borrow of State-Owned Enterprises (SOEs) for certain development projects and has on-lent the loans to SOEs through a separate agreement signed between MOFT and those SOEs. This on-lending arrangement if successful should result in MOFT being able to repay interest and principal payments to the original lender without resorting to cash flows from the State Budget. However we observed that a large proportion of on-lent loans SOEs were not being repaid to MOFT by the SOEs, resulting in MOFT being ultimately liable to repay the loans from the State Budget. As of the end of the year 2013, the defaulted non-performing on-lent loans to SOEs amounted to MVR 589,000,000.

Source: <http://www.audit.gov.mv/Uploads/AuditReports/2018/03March/Statement%20of%20Public%20Debt%20Audit%20Report%20Financial%20Year%202013.pdf>

*Report No 16 of 2016 - Union Ministry of Finance Public Debt Management Performance Audit*

The performance audit on Public Debt Management was conducted as public debt constituted a significant portion of the receipts of the Union Government of India. Further, such an audit would help policymakers to understand the risks of public debt, make their operations more effective, increase the efficiency of internal administrative processes and also enhance public debt transparency and accountability. Moreover, the frequency and severity of debt crises across the world and the consequent adverse impact on managing of public finances reinforces the need for promoting responsible lending and borrowing behaviours.

Source: <https://cag.gov.in/content/report-no-16-2016-union-ministry-finance-public-debt-management-performance-audit>

## LIST OF ABBREVIATIONS

AFM	Audit Findings Matrix
CS-DRMS	Commonwealth Secretariat Debt Recording and Management System
DeM	Debt Management
DMFAS	Debt Management and Financial Analysis System
DMO	Debt Management Office
GUID	Guidance
IDI	INTOSAI Development Initiative
IFPP	INTOSAI Framework of Professional Pronouncements
IMF	International Monetary Fund
INTOSAI	International Organisation of Supreme Audit Institutions
ISSAI	International Standards for Supreme Audit Institutions
PD	Public Debt
PDM	Public Debt Management
SAI	Supreme Audit Institution
SDP	Strategic Development Plan
UNCTAD	United Nations Conference on Trade and Development
WB	World Bank